Educational Management Information System (EMIS) in Public Elementary School

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Abstract
The study was conducted to determine the extent of effectiveness on the implementation of Education Management Information System (EMIS) as part of educational management functions in public elementary schools of Surigao Del Sur Philippines. Descriptive survey method using a researcher-made questionnaire was used. The respondents of the study were nine selected public elementary schools from the three clusters of Surigao Del Sur Division.

Findings revealed that from the eight (8) modules of EMIS, Pupil MIS received the highest mean while Finance MIS obtained the least as to the implementation of EMIS Modules. Planning and monitoring were found to be high as to the level of effectiveness of EMIS in public elementary schools. The study concludes that most of the public schools in Surigao Del Sur Division, regardless with its type, effectively implements EMIS Modules. However, Finance MIS requires further enrichment on planning, implementation, and evaluation. Hence, the study recommends strengthening of EMIS modules particularly on Finance MIS and establishment of sustainable EMIS by sharing the best practices in implementing the EMIS of the different schools.

Introduction

Information systems enable countries to be cost-efficient and effective in their education planning. When institutionalized and guided by a clear vision and strategic planning, an Education Management Information System (EMIS) helps policy makers manage an education system to produce quality outputs [1]. Unfortunately, many countries have invested resources in building education management information systems, but these systems are often not institutionalized, lack a guiding vision, and are not incorporated into strategic planning processes.

Education Management Information System (EMIS) is a program by DepEd pursuant to MEC Memo No. 83, s. 1981 that provides information to education administrators in the planning and delivery of educational services. It is a data collection, processing, dissemination and utilization for planning, implementation, monitoring and evaluation of school operation. The systematic and updated data serves as a guide on what is to be achieved by the school and how to achieve it while relying on the available data [2].

The Development Academy of the Philippines (DAP) and National Computer Centre (NCC) proposed and developed the MIS which was divided into eight functional modules. This includes: (1) Pupil/Student MIS wherein data and information can serve to generate statistics on the flow and stock of students for each type of level of education, cross-classified by grade or year, sex and age; (2) Personnel MIS which serves as source of data that can be utilized to generate information on personnel retirement, accumulation or utilization of leave credits, recruitment, placement, training, promotion, and disciplinary action; (3) Curriculum MIS which covers information on curriculum development, implementation and evaluation; (4) Legislation and Control MIS which contains information on legal

matters; (5) Physical Facilities MIS which generates information regarding the number and status of school sites, buildings and school equipment; (6) Financial MIS which provides budgetary, financial accounting data and cost standards for all types of expenditures; (7) Community Service MIS which serves as data storage and where non-formal and informal education are supplemented with quality education; and (8) Educational Planning, Research, and Evaluation MIS which contains planning and development of educational services, research and evaluation on the performance of the system [3].

Reference [4] shows that educational management has to be centrally concerned with the purpose and aims of education. Making decisions and setting goals provide the crucial sense of educational management. In the pursuit of quality education for all, the significance of timely, cost effective, and accurate data in evaluating education policy, determining education planning, and monitoring of the progress towards attainment of development goals is increasingly important [5]. In order to assess the progress towards policy goals, an effective EMIS is required [6]. Reference [7] added that a comprehensive EMIS is defined as not only including administrative and pupil data, but also financial, human resources, and learning data.

Schools and the education system as a whole should be accountable for targets that they are assigned to achieve [8]. Decision makers require data in a timely manner in order to assess changes in educational quality. Moreover, by having access to an EMIS, schools are able to better allocate resources and plan for the specific needs of each school if information on the sector is late, erroneous, or simply not collected, optimizing the performance of an education system can be increasingly difficult [9].

Focusing on the quality of education and monitoring and evaluation require updated and relevant data with the leadership of the school head to make decision making effective [10]. School operation may be guided with the goals to be attained while keeping abreast of good school performance in which they are accountable of. Aside from aiming to achieve the targets, people in the learning community should be considered as one of the most important component of the education system that works towards such goals [11]. Education system should not only focus on the inputs like physical infrastructure, recruitment of teachers, providing study materials and increase in enrolment. It was assumed that once the inputs were in place, the outcomes would follow automatically. Hence, monitoring and evaluation could be strengthened to assess programs implemented

There have been literatures about how Educational Management Information System (EMIS) is undertaken for its effectiveness of implementation. However, none of these literatures have cited how EMIS should operate particularly in Public Elementary Schools. The geographical location of public elementary schools of Surigao Del Sur is so distant, where access on records and information is quite difficult, which could serve as one of the contributing factors in the difficulty in strengthening the EMIS. Hence, this study determined the extent of implementation of EMIS in public elementary schools with the core view of examining the level of effectiveness in school planning, monitoring, project implementation and school performance evaluation. It is assumed that EMIS modules are in place, the operation of school is smooth flowing, and utilization of data gives high performance of school.

Methodology

Selected public elementary schools from the three clusters of Surigao Del Sur Division were the participants of the study. The selection of the schools was based on its type as follow: central, non-central and multi-grade schools. A sample of 100 respondents from the nine (9) identified central, non-central, and multi-grade schools of Cluster I, II and III Public Elementary Schools of Surigao Del Sur Division were chosen. Each cluster was represented by teachers and school administrators from a district who were prompted to answer the validated questionnaire. The participants were chosen because they were identified as data providers in the implementation of EMIS. The purposive sampling technique was adopted for the selection of sample from the targeted groups.
The study used a validated researcher-made questionnaire as the primary tool which contained three parts. Part I includes the profile of the respondent schools in terms of its type, availability of ICT Facilities, and geographical location. Part II comprises the extent of implementation of Educational Management Information System as to the eight (8) modules; and Part III contains the extent of effectiveness on the implementation of Educational Management Information System in terms of planning, implementation, monitoring and evaluation of the school performance.

Before the data were gathered, the researcher made questionnaire was validated by different experts on EMIS implementation. The instrument further undergone validity test through dry-run test with selected planning officers from the different

clusters. After which, a permit to conduct the study was secured. First, from the Schools Division Superintendent; the approval of which was presented to the Schools District Supervisor, then to the Principal and School head of the concerned schools where the researcher conducted the study. With their coordination, the validated questionnaire was administered to the respondents by the researcher. Subsequently, the conduct was completed in all the aforementioned respondent schools; tabulation of data was done before these were brought to the statistician for statistical treatment.

After the retrieval of the questionnaires from the teachers and administrators of the identified schools of 3 types from Cluster 1, 2, 3 of Surigao Del Sur, the responses were tallied and treated. The data gathered were analyzed and interpreted using frequency count and percentage computation, mean and standard deviation and one-way ANOVA or Analysis of Variance

Results and Discussions

The profile of the respondent schools reveals that public elementary schools consist of central, non-central, and multi-grade type. The EMIS employs ICT facilities to package Educational Management Information System as data bank of the school in consideration of the geographical location, which can address the urgent need of data and information.

The table below reflects the profile of the respondents' schools in terms of its type, ICT facilities, and geographical location.

Table 1 shows that most of the respondent schools have functional computer units (20) with good internet connections due to the geographical location being situated mostly in the center of the municipality. The central schools have the most number of enrolment (2,818), with a good number of teaching personnel (90) and non-teaching personnel (3). While multi-grade schools have the least number of enrolment ranging from 50 to 100 with 3 to 4 teachers handling combined classes. They have 10 functional computer units to cater the needs of the school children.

Extent of Implementation of EMIS in Public Elementary Schools as to the 8 Modules
The extent of implementation of EMIS as to the eight (8) modules is consequently presented through a series of charts.

Table 1.Profile of the Respondent Schools

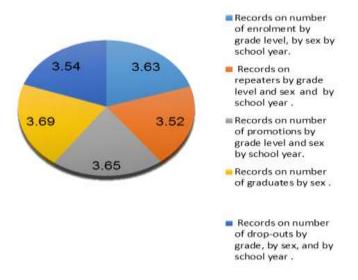| Profile of the Respondent Schools	Type of School					
	central		non-central		multi-grade	
	n	%	n	%	N	%
ICT Facilities						
no.of functional computer units	20	100	10	100	10	100
availability of mobile phone signal	3	100	3	100	3	100
availability of internet connection	3	100	3	100	3	100
Geographical Location						
availability of transportation	3	100	3	100	3	100
easy access to school by means of transportation	3	100	3	100	0	0
walking distance from home to school	3	3.34	2	6.66	0	0
scarcity on the means of transportation	0	0	0	0	3	3.33

Fig. 1
Extent of Implementation of EMIS as to Pupil/Students MIS

Figure 1 reveals that the extent of implementation of EMIS in public elementary schools as to pupil/student MIS with an average weighted mean of 3.61 is described as highly implemented. The first three indicators that the participants agreed on are: records on number of graduates (3.69); records on number of promotions (3.65); and records on number of enrolment (3.63). This implies that this module has always been updated in every school year to track and monitor records on pupils as basis for planning, budgeting, resource allocation, decision-making and other

relative purposes in attaining DepEd goals to better serve its stakeholders.

Based on the result, it can be gleaned that schools meticulously and carefully provide updated documents to be used in the end of school year rites. This practice adheres [12] records on the number of graduates that should be easily updated as part of the internal efficiency of schools which could be measured by the school's capacity to retain its students in school and produce highly competent graduates [13].

Learners profile and record from the different type of schools have significant indication as to the teachers' performance in school through the continuous changes and development of Learner Information System (LIS) [14]. Therefore, updating of learners' profile for every school year should be given emphasis by the advisers to identify who will be retained, promoted, or dropped out upon the preceding years. This in turn will give way to trace the pupils' status the next school year. Reference [15] shows that accurate, reliable and timely information is vital to effective decision-making in almost every aspect of human endeavour, whether it will be undertaken by individuals, or community organizations.
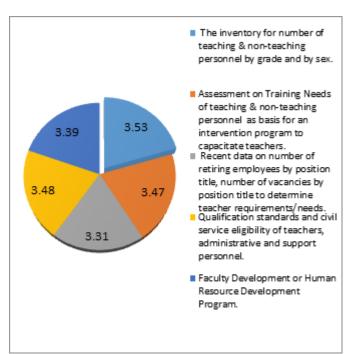

Fig. 2
Extent of Implementation of EMIS as to Personnel MIS

Figure 2 shows the result of the extent of implementation of EMIS as to personnel MIS. The chart reflects the average weighted mean of 3.44 as highly implemented in the implementation of EMIS of Personnel MIS.

The indicators with the highest mean is

reflected on the inventory for number of teaching & non-teaching personnel (3.53); followed by qualification standards and civil service eligibility of teachers, administrative and support personnel (3.48) and assessment on training needs of teaching & non-teaching personnel as basis for an intervention program to capacitate teachers (3.47). All are being described as highly implemented. This denotes that the respondent schools give high regards on updating of records of teacher educators as molders of the young minds. The inventory also aims to account the number of teachers in order to check if the teacher-pupil ratio is appropriately proportional to attain DepEd goals towards the learners and to empower educators with adequate abilities for the 21st century learners. The result also means that the school supports and promotes teachers' professional development so they can become personally responsible for their professional advancement and the improvement of student learning.

The results further support the RA No. 7784 or "An Act to Strengthen Teacher Education in the Philippines by Establishing Centers of Excellence, Creating a Teacher Education Council" where policies and standards to improve the system of teacher education in all existing public and private schools would enhance the pre-service, in-service, re-training, and teacher development [16].

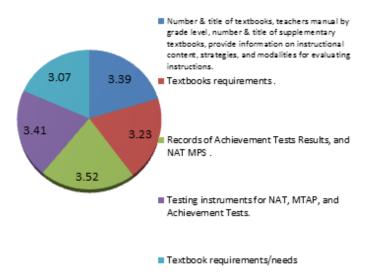Figure 3 shows the result on the extent of EMIS as to module 3, curriculum MIS.

Fig. 3
Extent of Implementation of EMIS as to Curriculum MIS

It was verbally described as highly implemented when the extent of implementation on Curriculum MIS received an average weighted mean of 3.32. The indicator on records of achievement tests results and NAT MPS (3.52) rank the highest which implies that schools keep track on the result of National Achievement Test as part of updating the School Report Card (SRC) that reflects the performance of the school and as bases on designing intervention programs for pupils to reinforce their performance. Textbook requirements/needs (3.07), which is moderately implemented, ranks the least. This means that inventories on textbooks are not that strictly implemented. This indicator is being takenadvantage by the respondent schools because they already experienced that even if the needs are being identified, they reluctantly give time to accomplish it because they knew that it will always end up being not a priority and making some materials obsolete. Identification of the needs of textbooks is being neglected by teachers since they are not that inspired to do so, since services on the delivery of teaching material particularly books are delayed most of the time, and innovative teachers prefer to have internet references for any available learning material.

This unending concern leads to a repeated problem that becomes a cycle of unresolved issues that affects the performance of the different schools even those located in far-flung areas. It is nevertheless important that the school should strengthen the mechanism on the procurement of learning materials as these are important and a necessity to effective learning.
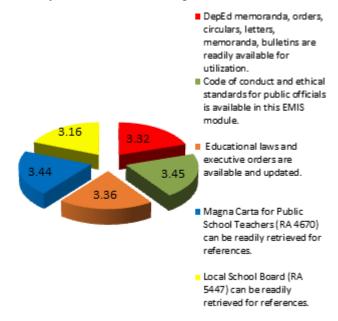

Fig. 4
Extent of Implementation of EMIS as to Legislation and Control MIS

Figure 4 presents the outcome on the extent of implementation of EMIS in public elementary schools as to legislation and control MIS. The figure reflects an average weighted mean of 3.35 described as highly implemented. The indicator on Code of conduct and ethical standards for public officials (3.45), which is highly implemented, resulted to be highest in the implementation of Module 4, this serves as guide for employees being a public servant.

A lot of cases were featured on television, newspapers and internet with regards to the misconduct of some government employees that gives the reasons for them to be discharged from offices and even worst as being sued by the affected individuals. Such scenarios are bases to learning not to wait same things to happen and that every school will be aware of the consequences and possibilities of one's action. Through the availability and implementation of this indicator, schools are guided to act ethically in the service of the community and to what their actions are heading to.

Reference [17] shows that ethics codes and code of conducts are tools for promoting an ethical and professional public service: comparative successes and lessons, an ethical public service requires both conducive social and cultural settings. A large part of this setting is having a professional, merit based public service. However, it also requires an environment where the public servant's managers and peers act ethically. It is almost impossible to have an effective ethics code in which public servants believe that their peers are acting unethically. In addition, the organizational culture must encourage an environment where individuals feel it is acceptable to raise ethical issues.

Figure 5 presents the result on the extent of implementation of EMIS as to module 5, physical facilities MIS.

Inventory of school buildings, furniture, and school equipment with the mean of 3.47 described as highly implemented, ranked the highest. This means that schools stick to DepEd Order 44 s. 2014, National building inventory of DepEd Public School Buildings. The said DO aims to gather data not just for school level or compliance purposes but the inventory is submitted online through Enhanced Basic Education Information System (EBEIS) for central office to monitor the serviceable and condemnable school facilities for the pupils' safety [18].
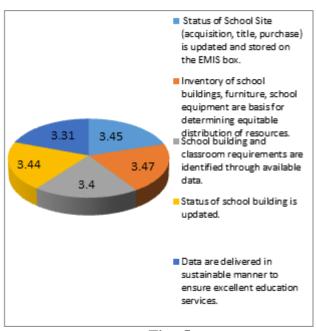
Fig. 5
Extent of Implementation of EMIS as to Physical Facilities MIS

Education reform must consider a wide range of issues to increase or maintain student achievements including the condition of the school building [19]. The condition of school buildings has a direct impact on student performance [20]. Reference [21] showed that "the condition, adequacy and management of a school building are directly under the control of the school district and state—hence improving school facilities offers a feasible opportunity for improving academic performance".

The delivery of services on physical facilities has directly affected the performance of the school. This is considered as gap in attaining DepEd goals upon giving a safe, motivating, enabling and supportive environment for the school children to promote learning. The problem can be addressed by sustaining the appropriate needs of the learning community. The facilities delivered to the different types of school sufficiently vary since the population of school is also concerned. Hence, small school community requires fewer facilities as compared to those schools with greater population and more accessible to the community.

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Fig. 6
Extent of Implementation of EMIS as to Finance MIS

The figure reflects the module on the extent of implementation of EMIS as to finance MIS with the weighted mean of 3.08, described as moderately implemented. This implies that in terms of implementation, activities that involved finances need to be properly made known to all for transparency. The issue on transparency became a gap on the implementation of EMIS as to finance MIS. This certainly affects the schools performance in the sense that appropriateness of funds allocation for a certain priority area of improvement must be made known to all regardless of the type of school as part of the institution and the community standing with the fact that a public office is a public trust that entitles everyone to know the flow of operations particularly on budget and finances. However, similar to that of legislation and control MIS, schools regardless the size of its population and community, can consider appropriate system of sourcing out funds by adhering on the existing favorable government policies.

The Philippine Constitution mandates that the education sector received the biggest share of government budget. In return, administrators have to ensure transparency in spending budget on priority programs and services. Special Education Fund (SEF) through RA 5447 which is established from the proceeds of an additional real property tax and portion of taxes from cigarettes to finance school boards is implemented. But the problem is on the knowledge of teachers and community that such funds appropriated for a certain project is from the local school board [22]. This became a gap in implementing EMIS as to legislation and control. Schools enjoyed the benefits from STF, yet mostly do not appreciate its significance because the amount is not tantamount to the school MOOE. In fact, this is one of the good ways of sourcing out funds to sustain the needs for school improvement. This implies that the type of school is not merely an issue as to the implementation of legislation and control MIS regardless of its type of school. By all means, the school can source out support and funds from different agencies as long as it is supported by valid objectives, plan and projects, which the school community can enjoy.
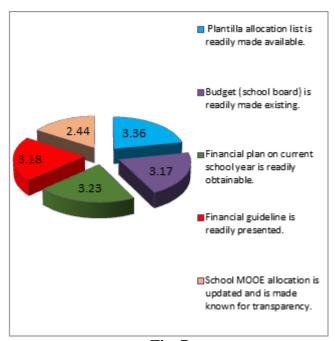
Fig. 7
Extent of Implementation of EMIS as to Community Extension Services MIS

Fig. 8
Extent of Implementation of EMIS as to Educational Planning, Research and Evaluation MIS

The average weighted mean of 3.16, labeled as moderately implemented can be gleaned on Figure 7. This means that the capacity of the school to assist its community in the delivery of quality education to the broadest extent gives moderate opportunities. Engagements with the community can address the need for classrooms and other forms of educational resources, it helps enhance teachers' performance, and increase student achievement. Schools continue to serve the community through collaboration and assistance from the parents, stakeholders and private individuals who uplifted the existing services to the public.

Community linkages can be made successful with the active participation of the community. In addition, tapping the stakeholders and other private individuals can contribute in the implementation of schools programs and service with an aim of strengthening the schools performance. Sourcing out of funds through conducting various activities like fund raising can contribute much to better appropriation of additional funds. But all these activities cannot be done with the presence of armed conflicts. The identified gap based on the result of the study can be perceived on the lack of security and assurance of being protected from the threats of armed conflict. Therefore, even by what means the effort of schools to plan and remediate the problems on finance MIS implementation; still, there can always be a conditional status of delivering quality service.

Figure 8 displays the result of the extent of implementation of EMIS as to educional planning, research and evaluation MIS.
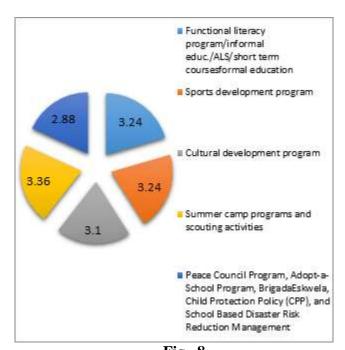
The figure shows a moderate implementation of module 8, Educational Planning and Research MIS with an average mean of 3.24. This means that indicators in this module need an intensive and thorough consideration to uplift its level of implementation so as not to be overlooked.

Of all the indicators, *Copies of Annual and Quarterly reports and Copy of School Achievement Plan* ranked the highest wherein both has the weighted mean of *3.36* labeled as *highly implemented*. This implies that School-Based Management is strengthened in schools of Surigao del Sur Division with the intent of bringing together school heads, teachers, students, as well as parents, the local government units and the community as priority to improve learning outcomes through effective schools based on DepEd Order No. 44 s. 2015, Guidelines on the Enhanced School Improvement Planning (SIP) Process and the School Report Card (SRC) [23]. The indicator on *Research on the conduct of surveys, studies, researches, experiments, evaluations* ranked the lowest with a weighted mean of *2.85* described as *moderately implemented,* which means that the assessment of results on performances and interventions are taken for granted for a reason that it would take a lot of time and would become an additional burden to the teachers. Most teachers would rather focus on teaching routines than bother themselves in conducting research where for them does not necessarily serve the purpose. They would better take short cuts than to conduct a long process and time consuming research. Conducting research would entail time, effort and dedication to do it in

order to come up with a reliable result. Teachers find it difficult to initiate research because most of them has unclear views and background on when and how with the proper conduct of research [24]. Some do not even have any idea about research at all. They simply hear the term research but could not perform resulting to a passive response.

Insufficient knowledge on the basic information of conducting research among teachers hinders them to initiate research that can help reinforce students' performance affecting the school. This is a gap that needs to be addressed in order to develop schools performance based on reliable researches by the teachers. Part of the implementation of Results-Based Performance Management System (RPMS) teachers are encouraged to conduct at least one action research that directly prompt the main problem in the classroom which can be the bases to reinforce students' performance. Thus initiating training and workshops related to the conduct of action research among teachers might be given focus not only to improve teachers' performance rating but most importantly, the process of giving due attention to the problems that needs action in school

Level of Effectiveness of EMIS Implementation

Table 2, 3, and 4 present the result on the level of effectiveness of EMIS in public elementary schools of Surigao del Sur in terms of planning implementation, monitoring and evaluation.

Table 2 reflects the result on the level of effectiveness of EMIS in terms of planning.

Table 2. Level of Effectiveness of EMIS in terms of Planning

An average mean of 3.31 qualitatively described as highly effective. This means that data being collected, gathered and stored in each module are utilized and disseminated for proper planning in the entire school operation. The indicator on *teachers, parents, students and stakeholders work towards shared goals that will improve student learning* ranked the highest with a weighted mean of 3.48, highly effective. This indicates that the schools work in partnership with the community to better serve its clientele, the pupils. DO 54, s. 2009 - Revised Guidelines Governing Parents-Teachers Associations (PTAs) at the School Level stated that as an organization operating in the school, the PTA shall adhere to all existing policies and implementing guidelines issued or hereinafter may be issued by the Department of Education [25].

Reference [26] stated that the process of

educational planning and management is to collect, store, and process, analyze, and disseminate

Indicators	Weighted Mean	Verbal Description
1. Annual Implementation Plan crafted functionally based on EMIS data.	3.34	Highly Effective
2. School Improvement Plan is known and understood by the community.	3.26	Highly Effective
3. Teachers, parents, students and stakeholders work towards shared goals that will improve student learning.	3.48	Highly Effective
4. All staff, parents and students are able to answer the question "What does the school care most about?".	3.21	Moderately Effective
5.Teachers and stakeholders are actively involved in Planning.	3.25	Moderately Effective
Average Weighted Mean	**3.31**	**Highly Effective**

organized group of information and documentation services. With Basic Education Sector Reform Agenda (BESRA), the promise of revitalizing the Philippine basic education seems high as it made significant progress in several areas. Relevant policy instruments were issued which include the adoption and roll down of School-Based Management (SBM) framework and standards. SBM is both a mechanism of decentralized governance where the management of schools that are accountable to both internal and external stakeholders is lodged in the school level, and a framework for integrating various inputs such as teacher training, classrooms, learning materials, nutrition programs, and resource mobilization among others [27]-[28].

Table 3 expresses the level of effectiveness of EMIS in public elementary schools of Surigao del Sur in terms of Implementation.

Indicators	Weighted Mean	Verbal Description
1. Disseminate school policies/ programs/ accomplishments to the school's clientele.	3.44	Highly Effective
2. Teachers communicate student progress to parents.	3.51	Highly Effective
3. Curriculum is revisited for improvement.	3.27	Highly Effective
4. Transparency on budget and finances is implemented and Updated	3.29 / 3.33	Moderately Effective / Highly Effective
Reports are submitted stakeholders in the Implementation	3.34	Highly Effective
A variety of assessment methods are used in attaining improved pupil learning.	3.22	Moderately Effective
A School prepares and update school report card that can be disseminated to the stakeholders.	3.36 / 3.25	Highly Effective / Moderately Effective
4. Results & Educational Performance are evaluated that serves as a guide in designing intervention programs.	3.23	Moderately Effective
5. Researches conducted are basis for strategic intervention programs.	3.04	Moderately Effective
Average Weighted Mean	**3.21**	**Moderately Effective**

Table 3. Level of Effectiveness of EMIS in terms of Implementation

An average mean of *3*.36, verbally described as highly effective can be seen in Table 3. This means that data on EMIS are utilized in designing priority programs and projects. Indicator on *teachers communicates student progress to parent's* ranked the highest with the weighted mean of 3.51 pronounced as highly effective. It can be inferred that Parent-Teacher Association (PTA) are organized wherein performance of pupils are conveyed to the parents by the class adviser upon meeting them and distribute pupil report cards at the end of every grading period. This practice becomes an avenue to strengthen partnership of parents and teachers that could bring benefits to the pupils.

One persuasive explanation attributes the effectiveness of high-community schools to their capacity to satisfy students' basic psychological needs for safety, belonging, autonomy, and competence [29]. When these basic needs are fulfilled, students are more likely to become engaged in, and committed to, the school and, therefore, inclined to behave in accord with its expressed goals and values [30]. Moreover, active involvement in the activities and deliberations of a Caring School Community helps students to develop their empathy for others, their social skills and social understanding, and their understanding of the values of the community. As students become more capable and inclined to contribute to the supportive school context, they in effect promote, along with the school's faculty, an "upward spiral" by which community is strengthened and those involved in it are further benefited [31]-[32].

Table 4 presents the level of effectiveness of EMIS in Public Elementary Schools in terms of Monitoring and Evaluation.

Table 4. Level of Effectiveness of EMIS in terms of Monitoring and Evaluation

The result on the level of effectiveness of EMIS in public elementary schools in terms of monitoring and evaluation (3.21) is revealed in table 4 being described as moderately effective. This means that monitoring and evaluation on EMIS implementation needs to be strengthened to empower schools in achieving the effective EMIS in Surigao del Sur.

Monitoring and evaluation done through school visitation is hindered by the geographical location of schools where some are situated in far flung areas such as in the islands, across rivers, mountains and even with the presence of armed conflict that makes it risky for the monitoring team to go.

The highest in rank among the listed indicators can be seen on accurate and updated reports (3.33) which implicates moderately effective. This means that the reports are set with deadline. It becomes a practice to submit reports on or before the given date to avoid rush and worst is being announced in management committee meeting where it boomerangs the district supervisor's performance.

Conclusions and Recommendations

The central, non-central, and multi-grade

types of school vary in the availability of ICT facilities and geographical location. The three types of school have varied result on extent of EMIS implementation as to the eight (8) modules. Yet most of the respondent schools described as highly implemented. Among the eight (8) modules, Pupil MIS as highly implemented was the top priority of the school since DepEd stands to its mission being a learner-centered institution whereas finance MIS is moderately implemented. The level of effectiveness of EMIS as to planning, and implementation resulted as highly effective while monitoring and evaluation is moderately implemented. This means that monitoring and evaluation have to be strengthened though it is hindered by the geographical location when some are situated in areas where there is the presence of armed conflict that may cause risk to the lives of the monitoring team. Road conditions and distance are another things to be considered. Types of schools as central, non-central, and multi-grade schools varies in the extent of EMIS implementation. One reason is the availability of funds from school MOOE calculated through enrolment and other funds that can still be sourced out by fund raising activities. Monitoring and evaluation, technical assistance, benchmarking and sharing of best practices may lead to an established sustainable EMIS reflective to the performance of the school that is worth of emulation though schools vary from one another in terms of resources, location, and population. Hence, strengthening of EMIS implementation among the eight (8) modules, and in all levels and types of schools may lead to sustainable quality education and performance. Moreover, regular monitoring and evaluation could support the level of effectiveness of EMIS in planning and implementation to assess the strength and weaknesses of a particular program whether it contribute to enriching the performance of the school or not.

Henceforth, EMIS implementation regardless of the type of school by all means require initiative of the school head with the support of the workforce community, stakeholders and for the learning community, to source out of funds for wider implementation of school programs and services aside from the allocated school MOOE. Exposure to trainings, seminars-workshop and team-building make EMIS implementation in every module capacitates teachers and school heads to addressing the problems that may lead to the highest extent of EMIS implementation making the school perform at its best.

References:

[1] UNESCO Bangkok.(2014).Regional report on progress towards education for all in asia and the pacific. Retrieved November 20, 2015 from http://www.unesco.org

[2] DepEd Order No. 52 s. 2016. Implementing guidelines on the direct release of Maintenance and other operating expenses (MOOE) allocations of schools to the respective implementing units. Retrieved February 19,

[3] Villanueva, C (2003). Education management information system (emis) and the formulation of education for all (efa) plan of action, 2002-2015. UNESCO Almaty Cluster Office and the Ministry of Education of Tajikistan. Accessed at: http://unesdoc.unesco.org/images/0015/0015 68/156818eo.pdf

[4] Bush,T. & Glover H. (2014). Journal of organizational theory in education, April16, 2015. Volume 1, Number 1, Retrieved March 7, 2016 from www.organizationaltheoryineducation.com

[5] UNESCO.(2014).Regional report on progress towards education for all in asia and the pacific. Retrieved November 20, 2015 from http://www.unesco.org

[6] Shooebridge, J (2015). Trends in the evolution of educational management information system (EMIS) throughout the Asian-pacific region. Accessed: February 24, 2016. http://www.unescobkk.org/education/ict/

[7] Abdul-Hamid, H., (2014) SABER :What matters for most education management information systems - a framework paper. SABER working paper series no. 7. Washington, DC World Bank Group. Retrieved September 25, 2015 from http://documents.worldbank.org/curated

[8] Bernbaum, M. , Moses, K. (2011). Lessons learned in EMIS. Retrieved on March 8,2016 from http://www.epdc.org/sites

[9] Passey, D. (2013). What matters most for an EMIS. Retrieved March 8, 2016 from http://www.sciepub.com/reference/92152

[10] Myat and Driscoll (2015). Making a school "outstanding examples of strategies". December 7, 2017. Accessed from : https://schoolleaders.thekeysupport.com

[11] PISA (2008). 21st Century learning research, innovation and policy inventions and recent OECD analyses. Accessed from: www. Oecd.org.

[12] DepEd Order No. 7 s. 2016. School year (SY) 2015-2016 end of school year rites.

Retrieved March 8, 2016 from http://www.deped.gov.ph/orders

[13] Villanueva, C. (1991). EMIS in the Philippines.UNESCO Principal Regional Office for Asian and Pacific Bankok, 1990. Accessed at: http://unesdoc.unesco.org/images/0008/0008 80/088079eb.pdf

[14] DepEd Order No. 33, s. 2013 Learner information system (LIS) data housekeeping and implementation for school year (SY) 2014-2015. Retrieved February 16, 2016 from http://www.deped.gov.ph/orders

[15] Eslake, S. (2012). The importance of accurate, reliable and timely. Retrieved February 24, 2016 from http://www.anz.com

[16] RA No. 7784. An act to strengthen teacher education in the Philippines. Retrieved: February 19. 2016. from www.gov.ph/1994/08/04/republic-act

[17] Gilman, S. (2015). Ethics codes and codes of conduct as tools for promoting an ethical and professional public service: comparative successes and lessons. Retrieved February 19. 2016 from http://www.oecd.org/mena/governance/3552 1418.pdf

[18] DepEd Order 44 s. 2005. Declaration of schools as zone of peace. Retrieved February 16, 2016 from http://www.deped.gov.ph/orders

[19] Roberts K. et al (2013). School facility condition and academic outcomes. Retrieved March 8, 2016 from https://www.collaborativeclassroom.org

[20] Lumpkin, (2013). Schools facilities condition and academic outcomes. School of architecture, Florida A&M University, Tallahassee, Florida, USA.

[21] Schneider, M. (2012). Research on the impact of school facilities to students and teachers. Retrieved February 19. 2016 from http://www.21csf.org/

[22] RA 5447. Local School Board Act. Retrieved February 19, 2016 from http://www.lawphil.net

[23] DepEd Order No. 44, s. 2015. Guidelines on the enhanced school improvement planning (SIP) process and the school report card (SRC). Retrieved. February 19, 2016 from http://www.deped.gov.ph/sites/default/files/o rder/2014

[24] Sophia,P. (2012). Evaluation of importance for research in education. Retrieved February 24, 2016 from http://indianresearchjournals.com

[25] DepEd Order No. 54 s. 2009. Revised guidelines governing parents-teachers Associations (PTAs) at the school level. Retrieved February 24, 2016 from http://www.deped.gov.ph/sites/default/files/o rder/2009

[26] Thaung, N.(2011). Designing EMIS to improve the quality of literacy and development programmes resource papers. Retrieved February 16, 2016 from http://www.accu.or.jp

[27] DepEd Order No. 118, s. 2010 - Adoption of the New BESRA Implementation Arrangement. Retrieved: February 25, 2016 from http://www.deped.gov.ph/orders/do-118-s-2010

[28]Abulencia, A. (2013). School-based Management: A structural reform intervention. Philippine Normal University. Published dissertation. Accessed at: https://www.slideshare.net/egempisao/school -based-managementastructuralreformintervention

[29] Deci, et al. (2015). Motivation and education: the self-determination perspective. Retrieved March 8, 2016 from http://selfdeterminationtheory.org/SDT/docu ments

[30] Richard M. et.al (2000). Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being. Department of Clinical and Social Sciences in Psychology, University of Rochester, Rochester, NY 14627.Vol. 55(1). January 2000 p 68–78.

[31] Hawkins, J. D., Catalano, R. F., Kosterman, R., Abbott, R., & Hill, K. G. (1999). Preventing adolescent health-risk behaviors by strengthening protection during childhood. Archives of Pediatric and Adolescent Medicine, 153, 226-234.

[32] Schaps, E. (2005). The role of supportive school environments in promoting academic success. Retrieved February 24, 2016 from:https://www.collaborativeclassroom.or g