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Research Article

Digital Leadership and Teachers' Performance: Basis for a Proposed Training Program

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ABSTRACT

This study aimed to determine the digital leadership and performance of teachers in Marikina City. The paper utilized a descriptive research design to accomplish the investigation and validate the level of digital leadership of school administrators and the performance of teachers. The main objective of the study was to describe the nature of a situation as it exists at the time of the study and to explore the cause of a particular phenomenon. The statistical treatments of data used were weighted mean, t-test, and Pearson r correlation. The extent of level of digital leadership as perceived by the school administrators in public secondary schools in Marikina was very knowledgeable. The extent level on digital leadership as perceived by the teachers in public secondary schools in Marikina was very knowledgeable. There was a slight correlation between the digital leadership and teachers' performance. The school administrators should encourage themselves and be motivated to pursue digital learning development that would increase their techno-leadership style.

Keywords*: Digital education, Educational leadership, Techno-leadership*

Introduction

Based on the research on leadership which started since early 1900s with the focus on differences between leaders and followers, school leaders must be aware of how technology is used in educational institutions. Leadership research for the past decade shifted to some sort of investigation of how settings affected leadership after no evidence was found to explain leaders' behaviors. The trend in today's 21st century of digital age takes digital leadership into consideration. Records have shown that there are a lot of research with regards to the tremendous growth of digital tools.

There is a great challenge for school heads to administer the digital age, the question is why, how, and where to begin. Why do we need to apply digital leadership in school? The researcher believes that there is a great advantage if digital technology using social media that will help a lot as a means of communication of our dearest teachers. When teachers' performance is also taken into consideration, there is a significant difference between the

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new and experienced teachers. The successful study will depend on the availability of increasing digital tools and resources that the school head will support and provide.

Moreover, this will require an understanding of how traditional (text based) and new (digital based) classroom technologies that can be used to facilitate learning environment in which teachers and school heads are engaged in the kind of team project work that will enable them to take greater responsibility for their own learning and construction of knowledge.

As leaders in educational institutions, school heads need to adapt the use of technology and promote its use among the teachers and staff which will aid in enhancing the instructions that will ultimately be beneficial to students. This will also enable teachers to do extraordinary things in their classes which will supplement the teaching and learning process. Consideration of the teachers' performance also plays an important role for there is a significant difference between the experiences of the new and seasoned teachers. Some teachers have already been teaching for many years but many of them are not yet experts in the teaching profession in terms of their subject matter or teaching pedagogy. Either way, there is a big advantage for the well experienced teachers as compared to a new comer. New teachers are more knowledgeable in using digital technology and the seasoned teachers may learn from them through academic collaboration and peer tutoring. In public schools, this could be done in learning action cells.

Due to the fast-growing digital technologies, we have to act immediately to cope with the situation and we need to train digital leaders because it is also their responsibility to lead even in this aspect of education.

Statement of the Problem

This study aimed to determine the digital leadership and performance of teachers in Marikina City. Specifically, it sought answers to the following questions:

1. What is the level of skills and knowledge on digital leadership of the school administrators and teacher respondents in terms of the following aspects;
   a. digital age learning culture
   b. digital citizenship
   c. excellence in professional practice
   d. systemic improvement
   e. visionary leadership
2. Is there a significant difference between the level of skills and knowledge on digital leadership of the two groups of respondents in terms of the above-mentioned aspects?
3. What is the level of performance of the teachers themselves during the school year 2017-2018 based on Individual Performance Commitment and Review Form (IPCRF)?
4. Is there a significant relationship between the digital leadership and the teachers' performance as regards to the five cited aspects?
5. What training program could be proposed based on the result of the study?

Scope and Delimitation of the Study.

This study centered on the relationship of Digital Leadership and the Performance of Teachers: Basis for a proposed training program. The level of the skills and knowledge of the respondents in digital leadership will be measured along the five aspects namely: digital age learning culture, digital citizenship, excellence in professional practice, systemic improvement, and visionary leadership.

This study was limited to thirty (30) School Administrators and (100) teachers of Junior and Senior high School teachers at a public national high school in the Division of Marikina City.

Literature Review

According to Larson, Miller, and Ribble (2009) technology has forever altered the way we learn and teach, and the pace of change is only accelerating. What was trending in education last year may not be up to date after a few months or years. Educational leaders should keep up with the advances in technology and its use in education when new literacies rapidly outpace traditional literacies, and access to technology and information expands exponentially. Administrators and educational leaders have to take personal responsibility for knowing firsthand the impact of technology in classroom instruction and should not totally

rely on school staff. It is up to the building-level staff, district personnel, and educational leaders to move schools into the digital age. Here, there are suggested five considerations, aligned with ISTE's NETS for Administrators for initiating a shared vision that embeds tech integration into all aspects of learning and teaching. Individual districts vary in how technological they are (or think they are), so any action plan needs multiple levels of experience and usage. The following list provides a springboard for conversations as school leaders seek to assess the status and logis-tics for progress toward 21st-cenury classrooms. ISTE-A standards defined the skills and knowledge of digital leadership from five dimensions: 1) visionary leadership, 2) digital age learning culture, 3) excellence in professional practice, 4) systemic improvement, and 5) digital citizenship.

Today's technology standards (ISTE: 2000) challenge the administrator of education programs across the nation to address the need to produce computer literate teachers who are confident in their ability to choose and incorporate instructional technology into their classroom teaching. For this reason, it is crucial for the school administrator to address the needs of the teacher for them to integrate their lesson in this digital age. It is a must that there's no teachers left behind in using the innovation of technology. The learners much appreciate the lesson if the teacher using a multimedia as one of the teaching strategies to get their interest compared to traditional visual aids which is normally used in Philippine classrooms in the 1990's. Therefore, technology may not be effective if there are some teachers who are still using the traditional way in presenting the lesson as well as in disseminating some important announcements. They must utilize social media like messenger, twitter or Facebook. Most of the schools are now using the social media to address some needs.

Baer (2015) pointed out that as schools across the educational institution continue to earmark funds for instructional technology in the classroom, we must consider how it is being used in the classroom. This qualitative research study was conducted to investigate instructional technology methods being used in sixth through eighth grade classrooms and to understand the depth of knowledge of those lessons. Interviews and observations were conducted to gather data about how teachers plan and deliver instructional technology methods to students from sixth to eight grade classrooms. Findings from this study determined the instructional technology methods teachers utilize in the classroom, the perceptions teachers have about integrating technology, and instructional technology tools teachers used in the classroom. Discussion of the research findings revolved around how instructional technology methods teachers use in the classroom and teacher perceptions about how they integrate technology methods in the classroom to achieve depth of knowledge with their students.

Dullas (2015) on her study revealed the following salient findings: 1) The school administrators evaluated the supervisory practices as Always carried out as proven by the overall weighted mean of 4.80, on the other hand, teachers rated them as Often being performed with their overall weighted mean of 4.25. 2) The school administrators and teachers correspondingly considered that the teachers' instructional competence as Very High Extent (VHC) with the overall weighted means of 4.66 and 4.54 for the school administrators and teachers respectively. 3) There is a moderate significant relationship between the supervisory practices of the school administrators and the level of teachers' instructional competence in terms of knowledge of the subject matter, class preparation and teaching methods and techniques. 4) There is a significant difference between the perception of the school administrators and teachers on the supervisory practices of the school administrators.

The study of Dullas is relevant to the present study because teachers' competencies are expressed in both instructional and information technology studies. The administrators have a big role in supervising the teachers' performance for the efficient and effective learning of the learners. Whereas the integration of technology in teaching practices of the teachers is more evident to the learners' output, most especially in performing their task.

Anderson and Dexter (2005) explained that for technology to be efficiently integrated and used in educational institutions, digital leadership of principals is of great importance. It plays a vital role for the teachers to effectively utilize the digital technology. Once the school administrator responds immediately to integrate digital technology under his administration, the teacher may eventually follow. Majority of the faculty may become digitally and technologically aware making them efficient 21st century educators. The practice of integrating technology into leadership research was the result of tremendous growth of digital tools and resources in early 21st century. School leaders were compelled to explore ways of administrating schools through technology.

Methods

This study utilized the descriptive type of research to accomplish and validates the performance of school administrators and teachers in technology based instructional materials in teaching Junior and Senior High School in Marikina City. The main objective of the study was to describe the nature of a situation as it exists at the time of the study and to explore the cause of a particular phenomenon. According to Adanza (2009) descriptive method of research is a kind of research which deals with what is designed for the investigation to gather information about the present situation and status quo, and dealing with what is actually happening. According to Zulueta (2005), it involves the study of relationship of variables. This method is adapted by the researchers because it fits the description given by the several authors.

Sources of Data

The main sources of data of the study were the public junior and senior school administrators and teachers. They were the (20) school administrators and (100) teachers of Marikina High School Junior and Senior High School District I in the Division of Marikina. The responses of the respondents to each item in the survey questionnaire represent the data needed in the study. The survey questionnaire was cited by Lotta Larson, Teresa Miller, and Mike Ribble December/January 2009-10 Digital Leadership.

Table 1. Distribution of respondent by schools

No.	Schools	Administrators		Teachers	
		Actual	Retrieved	Actual	Retrieved
1	Jesus Dela Pena High School	5	3	10	10
2	Marikina High School	10	9	50	46
3	Marikina Science High School	5	3	10	7
4	St.Elena High School	5	5	20	14
5	St. Nino High School	5	5	10	9
		30	25	100	86

Data Gathering Instrument

The research used the survey questionnaire, which is the main instrument that aimed to generate information about the respondents. This was conducted to (30) school administrators and (100) teachers of selected schools in District Iin the Division of Marikina.

Part I of the survey instrument is the name and designation of the respondents.

Part II of the said survey questionnaire is the respondent's level of knowledge and skills along the five aspects of digital leadership such as digital age learning culture, digital citizenship, excellence in professional practice, systemic improvement and visionary leadership. The indicators, rating scale and guide how to rate

Part III of the survey questionnaire is the latest performance rating of the respondents.

The instrument is divided into two respondents, the school administrators and teachers where he or she indicates themselves their level of knowledge and skills and performance rating from the school year 2017 - 2018.

To validate the survey questionnaire, the researcher wrote a letter to school administrators and teachers with its expertise in data writing questionnaire framework.

Data Gathering Procedure

The researcher gathered the needed data right after the approval to administer or conduct the survey from the Schools Division Superintendent, Division of Marikina city. Likewise, the researcher requested permission from the school Principal to administer the questionnaire with the attached letter from the Schools Division Office – Marikina. The researcher facilitated the administration of questionnaires; the researcher sought the assistance of selected teachers. Most of the time, the researcher took charge of the administration of survey questionnaires. To ensure the one hundred percent retrieval of the survey forms, the researcher personally followed up the retrieval of the accomplished questionnaires from the respondents. After the actual collection of data, the researcher tabulated, encoded, summarized, and tallied the responses given by the research respondents. Analysis and interpretation of the data followed.

Statistical Treatment of Data

The following statistical tools were used in order to arrive at the results of the study.

Weighted Mean

This was used to determine the average frequency of responses of respondents' level of knowledge and skills in digital leadership and the performance of teachers.

The following shows the scale and descriptive ratings used in the study:

Scale	Verbal Interpretation
5	Highly knowledgeable (HK)
4	Very knowledgeable(VK)
3	Knowledgeable(K)
2	Somewhat knowledgeable (SK)
1	Not knowledgeable (NK)

Pearson R

Pearson R was used to determine the significant correlations between the respondents' digital leadership and their performance rating. The scale of the statistical values used in this study is the following:

Scale	Descriptive Ratings
0	Correlation
0.01-0.20	Slight corelation, almost negligible relationship
0.21-0.40	Slight corelation, definite but small relationship
0.41-0.70	Moderate correlation
0.71-0.90	High correlation, marked relationship
0.90-0.99	Very high correlation, very dependable relationship
1.00	Perfect correlation

Results and Discussion

Digital Leadership of School Administrators' as Perceived by themselves and as Perceived by the Teachers

The extent levels of the digital leadership of school administrators in public secondary schools in Marikina as perceived by themselves and as perceived by the teachers are shown in tables 2 to 6.

Digital Age Learning Culture. The weighted mean and verbal interpretation on the extent levels on digital leadership as perceived by the school administrators themselves and teachers are shown in Table 2.

The Average Weighted Means of 4.46 and 4.35 shown in table 2 reveal that the school administrators were "very knowledgeable" in digital age learning culture. More specifically, the results show that both school administrators and teachers were "highly knowledgeable" in the access information, interaction among people with the school as shown by the weighted mean of 4.56. Likewise, indicator number 2 revealed that the respondents were "very knowledgeable" as shown by the weighted means of 4.40 and 4.29 respectively. In the same manner, the school administrators themselves perceived that they were "highly knowledgeable"

in exploring the changes in social practice caused/shaped by the Internet, digital media, and technologies in general. However, the teacher respondents' extent level of the above-mentioned indicator were "very knowledgeable" as shown by the weighted means of 4.52 and 3.38. Further, the indicators 4 and 5 in the table shows that the extent levels of school administrators was "very knowledgeable" as shown by the weighted means of 4.40 and 4.26.

This means that in order to achieve high levels of knowledge in digital culture, the school administrators may still need a training program which would enhance their extent levels on digital leadership in terms of digital age learning culture particularly on the significant changes and challenges to communication, conceptual notions such as information, knowledge, and data, and practices, and empirical as well as analytic questions to the consequences and transformations shaped by this digitalization.

Table 2. Digital Leadership of school administrators as perceived by themselves and the teachers in term of digital age learning Culture

No.	Digital age learning culture	School Administrators		Teachers	
		Mean	VI	Mean	VI
1	Access information, and interact among people and with institutions	4.56	HK	4.56	HK
2	Poses significant changes and challenges to communication	4.40	VK	4.29	VK
3	Explores the changes in social practice caused/shaped by the internet, digital media, and technologies in general	4.52	HK	4.38	VK
4	Analysis the foundation of the digital information society by exploring conceptual notions such as information, knowledge, and data, and practices	4.40	VK	4.26	VK
5	Increasing become facilities and mediated via digital media and information technology and ask empirical as well as analytic questions to the consequences and transformations shaped by this digitalization	4.40	VK	4.26	VK
	Average weighted mean	4.46	VK	4.35	VK

Note: 1.00-1.50 (NK); 1.51-2.50 (K); 2.51-3.50 (SK); 3.51-4.50 (VK); 4.51-5.00 (HK)

Digital Citizenship. The weighted mean and verbal interpretation on the extent levels on digital leadership as perceived by the school administrators themselves and teachers in terms of digital citizenship are shown in Table 3.

Table 3. Digital Leadership of school administrators as perceived by themselves and the teachers in term of digital citizenship

No.	Digital citizenship	School Administrators		Teachers	
		Mean	VI	Mean	VI
1	Participate in a digital society at acceptable levels if they choose	4.36	HK	4.47	HK
2	Use digital technology and know when and how to use it	4.36	VK	4.44	VK

No.	Digital citizenship	School Administrators		Teachers	
		Mean	VI	Mean	VI
3	Understand of the digital communication methods and when they are appropriate	4.44	VK	4.48	VK
4	Elaborate the precautions that all technology users must take to guarantee their personal safety and the security of their networks	4.32	VK	4.42	VK
5	Provide a common understanding among all groups will allow all us to be included in the conversation about how we should be looking at technology within this rapidly changing society	4.44	VK	4.42	VK
	Average weighted mean	4.38	VK	4.45	VK

Note: 1.00-1.50 (NK); 1.51-2.50 (K); 2.51-3.50 (SK); 3.51-4.50 (VK); 4.51-5.00 (HK)

As shown in the table, the extent levels of school administrators' digital leadership in terms of digital citizenship was "very knowledgeable" as shown by the average weighted means of 4.38 and 4.45.

Specifically, the data reveal that school administrators were "highly knowledgeable" in participating in a digital society at acceptable levels if they choose as shown by the weighted means of 4.36 and 4.47. Further, in the use of digital technology and how it is being used, the perceptions of the school administrators as well as the teachers were "very knowledgeable as shown by the weighted means of 4.36 and 4.44 respectively. In the understanding of the digital communication methods and when they are appropriate, the perceived levels of the respondents were "very knowledgeable" as shown by the weighted means of 4.44 and 4.48.

Likewise, as stated in indicator number 4, the perceived levels of school administrators and teachers were also "very knowledgeable" as shown by the weighted means of 4.32 and 4.42. In providing a common understanding among all groups on how they should be looking at technology within the rapidly changing society, the school administrators' extent levels were 4.44 and 4.42.

It may be inferred from the findings that the school administrators are trying to accommodate undertakings which would improve their social relations benefiting from the use of technology and strengthen connections from the citizen where the schools are established.

Excellence on Professional Practice. The weighted mean and verbal interpretation on the extent levels on digital leadership as perceived by the school administrators themselves and teachers in terms of excellence on professional practice are shown in Table 4.

The data reveal that the two groups of respondents' extent level on digital leadership in terms of excellence on professional practice as "very knowledgeable" as shown by the average weighted means of 4.36 and 4.38 respectively. More specifically, the results show that both the school administrators and teachers extent level on understanding the appropriate knowledge which is relevant theories, literature and philosophies was "very knowledgeable" as shown by the weighted means of 4.32 and 4.33.

Table 4. Digital Leadership of school administrators as perceived by themselves and the teachers in term of Excellence in professional practice

No.	Excellence on professional practice	School Administrators		Teachers	
		Mean	VI	Mean	VI
1	Understand appropriate knowledge of relevant theories, literature, and philosophies on which to base informed professional practice	4.32	VK	4.33	VK

No.	Excellence on professional practice	School Administrators		Teachers	
		Mean	VI	Mean	VI
2	Effective utilized language through speaking, writing, and other	4.32	VK	4.34	VK
3	Understand of the digital communication methods and when they are appropriate	4.48	VK	4.48	VK
4	Elaborate the precautions that all technology users must take to guarantee their personal safety and the security of their networks	4.36	VK	4.41	VK
5	Provide a common understanding among all groups will allow all us to be included in the conversation about how we should be looking at technology within this rapidly changing society	4.32	VK	4.36	VK
	Average weighted mean	4.36	VK	4.38	VK

Note: 1.00-1.50 (NK); 1.51-2.50 (K); 2.51-3.50 (SK); 3.51-4.50 (VK); 4.51-5.00 (HK)

On the other hand, both groups of respondents were also "very knowledgeable" in utilizing language through speaking, writing and other means of communication as revealed by the weighted means of 4.32 and 4.34 respectively. Further, the extent level on demonstrating loyalty and support of the institution where both school administrators and teachers are employed was very knowledgeable as shown by the weighted mean of 4. 48.

On the aspect of effectively creating and maintaining networks among colleagues locally, regionally, nationally, and internationally, the school administrators themselves and teachers were "very knowledgeable as shown by the weighted means of 4.36 and 4.41 respectively. Likewise, on the indicator number 5, both the school administrators and teachers were "very knowledgeable" as reflected in the weighted means of 4.32 and 4.36.

The results indicate that the school administrators may need a techno-training program which would enhance their digital proficiency and practice in order to achieve high knowledge and skills on the above-mentioned variable.

Systemic Improvement. The weighted mean and verbal interpretation on the extent levels on digital leadership as perceived by the school administrators themselves and teachers in terms of systemic improvement is presented in Table 5.

Table 5. Digital Leadership of school administrators as perceived by themselves and the teachers in term of systemic improvement

No.	*Systemic improvement*	School Administrators		Teachers	
		Mean	VI	Mean	VI
1	Improve the organization through the effective use of information and technology resource	4.32	VK	4.51	HK
2	Evaluated the use of technology throughout the school by walking around the building to observe how technology is used and writing notes about things that appear noteworthy				
3	Ensure that staff who are hired at the school uses technology creatively and proficiently to advance academic and operational achievement	4.44	VK	4.33	VK
4	Access and manage computer-based tool designed to support observers in assessing technology use in educational establishments	4.44	VK	4.38	VK

No.	*Systemic improvement*	School Administrators		Teachers	
		Mean	VI	Mean	VI
5	Measure the effectiveness of the school's educational organization and apply the same measure on a regular basis to ensure continuous improvement	4.52	HK	4.44	VK
	Average weighted mean	4.42	VK	4.38	VK

Note: 1.00-1.50 (NK); 1.51-2.50 (K); 2.51-3.50 (SK); 3.51-4.50 (VK); 4.51-5.00 (HK)

It was revealed that the school administrators' extent level on digital leadership in terms of systemic improvement was "very knowledgeable" as shown by the average weighted means of 4.42 and 4.40. More specifically, the result shows that school administrators were "very knowledgeable" in improving the organization through the effective use of information and technology resources. However, the teachers perceived that the extent level of the school administrators on this aspect were "highly knowledgeable" as shown by the weighted means of 4.32 and 4.51 respectively. Moreover, both groups of respondents perceived that the school administrators were "very knowledgeable" in evaluating the use of technology throughout the school by walking around the building to observe how technology is used and writing notes about things that appear noteworthy as shown by the weighted means of 4.40 and 4.36.

Likewise, as shown in indicators number 3 and 4, it was perceived that the school administrators were "very knowledgeable" in ensuring that staff who are hired at the school uses technology creatively and accessing and managing computer-based tool designed to support observers in assessing technology use in educational establishments as shown by the weighted means of 4.43, 4.33 and 4.44 and 4.38.

On the aspect of measuring the effectiveness of the school's educational organization and applying the same measure on a regular basis to ensure continuous improvement, the extent level of the school administrators as perceived by themselves were "highly knowledgeable" while teachers' assessment was "very knowledgeable" as shown by the weighted means of 4.52 and 4.44.

The results further show that there is a necessity to look for a training reforms that would aspire to make changes throughout the system on the aspect of technological advancement and skills of school administrators in order to enhance their technological leadership.

Visionary Leadership. The weighted mean and verbal interpretation on the extent levels on digital leadership as perceived by the school administrators themselves and teachers in terms of systemic improvement is presented in Table 6.

Table 6. Digital Leadership of school administrators as perceived by themselves and the teachers in term of visionary leadership

No.	Visionary leadership	School Administrators		Teachers	
		Mean	VI	Mean	VI
1	Use the knowledge of the system that we live and work in to create a vision for how to incorporate inspiring and engaging technology tools in the classroom	4.24	VK	4.49	HK
2	Help support staff learn how to complete tasks efficiently while showing them how to use the strategies, tools and equipment in the classroom for their own professional development	4.32		4.45	

No.	Visionary leadership	School Administrators		Teachers	
		Mean	VI	Mean	VI
3	Help educators create learning activities in the technology rich environment that today's student require	4.32	VK	4.42	VK
4	Facilities among all stakeholders a shared vision of purposeful change that maximized use or digital-age resources to meet and exceed learning goals, support effective instructional practice, and maximize performance of district and school leaders	4.36	VK	4.44	VK
5	Engage in an ongoing process to develop, implement, and communicate technology-infused strategic plans aligned with a shared vision	4.24	VK	4.33	VK
	Average weighted mean	4.30	VK	4.43	VK

Note: 1.00-1.50 (NK); 1.51-2.50 (K); 2.51-3.50 (SK); 3.51-4.50 (VK); 4.51-5.00 (HK)

The data revealed that the extent levels of school administrators' digital leadership in terms of visionary leadership were "very knowledgeable" as shown by the average weighted means of 4.30 and 4.43.

To be particular, the extent levels of school administrators' digital leadership which is written in the indicator 1 were "very knowledgeable" as shown by the weighted means of 4.24 and 4.49. On the other hand, in the aspect of helping support staff to learn how to complete tasks efficiently while showing them how to use the strategies, tools and equipment in the classroom for their own professional development, the extent levels of the school administrators as perceived by themselves and teachers were "very knowledgeable" as shown by the weighted means of 4.32 and 4.45. In the same manner, in the indicator number 3 which states that: "help educators create learning activities in the technology-rich environment that today's students require", the perceived extent levels of school administrators as well as the teachers were "very knowledgeable" as shown by the weighted means of 4.32 and 4.42 respectively.

Moreover, the perceived extent levels of school administrators and teachers on the basis of facilitating among all stakeholders a shared vision of purposeful change that maximizes use of digital-age resources to meet and exceed learning goals, support effective instructional practice, and maximize performance of district and school leaders were "very knowledgeable" as shown by the weighted means of 4.36 and 4.44. Additionally, in terms of engaging in an ongoing process to develop, implement, and communicate technology-infused strategic plans aligned with a shared vision as written in indicators number 5, the extent level of the school administrators as perceived by themselves and teachers were "very knowledgeable" as shown by the weighted means of 4.24 and 4.33.

The results further indicate that the crucial planning for technology and being involved in the planning process as well as making technology and integration are the primary considerations. Thus, the technological learning needs for school administrators are necessary in order to achieve the school's technological vision.

Table 7 shows the summary of average weighted means and standard deviation on the extent levels of digital leadership perceived by the school administrators themselves and the teachers during the school year 2017 – 2018.

Table 7. Summary of the level of Digital Leadership of school administrators as perceived by themselves and the teachers

No.	Digital leadership	School Administrators		Teachers	
		AWD	SD	AWM	SD
1	Digital age learning culture	4.35	0.113	4.51	0.070
2	Digital citizenship	4.45	0.025	4.38	0.048
3	Excellence on professional practice	4.38	0.055	4.36	0.062
4	Systemic improvement	4.40	0.064	4.42	0.065
5	Visionary leadership	4.43	0.053	4.30	0.048
	Grand weighted mean	4.40	0.033	4.38	0.055

It was revealed in the table that the extent levels of digital leadership perceived by the two groups of respondents were "very knowledgeable" as shown by the grand weighted means of 4.40 and 4.38 with its standard deviation of 0.033 and 0.055 respectively.

The results further indicate that the digital leadership of the respondents of selected public secondary schools in district I may need a training program in order to advance their technological leadership.

Significant Differences on the Extent Levels in the Perceptions of the Two Groups of Respondents on Digital Leadership

The significant differences on the extent levels of the two groups of respondents on digital leadership perceived by the school administrators themselves and the teachers were presented in Tables 8, 9, 10, 11,12 and 13.

Table 8 shows the computed *t value* and critical *t value* as regard the significant difference in the perceptions of the two groups of respondents on the extent level on digital leadership assessed by the school administrators themselves and the teachers during the school year 2017 – 2018 in terms of digital age learning culture

It can be gleaned in the table that the computed t value of -3.907 is greater than the critical t value of 2.78 which led to the rejection of null hypothesis. Therefore at 0.05 level of significance, it can be claimed that there is a significant difference in the perceptions of the two groups of respondents. The claim was justified in Table 8 where the grand weighted means obtained were 4.35 and 4.46, respectively and verbally interpreted as very knowledgeable. It implied that both groups of respondents have the similar saying on the extent levels of digital leadership in terms of digital age learning culture. Nevertheless, it implied that the respondents may need a techno – training matrix to enhance and improve their techno-leadership practice.

Table 8. significant difference in the perceptions of the two groups of respondents on digital leadership in term of digital age learning culture

Respondents	Mean	Standard deviation	Computed t value	Critical t value	Decision	Interpretation
Teachers	4.35	0.114	-3.907	2.78	Reject Ho	significant
School administrators	4.46	0.070				

Note: computed t value> critical value (reject Ho) computed t value < critical value (Accept Ho)

Table 9 shows the *computed t value* and *critical t value* as regard the significant difference in the perceptions of the two groups of respondents on the extent level on digital leadership assessed by the school administrators themselves and the teachers during the school year 2017 – 2018 in terms of digital citizenship

It can be seen in the table that the computed t value of 2.611 is less than the critical t value of 2.78 which led to the acceptance of null hypothesis. Therefore at 0.05 level of significance,

it can be inferred that there is no significant difference in the perceptions of the two groups of respondents. The claim was justified in Table 9 where the grand weighted means obtained were 4.45 and 4.38, respectively and verbally interpreted as very knowledgeable. It implied that both groups of respondents have the same saying on the extent levels of digital leadership in terms of digital citizenship. Nevertheless, it can be inferred that the respondents may need a training program on the aspect of digital citizenship.

Table 9. significant difference in the perceptions of the two groups of respondents on digital leadership in term of digital citizenship

Respondents	Mean	Standard deviation	Computed t value	Critical t value	Decision	Interpretation
Teachers	4.45	0.025	2.611	2.78	Failed to Reject Ho	Not significant
School administrators	4.38	0.048				

Note: computed t value> critical value (reject Ho) computed t value < critical value (Accept Ho)

Table 10 presents the computed t value and critical t value as regard the significant difference in the perceptions of the two groups of respondents on the extent level on digital leadership assessed by the school administrators themselves and the teachers during the school year 2017 – 2018 in terms of excellence in professional practice.

It can be seen in the table that the *computed t value of 2.588* is less than the *critical t value of 2.78* which led to the acceptance of null hypothesis. Therefore at 0.05 level of significance, it can be inferred that there is no significant difference in the perceptions of the two groups of respondents. The claim was justified in Table 10 where the grand weighted means obtained were 4.38 and 4.36, respectively and verbally interpreted as very knowledgeable. It is understood that both groups of respondents have the similar saying on the extent levels of digital leadership in terms of excellence in professional practice. Nonetheless, it can be said that the respondents may need a training program on the aspect of excellence in professional practice.

Table 10. significant difference in the perceptions of the two groups of respondents on digital leadership in term of excellence in professional practice

Respondents	Mean	Standard deviation	Computed t value	Critical t value	Decision	Interpretation
Teachers	4.38	0.055	2.588	2.78	Failed to Reject Ho	Not significant
School administrators	4.36	0.062				

Note: computed t value> critical value (reject Ho) computed t value < critical value (Accept Ho)

Table 11 presents the computed t value and critical t value as regard the significant difference in the perceptions of the two groups of respondents on the extent level on digital leadership assessed by the school administrators themselves and the teachers during the school year 2017 – 2018 in terms of systemic improvement.

It can be gleaned in the table that the *computed t value of -0.372* is less than the *critical t value of 2.78* which led to the acceptance of null hypothesis. Hence, at 0.05 level of significance, it can be concluded that there is no significant difference in the perceptions of the two groups of respondents. The prerogative was justified in Table 11 where the grand weighted means obtained were 4.40 and 4.42, respectively and verbally interpreted as very knowledgeable. It implied that both groups of respondents have the same saying on the extent levels of digital leadership in terms of systemic improvement.

Though, it can be said that the respondents may still needs a training program which would enhance their extent levels of digital leadership in terms of technological systemic reforms.

Table 11. significant difference in the perceptions of the two groups of respondents on digital leadership in term of systemic improvement

Respondent	Mean	Standard Deviation	Computed t Value	Critical t Value	Decision	Interpretation
Teachers	4.40	0.064	-0.372	2.78	Failed to Reject Ho	Not Significant
School Administrators	4.42	0.065				

Note: computed t value> critical value (reject Ho) computed t value < critical value (Accept Ho

Table 12 displays the computed t value and critical t value as regard the significant difference in the perceptions of the two groups of respondents on the extent level on digital leadership assessed by the school administrators themselves and the teachers during the school year 2017 – 2018 in terms of visionary leadership.

Table 12. Significant difference in the perceptions of the two groups of respondents on digital leadership in terms of visionary leadership

Respondent	Mean	Standart Deviation	Computed t Value	Critical t Value	Decision	Interpretation
Teachers	4.27	0.034	4.174	2.78	Reject Ho	Significant
School Administrators	4.30	0.048				

Note: computed t value> critical value (reject Ho) computed t value < critical value (Accept Ho)

It can be seen in the table that the *computed t value of 4.17* is greater than the *critical t value of 2.78* which led to the rejection of null hypothesis. Consequently, at 0.05 level of significance, it can be inferred that there is a significant difference in the perceptions of the two groups of respondents. The claim was justified in Table 12 where the grand weighted means obtained were 4.43 and 4.30, respectively and verbally interpreted as very knowledgeable. It implied that both groups of respondents have agreed on the extent levels of digital leadership in terms of visionary leadership. Thus, it can be concluded that the respondents may need a training program which would develop their technological knowhow on the aspect of visionary leadership.

Summary of the Significant Differences in the Digital Leadership of School Administrator

Table 13 displays the summary of the computed t values and critical t values as regard the significant differences in the perceptions of the two groups of respondents on the extent level on digital leadership assessed by the school administrators themselves and the teachers during the school year 2017 – 2018.

Table 13. Summary of significant differences in the perceptions of the two groups of respondents on digital leadership

Variable	Respondents	Computed t value	Critical t value	Decision	Interpretation
Digital age learning culture	School administrators Teachers	-3.907	2.78	Reject Ho	Significant

Variable	Respondents	Computed t value	Critical t value	Decision	Interpretation
Digital citizenship	School administrators Teachers	2.611	2.78	Failed to Reject Ho	Not significant
Excellence in professional practice	School administrators Teachers	2.588	2.78	Failed to Reject Ho	Not significant
Systemic improvement	School administrators Teachers	-0.372	2.78	Failed to Reject Ho	Not significant
Visionary leadership	School administrators Teachers	4.174	2.78	Reject Ho	Significant

Note: computed t value> critical value (reject Ho) computed t value < critical value (Accept Ho)

It can be gleaned from the table that the *computed t values of -3.907* and *4.174* are greater than the *critical values of 2.78* which led to the acceptance of null hypothesis. At 0.05 level of significance, it can be said that there is a significant difference in the perceptions of the two groups of respondents in terms of digital age learning culture and visionary leadership. However, the computed t values of 2.611, 2.588 and -0.372 are less than the critical value of 2.78 which led to the rejection of null hypothesis. Thus, it can be said that there is a need to develop a training program which enhance the digital leadership of the respondents.

Level of Performance of the teacher's themselves on Individual Performance Commitment and Review Form

Table 14 presents the level of performance of the teachers as shown on the Individual Performance Commitment and Review Form for SY 2017-2018.

Tabel 14. Performance of the Teachers on the individual performance commitment and review from for SY 2017-2018

Range	Adjectival rating	Frequency	Percentile	Mean
4.1-5.0	O	0	0%	0
3.1-4.0	VS	86	100%	3.65
2.1-3.0	S	0	0%	0
1.1-2.0	F	0	0%	0
0-1.0	P	0	0%	0
Average				3.65

It can be gleaned in table 14 that the performance of the teachers with an average of 3.65 while has an adjectival rating of very satisfactory. These findings shown that the teachers are performing his job very well, however there is a need to encourage the teachers to improve their performance to outstanding level.

Test of Relationship on Digital Leadership and Teachers' Performance

Table 15 presents the test of relationship between the digital leadership and teachers' performance.

Tabel 15. Test of relationship between the digital leadership and teachers' performance

Variables	Mean	SD	Pearson r	Computed t Value	Critical t Value	Decision	Interpretation
Digital leadership	4.40	0.53	0.07	13.11	1.99 (df39)	Reject Ho	Significant
Teachers' performance	3.65	0.088					

Level of significance = 0.05

The data revealed that there was a "slight correlation" between the digital leadership and teachers' performance as shown by the computed Pearson r value of 0.07. Furthermore, at 0.05 level of significance, 85 degrees of freedom the *computed t value of 13.11* is greater than the critical t value of 1.99 which led to the rejection of the null hypothesis. Hence, there is a significant difference between the digital leadership of the teacher and their performance rating.

This finding implied that the teachers are knowledgeable enough on digital leadership and aware of the 21st century skills that he or she must possess in order to perform his or her work or job well.

Proposed Training Program

Introduction

The trend of today's information age is of great challenge to teachers because they are the immigrants in embracing the 21st century digital era. It is very vital for them to upgrade their techno leadership so that the strategies and pedagogy of teaching and learning is interesting and can blend the students, teachers and stakeholders' involvement. In the event of analysis of the data sought from the respondents, the researcher then identified the result of the extent levels on digital leadership. As a result, the record showed that techno-leadership were "very knowledgeable" in the general aspect of the digital leading.

Thus, the researcher found out that there is a need for them to improve their knowledge and skills on the above mentioned aspects in order to achieve high understanding and data information in digital leadership.

Rationale

Reviews indicate that functional competency of school administrators are the leading issues for most schools. Training program is a component in strengthening their knowledge and skills, because it sounds out possible and necessary learning needs in order to address proficiency gaps.

Technical growths and organizational change have gradually caused some school administrators to realize that success lie in their skills and abilities in handling the school.

Thus, extensive and continuous venture in training and development are crucial in order to cope up issues and concerns in digital school leadership. This training development program would help school administrators to enhance and increase their management capabilities as they engage in the school environment where standard learning skills are expected.

Objectives

The proposed training program for school administrators aims to do the following:

1. Explore techno – leadership concepts and ideas.
2. State the importance of data privacy and security.
3. Discuss theories issues prevailing in information age.
4. Strengthen knowledge and understanding on hiring process through techno – based staffing
5. Identify the current technological facilities and equipment, its uses and maintenance.

Conclusion

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

1. The school administrators are very knowledgeable in digital leadership and are looking forward for techno proficiency skills.
2. There were digital leadership variables that were significantly different between the perceptions of the two groups of respondents specifically on digital age learning culture and visionary leadership
3. Teachers are performing well on their job, however there is a need to encourage the teachers to improve their performance to outstanding level.
4. A training program is deemed necessary to improve the performance of the school administrator and teacher to outstanding level.

Recommendation

Based on the conclusions drawn in the study, the following recommendations were made:

1. The school administrators should encourage themselves and be motivated the pursue digital learning development that would increase their techno-leadership style.
2. To achieve high skills and knowledge in digital leadership, school administrators should focus on the need for techno advancement scheme.
3. Several trainings and program may be proposed such as technology integration and learning disciplines during the In - Service Training (INSET) of the schools.
4. It is recommended that further studies be made to find out other aspects that would contribute to achieving techno-based learning program
5. The proposed training program in the study should be considered for further enhancement and improvement of technical knowledge and skills among school officials, faculty and staff especially in dealing with information and communications technology activities.

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