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RESEARCH ARTICLE

SCHOOL HEADS' TECHNOLOGY LEADERSHIP AND ITS RELATIONSHIP WITH TEACHERS' AND LEARNERS' PERFORMANCE

Genesis Dave Aquino Quidasol
Department of Education, Los Baños, Laguna, Philippines.

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Abstract

The integration of Information and Communications Technology (ICT) in educational systems believed to aid in achieving educational goals has come out as a result of transforming cultural and socio-economic requirements. This study involved DepEd Computerization Program (DCP)-recipient secondary schools in the Division of Laguna, Philippines for at least three years. It focused on the extent of DCP implementation and investigated its impact in the school heads' technology leadership and its relationship with teachers' and learners' performance. Findings revealed that teachers and students were found to be skilled in their ICT literacy while school heads have average technology leadership with limited ICT skills in relation to the standards particularly in information and data management. Teachers' ICT-integration in the teaching-learning process was moderate and students' Mean Percentile Score(MPS) was average. There were no significant relationships found between the school heads' technology leadership and teachers' ICT integration in the teaching-learning process. Further, teachers' ICT integration had significant correlation with students' MPS in the core subjects. Recommendations include the development and implementation of a vision and technology plan for the school, and a continuous ICT upskilling of the DCP recipients including the school heads' role as technology leaders.

Introduction:-

In recent years, the integration of ICT in educational systems has come out as a result of changing cultural and socio-economic requisites, which require much attention from leaders accordingly. "This challenge is both relevant and complex, mainly due to the need for significant changes in educational centers and more participative and student-centered pedagogical models" (Capilla et al., 2015). Changes in terms of technology in the educational milieu require not only the procurement of technical equipment but also the systematic and efficient utilization of these. In relation to this, teacher training programs are essential to establish ample systems and approaches that ensure the use of these technologies as actual support tools primarily for students and teachers. Consequently, quality of education is improved by providing access to technological resources and training opportunities.

Education technology has been confirmed to have great potentials that impact on teaching and learning. It motivates and engages students to learn and helps broaden their skills, helps them to experience the real world of work thereby preparing learners possess what the labor market requires. Livingstone (2012) stressed that "ICT can improve the

Corresponding Author:- Genesis Dave Aquino Quidasol
Address:- Department of Education, Los Baños, Laguna, Philippines.

quality of teaching, learning and management in schools and so help raise standards". According to Courts and Tucker (2012), lessons presented in various means are more advantageous than conventional instruction. They also believed that the proper use of technology will improve their skills and abilities and can develop higher critical thinking skills through sustained exposure.

School heads have a great impact on the school's use of ICT. Public school principals have the power to move educational use of technology forward. Studies show that an effective technology leadership plays a significant role in today's education. Schrum et al. (2011) recognized school leaders with technological capacities to be more successful in implementing the use of technology in the classroom. Enhancing the technology leadership could result to better technology spending decisions and valuable use of technology in the classroom.

Background of the Study

Based on the document from the division of Laguna regarding the appropriation of DCP packages to schools, all secondary schools already received their DCP packages as of August 2018. Despite the government's success in providing ICT infrastructure for the integration of technology in classrooms, there are still a lot of factors that prevent its full implementation and contribute in the under-utilization of these facilities to the disadvantage of the recipients.

Teachers' readiness and skills in using ICT are playing essential roles in the use of ICT in education. Teachers need sufficient ICT skills to implement the technology and to have high confidence level to use it in a classroom setting. There are teachers who are hesitant to use technology because they thought their students will outdo them (Hennessy et al., 2010). These are some barriers why teachers could be reluctant to adopt ICT as an innovation in their teaching, and thus, should be taken into consideration when studying teachers' adoption of such innovations.

According to a report (Business World, 2019), "the quality of basic education remains low despite the implementation of the Enhanced Basic Education Act of 2013". National Achievement Test scores remain low and feared this could affect their lives in the future.

Conceptual Framework

The independent variables are the indicators on the levels of technology leadership among school heads, while the dependent variables include the teachers' performance in terms of ICT integration in the teaching-learning process, and the learners' performance in terms of their Mean Percentile Scores (MPS) in the core subjects of Math, Science, and English.

Furthermore, the school heads' technology leadership will be used to determine if it has a significant relationship with the teachers' performance in integrating technology in the classroom. In addition, the teachers' performance will be used to determine if it has a significant relationship with the learners' ICT literacy and performance in terms of their MPS in Math, Science, and English.

Statement of the Problem

This study aims to determine the effectiveness in terms of the extent of implementation of the DepEd Computerization Program (DCP) to secondary schools and its relationship with the school heads, teachers, and learners' performance. Furthermore, it seeks to answer the following questions:

1. What is the school heads' level of technology leadership?
2. What is the degree of teachers' ICT-integration in the teaching-learning process?
3. What are the Mean Percentile Scores (MPS) of students in the core subjects of English, Math, Science?
4. Is there a significant relationship between the school heads' technology leadership and teachers' ICT integration in the teaching-learning process?
5. Is there a significant relationship between the teachers' ICT integration in the teaching-learning process and students' performance in terms of MPS in English, Science, Math?

Research Design

This study adopted the quantitative descriptive approach concerning the extent of DCP implementation and its impact to the technology literacy and performance of the recipients.

Respondents of the Study
The respondents of the study came from 40 schools grouped into 8 clusters in the division of Laguna, composed of school heads, Math, Science, and English teachers, school ICT coordinators, and Grade 10 students from public secondary high schools. Out of the 784 respondents, 56% or 436 are students, 36% or 280 are teachers, while 4% or 34 individuals for both school heads and ICT coordinators took part in the survey.

Sampling Technique
After determining the schools which will qualify for the study, clustered sampling was used among 8 clusters.

Research Instrument
The instrument for school heads technology leadership was adopted from the study of Duncan (2011) which collected data about engagement and involvement around technology issues by principals in Virginia in the United States. Assessment items were based on the International Society for Technology in Education's National Educational Technology Standards for Administrators. The purpose of the assessment was to provide public school administrators with detailed and comparative information about their technology leadership. The developed instrument is composed of five parts.

Since the school heads are considered teachers, both school heads and teachers used a similar instrument in determining their ICT literacy. The instrument contains items extracted from the National ICT Competency Standards (NICS) for teachers. The NICS for Teachers was a product of the then Commission on Information and Communications Technology which is now known as the Department of Information and Communications Technology (DICT). It defines the competency outcomes, and the supporting knowledge and skills that are needed to utilize ICT in performing the job roles related to teaching. It provides the performance indicators to evaluate the level of knowledge and competence of teacher to apply ICT in the educational setting. The NICS-Teachers is based on a broad comparative research on current industry practices in other countries and was developed in consultation with various government and private agencies, institutions, and stakeholders. Knowledge and skills in competency areas are presented generally with specifics on essential areas of learning, but avoids reference to specific vendors, versions or equipment. Thus, it allows flexibility in the adoption of the standard while preserving the general requirements for competence. The developed instrument contains four standards that are supplied with related statements.

The instrument to assess the extent of technology use in the teaching-learning process was based from pedagogical domain of the NICS for teachers. It contains the following components: planning and designing effective learning environments and experiences supported by technology; implementing, facilitating and monitoring teaching and learning strategies that integrate a range of information and communication technologies to promote and enhance student learning; and assessing and evaluating student learning and performances. These components are divided into six standards.

The students' MPS was requested from the Division Office to make sure that these are the officially submitted records.

Statistical Treatment of Data
The school heads' level of technology leadership, teachers' degree of ICT-integration in the teaching-learning process, and MPS for the core subjects used standard deviation, frequency percentage, and mean.

Pearson r statistical tool was used to measure the relationship between the school heads' technology leadership and teachers' ICT-integration in the teaching-learning process, and between the teachers' ICT integration and students' academic performance.

Results and Discussion:-

Table 1:- Summary of school-heads' technology leadership.

Domains		Mean	SD	Description
a.	Leadership & Vision	2.75	0.98	SW
b.	Learning & Teaching	3.73	1.12	S
c.	Productivity & Professional Practice	3.64	0.96	S

d. Support, Management & Operations	3.63	1.05	S
e. Assessment & Evaluation	3.71	1.07	S
Overall Mean	**3.49**	**1.03**	**SW**

Legend: 1.00 – 1.49 Not at all (NA), 1.50- 2.49 Minimally (M), 2-50 - 3.49 Somewhat (SW), 3.50 - 4.49 Significantly(S), 4.50 – 5.00 Fully (F)

The school heads' participation and performance under the leadership and vision domain is minimal. It appears that a large majority of school heads fail to compare and align technology plans with other plans. Although the Department of Education has a general plan for the basic education program, the schools still differ in their approaches and strategies in realizing their goals. It is also notable that school-heads have minimally promoted the participation of their school's stakeholders in the school's technology planning process. This suggests that the planning process often involves individuals within the organization. Study findings of Pradhan et al., (2011), conclude that measures which foster ties among stakeholders result to better engagement and pointed out that "linkage is the most cost-effective intervention".

For the learning and teaching domain, the school heads exhibited a significant extent of performance. Though they excelled the most in disseminating or modeling best practices in learning and teaching with technology to faculty and staff, they lacked in providing or making available assistance to teachers for using student assessment data to modify instruction. The article of Martinuzzi (2019) stressed that "there's hardly anything worse for company morale than leaders who practice the 'Do as I say, not as I do' philosophy". This could result to lethargy and antagonism among members of the organization. Eventually, distrust and frustration become evident. Leading by example is showing what could possibly be done which makes others follow you more easily. By utilizing technology in fulfilling their duties, there is a likelihood that their subordinates will do the same. As Martinuzzi' puts it, "when leaders do not practice what they preach, it can be almost impossible for a team to work together successfully". But study results of Cartwright et al., (2013) suggest that leading by example improves competence but is not an assurance of success.

On the productivity and professional practice domain, the school heads performed significantly. A substantial number of school heads participated in professional development activities meant to improve or expand their use of technology. Wang (2010) said, "technology leadership training is a key factor in the context of technology leadership and that the need for technology training in teacher and administrator preparation was consistently identified as the overwhelming need for making technological innovation a reality in schools". On the other hand, none fully used technology-based management systems to access staff/faculty personnel records. A considerable proportion of school-heads did not at all encourage and use technology (e-mail, blogs, videoconferences) as a means of communicating with education stakeholders, including peers, experts, students, parents/guardians, and the community. The latter could be attributed not with the school-heads lack of skills but to the lack of the needed infrastructure.

The survey data for support, management & operations domain of technology leadership show that majority of the criteria were significantly attended to by the respondents. This could be because of the objectives of DCP which include the "provision of ICT packages and the improvement on the replacement cycle of such". One of the standards for technology leadership is to "model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning". This standard was developed to help school leaders "support digital age learning, implement technology, and transform the education landscape". It also intended that school heads understand their functions as technology advocates by providing the technical needs to fully integrate technology in the learning process (Mcleod and Richardson, 2011).

Survey results for assessment & evaluation domain reveal a significant participation in most of the criteria. Two indicators: "promote the evaluation of instructional practices, including technology-based practices, to assess their effectiveness", and "evaluate the effectiveness of professional development offerings in your school to meet the needs of teachers and their use of technology", reflected a great number of respondents who acted significantly on these indicators. Evaluating instructional strategies improves teaching. More often, student grades are used as indicator to assess instructional efficiency, however, there are other indicators. Study results of Marshall et al. (2011) suggest that changes in instructional techniques improved student's performance and strengthened the need to evaluate and adjust instructional approaches to address student and teachers' issues.

The summary of the school-heads' technology leadership shows that they have fairly performed their functions and duties in general. They fared relatively low in their leadership and vision domain where a great majority of the respondents performed minimally in terms of their leadership and vision in relation to technology headship. Seventy-one percent executed their functions significantly in terms of support, management, and operations although none had full extent of performance.

The study of Sincar (2013) tried to ascertain the school-heads' challenges in exercising their technology leadership. Results show that "lack of resources, resistance to innovation, lack of in-service training, and bureaucracy were among the challenges school-heads face as they fulfill their function as technology leaders". Change is difficult to achieve in an organization when people want to stay in their comfort zones. A leader's vision is hard to realize when support is lacking. Some institutions overflow with resources while others receive less. Such could happen when the system of government does not practice equity. Despite the findings described above, the quest to establish the impact of technology-leadership in the school setting remains a mission. Thus, Voogt et al. (2013), called for action on the development of leadership models to implement technology successfully.

Table 2:- Summary of teachers' ICT integration in the teaching-learning process.

Standards	Mean	SD	Description
1. Apply technology to develop students' higher order thinking skills and creativity	3.08	1.00	M
2. Provide performance tasks that require students to locate and analyze information and to use a variety of media to clearly communicate results	3.66	1.01	H
3. Conduct open and flexible learning environments where technology is used to support a variety of interactions among students, cooperative learning and peer instruction	3.28	1.07	M
4. Evaluate usage of ICT integration in the teaching-learning process and use results to refine the design of learning activities	3.38	1.14	M
5. Use computers and other technologies to collect and communicate information to students' colleagues, parents, and others	3.37	1.08	M
6. Apply technology to facilitate a variety of appropriate assessment and evaluation strategies recognizing the diversity of learners	2.80	1.14	M
Overall Mean	**3.26**	**1.07**	**M**

Legend: 1.00–1.49 Very Low (VL), 1.50-2.49 Low (L), 2-50-3.49 Moderate(M), 3.50-4.49 High (H), 4.50-5.00 Very High (VH)

In the integration of technology to develop students' higher order thinking skills and creativity, the teachers are found to be moderate in their ICT integration such as in encouraging students to use technology do data analysis, problem solving, decision making and exchange of idea, and in making students use databases, spreadsheets, concept mapping tools and communication tools. Around half of the respondents have moderately integrated technology in both indicators.

The use of computers in data analysis allows a more efficient and effective work developments because you get more accurate calculations apart from producing results in less time. Data analysis is not only for professional researchers but teachers and students as well. Data analysis applications are used in academics and other disciplines. When students are acquainted with the use of computers in analyzing data, they can use the results in making sound judgements and decisions. In the end, they could offer possible solutions to problems.

Data gathered show that only a small portion of teachers are still low in developing information and communication literacy. It is a reality that some seasoned teachers are still hesitant to use technology because they thought it will just complicate them and are afraid that they might fail. The study of Li (2016) compared the conventional teaching with the multimedia learning in terms of their implications on learner understanding and learner motivation and found that web learning environment was able to contribute the most in improving students' performances, followed

by learning with multimedia, and lastly face-to-face traditional teaching. Furthermore, study results of Galope (2013) indicated that using the multimedia in the classes produced significant improvement in the performance of students compared to traditional instruction. The learners were positive about what multimedia can do in their learning. He then encouraged teachers to develop their technological skills and knowledge to use multimedia in their classrooms.

The teachers performed moderately on the third standard where majority of them are in the "very low" to "moderate" categories. Since there is a low rating in terms of internet connectivity, the afore-mentioned indicators are expected to have a low integration in the teaching-learning process. Given that there are other avenues where teachers and students access the internet, there is a moderate utilization of such techniques.

Web 2.0, also known as "participative and social web, are websites that emphasize user-generated content, ease of use, participatory culture and interoperability for end users". These tools are free, interactive, intuitive, and are useful for students in complying with school requirements. Given the worth of such technologies, positive results are not always observable. Hew and Cheung (2013) discussed "evidence-based pedagogical approaches related to the use of Web 2.0 technologies in both K-12 and higher education settings". Results suggested that "actual evidence regarding the impact of Web 2.0 technologies on student learning is as yet fairly weak". Even then, they agree that these technologies still have a general positive impact on student learning and better still, they don't have negative effects on learning. They further discussed that the constructive results may not be ascribed to technology by itself, but on how they are used and conceptualized.

Teachers are moderate in evaluating usage of ICT integration and use results to refine the design of learning activities. Rubrics contain criteria or standards that are used to determine how a student accomplished something. If the criteria are communicated well, the learners can focus on the requirements expected of them. The study of Jonsson (2014) reported that transparent assessment criteria express what is expected from students. They also learn because they are able to determine the performance standards and can perform self-assessment. Since the results indicate that rubrics design is implemented in moderation, issues may arise. The absence of rubrics in assessment makes it difficult to evaluate their performance and could result to inaccurate or biased results and consequently, students will not be given the right feedback.

The teachers moderately used computers and other technologies to collect and communicate information to students, colleagues, parents, and others.

In education, communication is vital among stakeholders. Proper communication can be hindered though by several factors including time and proximity, but these can be overcome through the use of technology. Hampton (2016) confirms that "younger school administrators recognize social media outlets as an effective communication tool to reach their target audience of stakeholders". Communicating well with others allows a symbiotic relationship of understanding what expectations we have from each other.

The respondents moderately used the application of technology to facilitate a variety of appropriate assessment and evaluation strategies recognizing the diversity of learners, and only a small ratio is actively engaged in this practice.

Assessment is used to measure students' progress as well as their needs. Online assessments are becoming popular. "It promotes a higher level of engagement with the students and can accommodate a larger number of participants even if they are in different areas and has features to prevent students from cheating by randomizing the questions. Another worthy feature is its ability to provide immediate feedback which allows them to assess their needs. On the part of the teacher, he can set a timer for a fair allocation of time allowance. Ultimately, online assessment provides item analysis to determine areas that need reinforcement".

Galizzi (2010) assessed the impact of online quizzes on students' learning was made. Findings show that the use of online assessments helped improve students' diligence in complying with their requirements and remarked positively about their learning experience. Unfortunately, it did not improve their performance in examinations. Despite this, the researcher is inclined to believe that the above-mentioned technologies will improve the students' performance in general, and the absence of significant positive results may be due to factors unknown to the researcher.

In summary, the teachers received a "moderate" rating and only the second standard reflected more than half of the respondents combined high and very high rating while the last standard indicates a significant number performing low in applying technology to facilitate a variety of appropriate assessment and evaluation strategies recognizing the diversity of learners.

No doubt, the world greatly depends on the power of technology in realizing development goals and plans. In the education sector, it transforms a classroom from a confined arena to a seemingly boundless universe because of the immense availability of technology-based educational tools and resources. Study results of Simin and Sani (2015) indicate that ICT integration was beneficial for teachers and students. They also found out that proper preparation in using ICT in teaching is vital, in addition to timely and continuous development programs in achieving quality learning.

As supported by research, education has a promising future because of the influx of technological advancement, but as the saying goes "it takes two to tango". The government through the Department of Education is seriously making all efforts to bring technology inside classrooms with the implementation of DepEd Computerization Program (DCP). This should be complemented by every partner in the education sector. Aside from the institutionalized development programs, each one should engage in self-assessment of needs and strengths and constantly pursue growth and advancement to upskill oneself in response to the equally increasing demands of the profession.

The data in Table 3 show that the students' performance in terms of their mean percentile score (MPS) is "average" but way below the "moving toward mastery" mark. Figure 1 reflects that English earned the highest individual score of 78.06% but Science got the highest mean for three consecutive years. Math received the lowest rate both in individual scores (38.05%) and means. The DepEd is targeting an elusive overall MPS of 75% based on the presentation made by the National Education Testing and Research Center.

According to a report mentioned previously, "the quality of basic education remains low despite Republic Act No. 10533 or the Enhanced Basic Education Act of 2013, judging from the recent National Achievement Test (NAT) average scores of Grade 6 and 10 students". Data cited from Department of Education (DepEd) indicated a "decline in the overall NAT average for Grade 6 and Grade 10 students since 2013". It noted the NAT scores in 2013 at 51.41%, 53.77% in 2014 and 49.48% in 2015. It was also observed that in 2016, the Grade 10 students scored 44.7% and a slightly lower performance of 44.1% the following academic year, then slightly improved in 2018 at 44.59%. Because of this, it was feared that some students cannot enter tertiary level and consequently, cannot get a decent job and perhaps a good future.

Table 3:- Summary of students' mean percentile scores in the core subjects.

MPS in English, Math, Science	**Min**	**Max**	**Mean**	**SD**	**Description**
1. English	40.73	78.06	57.17	7.53	AM
2. Math	38.05	67.37	54.69	7.20	AM
3. Science	44.97	75.30	58.67	6.27	AM
Overall Mean			**56.84**	**7.00**	**AM**

Legend: 96 & above (Mastered); 86 & above (Closely Approaching Mastery); 66 & above (Moving Towards Mastery); 35 & above (Average Mastery); below 35 (Low Mastery); below 15 (Very Low Mastery); below 5 (Absolutely No Mastery).

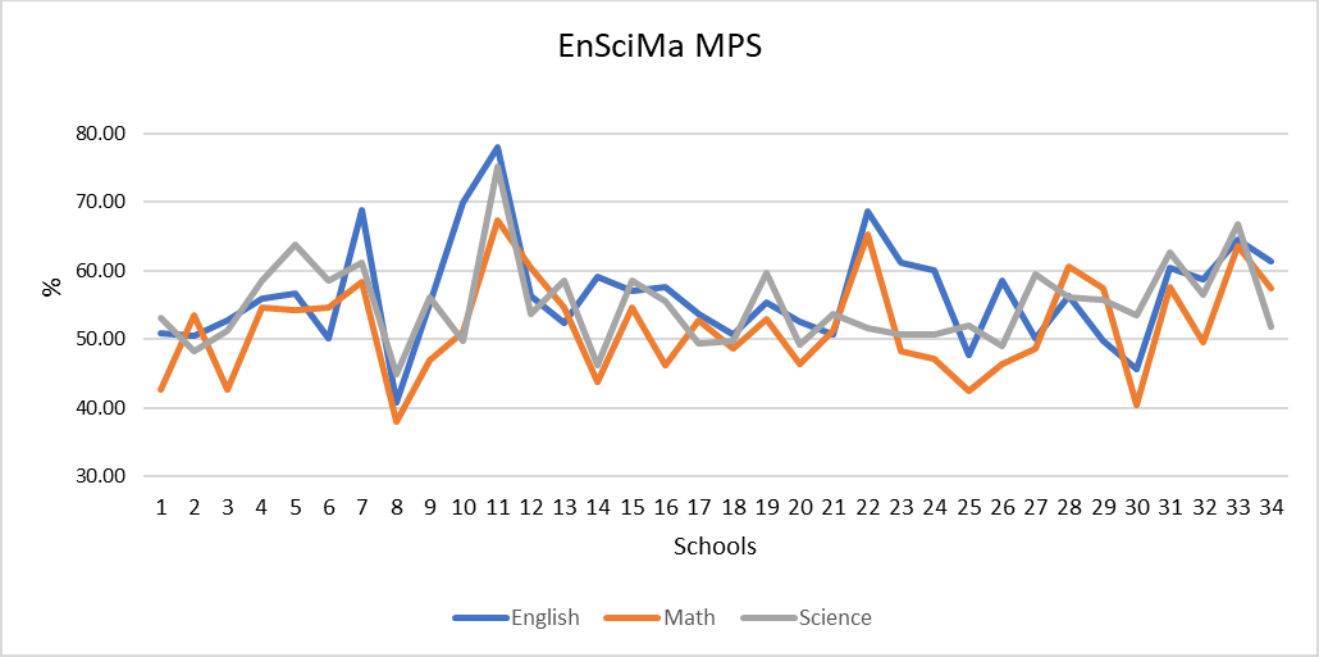

Figure 1:- Graph of the 3-year average MPS in English, Science, and Math.

The low performance of secondary schools can be attributed to many factors. There are changes in the curriculum which caused the focal shift from one to another. Education Assistant Secretary Alma Ruby C. Torio said the "decline of NAT scores may be due to a shift in the framing of the test questions following the implementation of the K to 12 program, rendering recent test results less directly comparable to those of previous years". She also mentioned that the K-12 implementation is aimed at "equipping learners with 21st century skills but recognized that there's still a lot of things to do". She infers other factors including teachers' competence which prompted the creation of "Teacher Education Council (TEC) to discuss proposed admission requirements for a teacher education program". Additionally, "schools where teachers present first the concept or theory followed by a variety of examples or situational roles and then application concept have an MPS of 52.3% in Science". Similar findings related to Math and English were also cited. In addition, "single shift schools have also been found to correlate positively with MPS". On the other hand, there are possible factors outside the school which include the economic background of learners. DepEd's National Education Testing and Research Center reported the high school national average is 48.9% and their findings show that "schools where learners are not engaged in labor have an MPS of 51.9%".

At this stage, it is still difficult to conclude as several factors still need to be extensively investigated upon. Before drawing conclusions, further studies regarding predictors of good school performance and factors behind it should be considered by proper authorities.

Table 4 shows no significant relationship between the school heads' technology leadership and teachers' ICT integration in the teaching-learning process.

Findings of this study do not agree with the study of Chang (2012) on the "effect of school heads' technological leadership on teachers' ICT literacy and teaching effectiveness". Positive relationship was found where the technological leadership of principals improves teachers' technological literacy and directly encourages them to integrate technology in their teaching". It also made teachers more effective in fulfilling their duties.

Most teachers of the new generation recognize the power of technology in fulfilling their duties. They try hard to own computers which they use in lesson and activity planning, exam preparation, assessment procedures, and grade reporting. With the demands of the profession, one can rely on these tiny machines with big capabilities even without the prodding, encouragement, or technology modelling of principals. But this is only one side of the coin-students should be given opportunities to experience the power of these machines to aid them in learning. This is

where functioning technology leadership comes into the picture. Leaders are expected to take action in the planning, acquisition, training, and utilization of technology infrastructure for the sake of the learners.

Table 4:- Relationship between the school heads' technology leadership and teachers' ICT-integration in the teaching-learning process.

		ICT integration in the teaching-learning process
School heads' Technology Leadership	Correlation	-.019
	Significance	.915

Study results of Cakir (2012) showed that despite the principals' positive attitude towards technology, it was not completely received with assenting response as few of them do not consider the use of current technologies such as Web 2.0 despite being highly aware of it. This common scenario could be attributed to insufficient competence in the use of recent technologies that is why part of technology leadership is to assess the teachers' training needs and act on them accordingly.

Table 5:- Relationship between the teachers' ICT integration in the teaching-learning process and students' MPS.

		ICT integration in the teaching-learning process
Students' MPS	Correlation	.463
	Significance	.006

Table 5 shows a high significance between the variables. The study of Skryabin et al. (2015) investigated on the adoption of technology in the classroom through the national ICT development level and found that it is a significant positive predictor for individual academic performance in all three subjects, but studies found negative correlations between ICT use and students' performance. Wittwer and Senkbeil (2008) found that the use of computers yielded no substantial positive outcome on Math achievement. These varying results could be attributed to several factors. One such factor is how the teacher would integrate ICT in the process. Some teachers use ICT to disseminate information and to gather students' outputs but not provide avenues on how learners extend their learning. Others fail to recognize the diverse learning characteristics of learners and how their performance is influenced by technology. Gumus et al. (2011) reported that students use their time on ICT activities which are not associated with their subjects.

The paramount reason ICT is integrated in teaching and learning is to improve the students' performance, that is why, continuous studies are being done to establish solid evidence on the relationship between them (Zhang and Liu, 2016). These conflicting findings insinuate the need for a deeper establishment of a more effective integration of ICT in these core subjects.

Summary of Findings

The following were the researcher's findings after the data gathered were tabulated, organized, analyzed, evaluated, and interpreted:

The school-heads' technology leadership shows that they have fairly performed their functions and duties in general. They fared relatively low in their leadership and vision domain where half performed minimally in relation to technology headship, but they performed significantly in terms of support, management, and operations.

The degree of ICT-integration in the teaching-learning process is described as "moderate". The standard to "provide performance tasks that require students to locate and analyze information and to use a variety of media to clearly communicate results" reflected more than half of the respondents combining high and very high ratings, while 35% performed low in applying technology to facilitate a variety of appropriate assessment and evaluation strategies recognizing the diversity of learners.

The students' performance in terms of their mean percentile score (MPS) in the core subjects is described to be "average" with a rate of 56.84%, way below the "moving toward mastery" mark. English earned the highest individual score of 78.06% but Science got the highest mean of 58.67% for three consecutive years. Math received the lowest rate both in individual scores (38.05%) and means (54.69%).

There is no significant relationship between the school heads' technology leadership and teachers' ICT integration in the teaching-learning process.

There is a highly significant relationship between the teachers' ICT integration in the teaching-learning process and students' combined MPS in the core subjects but only Math had significant relationships with all the standards of the teachers' ICT integration in the teaching-learning process.

Conclusion:-

Based on the findings previously presented, there is no significant relationship between the school heads' technology leadership and teachers' ICT integration in the teaching-learning process is accepted. However, the teachers' ICT integration in the teaching-learning process and students' performance in terms of MPS in English, Science, Math were found to have significant relationship.

Recommendations:-

In the light of the findings and conclusions established in this study, the researcher recommends the need to develop a Division-wide plan on the continuous ICT upskilling of teachers in the integration of ICT in the teaching-learning process including the use of Web 2.0, conduct a training on ICT skills-enhancement for school heads including their roles as technology leaders, and for school heads to develop and implement a vision and technology plan for the school.

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