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# ICT Competencies and Performance of ICT Coordinators in Moncada

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***Abstract*** *– This study determined the level of competencies and performance of thirty – one (31) ICT Coordinators in public elementary schools in Moncada. It employed a descriptive - comparative – correlational research design. In gathering the data, a researcher – made questionnaire was given to the respondents. Descriptive statistics, multivariate analysis of variance, paired t – test and Pearson product – moment correlation were used to treat the data gathered. Results showed that the ICT Coordinators are generally young adults, male, bachelor's degree holders, have limited number of trainings related to ICT, and are newly designated as school ICT Coordinators. The ICT Coordinators are highly competent as perceived by their immediate supervisors and by themselves. The level of competency of ICT Coordinators has no bearing on their performance. The researcher recommends that the administrators shall conduct training – workshops focused on ICT Systems and Infrastructure Management and ICT Programs and Projects and Policies and Standards Implementation; design comprehensive Key Result Areas (KRAs) as basis for Individual Performance Commitment (IPC) of ICT Coordinators; provide job description for ICT Coordinators' designation; and monitor the strict implementation of the Individual Work Plan (IWP) of the ICT Coordinators.*

**Keywords –** *ICT, ICT Coordinators, Competence, Performance*

## INTRODUCTION

Over the years, Information and Communication Technology (ICT) has undoubtedly changed the lives of people. It has posed a lot of benefits from making communications faster and more efficient to making information circulate in just a blink of an eye. Moreover, it has also contributed a lot not just in the technological field but also to the educational sector.

ICT has impacted the educational field through its rapid development and changes. Many researches have been conducted on how ICT has influenced today's education. Ilomaki [1] found out that the use of ICT in schools was very good since learners become more capable of easily acquiring knowledge because they seem to be more motivated to learn. Infodev.org [2] mentioned that ICT generally, can empower both teacher and learners and foster the development of 21st century skills. Moreover, ICT – based instruction also plays vital role in improving learner's motivation and performance.

Apparently, on a survey done by Inspectorate Evaluation Studies in 2008 [3], schools that made dedicated computer facilities available to teachers reported that it led to the use of higher quality and creative teaching resources in classrooms. It was then believed that when students are more exposed to different kinds of ICT, they tend to perform better in schools and could pose higher level of learning. Thus, there is a need that educators are equipped with enough ICT skills in order to deliver their lessons well.

ICT competent teachers play an important role in delivering the worldwide change in education and learning such that they should become the spark and authors of ICT based learning. Consequently, Ilomaki [1] said that teachers' good ICT competence help them adopt new pedagogical practices and integrate ICT in a meaningful way.

However, some studies showed that teachers do not maximize the benefits ICT could offer. In his research, Buabeng – Andoh [4] enumerated factors that influence the use of ICT in teaching and these include the following: lack of teacher confidence; lack of pedagogical teacher training; lack of suitable educational software; limited access to ICT; rigid structure of traditional education systems; and

restrictive curricula. He concluded that knowing the extent to which these barriers affect individuals and institutions may help in taking a decision on how to tackle them.

In the Philippine context, ICT has also played an important factor in the educational sector. The government is very diligent in providing every school with ICT equipment through its Project CARES designed by the Senate Committee on Education in cooperation with the Department of Education, Culture and Sports (DECS) in March 2001. The said project aims to provide public schools and district offices with "computer-based management and operations support tools…and eventually make elementary and high school principals…more efficient and productive in their work" - former DECS Undersecretary for Administration Isagani R. Cruz.

Presently, the Department of Education (DepED) has made ICT an integral part of the learning areas with its K – 12 curriculum. ICT has become one of the subjects taught in Edukasyong Pantahanan at Pangkabuhayan starting from Grade IV to Grade 10. The DepEd has also launched the DepEd Computerization Program (DCP) that aims to provide every public school a functional and equipped E – classroom. Likewise, the department also launches the program Laptop for Teachers Project (LT4T) which targets to provide laptops to every teacher in public schools. Moreover, DepEd has also launched the DepED Internet Connectivity Program (DICP) that will provide free internet connection to public schools. The Philippine Government has shown its best in providing better and quality access to ICT. But, there is still a lacking component, who will implement these programs of the department?

Due to succeeding release of DepEd Orders, Memoranda and Advisories, the DepEd through its Information and Technology Office (ITO) has designated ICT coordinators in each school. Section 1.f of DepEd Order No. 68, series 2011[5] reiterates the designation of a School ICT coordinator as a secondary focal person responsible for operating the Enhanced Basic Education Information System (EBEIS). Furthermore, DepEd Order No 78, series 2010 [6] or the Guidelines on the Implementation of the DepEd Computerization Program (DCP) says that at least one (1) teacher should be assigned to handle Computer Education classes, to manage the computer laboratory and willing to be trained on lab management including hardware fundamentals and servicing. Aside from facilitating DepEd ICT enabled systems (LIS, EBEIS, LRMDS, etc.), the ICT coordinator shall oversee all aspect of ICT in the school, such as taking charge in training teachers and staff in integrating ICT in education, and shall take initiative diagnostics and recommendation to ensure that ICT resources are effectively utilized.

However, not all ICT coordinators are equipped with knowledge and skills in implementing the above programs. Just like in the case of the ICT coordinators in Moncada who are merely pinpointed by their school heads to become one. They are not IT experts because most of them are mere teachers. Most of these ICT Coordinators are not graduates of any IT related course but rather education courses. Likewise, majority of them are newly hired teachers and are new in the field of ICT and do not handle ICT lessons. Accordingly, these coordinators lack training in terms of the different aspects of ICT. Thus, it is on this premise that a competency - based assessment will be conducted to measure the level of ICT competencies of the ICT Coordinators in Moncada in order to design an ICT program suitable according to their needs.

## THEORETICAL FRAMEWORK

This study is anchored on the Diffusion of Innovation (DOI) Theory, developed by E.M. Rogers in 1962. As cited in sphweb.bumc.bu.edu [7], DOI is one of the oldest social science theories. It originated in communication to explain how, over time, an idea or product gains momentum and diffuses (or spreads) through a specific population or social system. The end result of this diffusion is that people, as part of a social system, adopt a new idea, behavior, or product. Adoption means that a person does something differently than what they had previously (i.e., purchase or use a new product, acquire and perform a new behavior, etc.). The key to adoption is that the person must perceive the idea, behavior, or product as new or innovative. It is through this that diffusion is possible.

Adoption of a new idea, behavior, or product (i.e., "innovation") does not happen simultaneously in a social system; rather it is a process whereby some people are more apt to adopt the innovation than others. Researchers have found that people who adopt

an innovation early have different characteristics than people who adopt an innovation later. When promoting an innovation to a target population, it is important to understand the characteristics of the target population that will help or hinder adoption of the innovation. There are five established adopter categories, and while the majority of the general population tends to fall in the middle categories, it is still necessary to understand the characteristics of the target population. When promoting an innovation, there are different strategies used to appeal to the different adopter categories. First, (1) Innovators - these are people who want to be the first to try the innovation. They are venturesome and interested in new ideas. These people are very willing to take risks, and are often the first to develop new ideas. Very little, if anything, needs to be done to appeal to this population.

Second, the Early Adopters - these are people who represent opinion leaders. They enjoy leadership roles, and embrace change opportunities. They are already aware of the need to change and so are very comfortable adopting new ideas. Strategies to appeal to this population include how-to manuals and information sheets on implementation. They do not need information to convince them to change.

Third, the Early Majority - these people are rarely leaders, but they do adopt new ideas before the average person. That said, they typically need to see evidence that the innovation works before they are willing to adopt it. Strategies to appeal to this population include success stories and evidence of the innovation's effectiveness.

Fourth, the Late Majority - these people are skeptical of change, and will only adopt an innovation after it has been tried by the majority. Strategies to appeal to this population include information on how many other people have tried the innovation and have adopted it successfully.

Fifth, the Laggards - these people are bound by tradition and very conservative. They are very skeptical of change and are the hardest group to bring on board. Strategies to appeal to this population include statistics, fear appeals, and pressure from people in the other adopter groups.

The stages by which a person adopts an innovation, and whereby diffusion is accomplished, include awareness of the need for an innovation, decision to adopt (or reject) the innovation, initial use of the innovation to test it, and continued use of the innovation. There are five main factors that influence adoption of an innovation, and each of these factors is at play to a different extent in the five adopter categories: (1) Relative Advantage - the degree to which an innovation is seen as better than the idea, program, or product it replaces; (2) Compatibility - how consistent the innovation is with the values, experiences, and needs of the potential adopters; (3) Complexity - how difficult the innovation is to understand and/or use. (3) Triability - the extent to which the innovation can be tested or experimented with before a commitment to adopt is made; and (4) Observability - the extent to which the innovation provides tangible results.

## CONCEPTUAL FRAMEWORK

The independent variables in the study are the profile of the respondents namely age, sex, length of experience, highest educational attainment and trainings attended while the dependent variables are the level of ICT Competency and Performance of ICT Coordinators. The figure shows that the level of ICT competency of ICT coordinators differs with respect to their profile. Also, the performance of ICT Coordinators is related to the level of ICT Competency.

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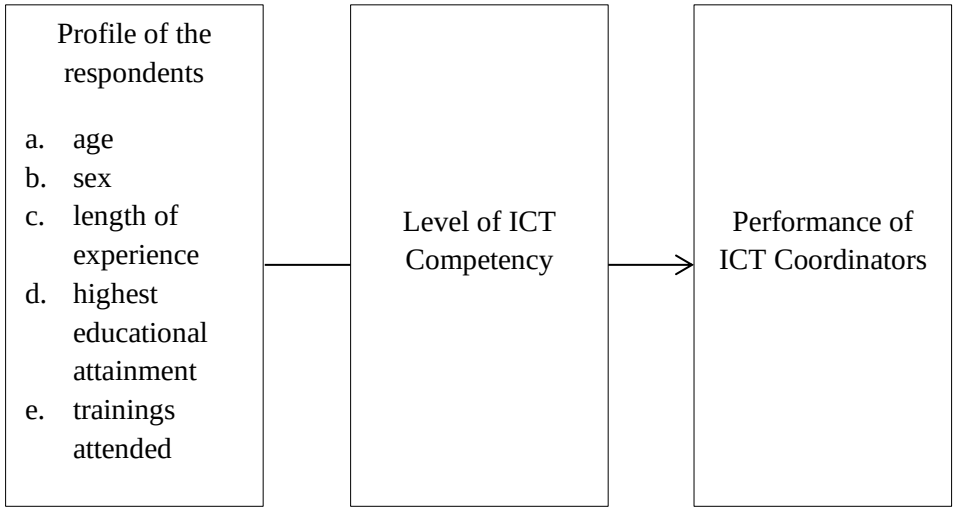


**Figure 1: Conceptual Framework**

## OBJECTIVES OF THE STUDY

This study determined the ICT Competencies and Performance of ICT Coordinators in public elementary schools in Moncada. Specifically, it sought to determine the following: (a) profile of the respondents in terms of age, sex, highest educational attainment, number of trainings attended related to ICT; and length of experience as ICT Coordinator; (b) level of competency of the ICT coordinators' in performing their assigned duties and functions along ICT Systems and School Infrastructure Management, ICT Programs and Projects, ICT Technical Assistance, and ICT Programs and Projects and Policies and Standards Implementation; (c) level of performance of the ICT Coordinators based on their Individual Performance, Commitment and Review (IPRC) rating along ICT Systems and School Infrastructure Management, ICT Programs and Projects, ICT Technical Assistance, and ICT Programs and Projects and Policies and Standards Implementation; (d) Compare the level of ICT competencies across the respondents' profile?; and (e) Test the relationship between the level of ICT competencies and performance of ICT Coordinators in public elementary schools in Moncada.

## MATERIALS AND METHODS

### *Research Design*

This study used a Descriptive – Comparative - Correlational Research Design. It is descriptive because it aims to describe the level of competency and performance of ICT coordinators in Moncada. It is comparative because it examined the difference between the level of competency of ICT coordinators across their profile. It is correlational because it determined the relationship between the performance and level of competency of ICT coordinators.

### *Samples of the Study*

The respondents of this study were all of the thirty – one (31) school ICT coordinators of Moncada South and Moncada North Districts. Thirty – one (31) school administrators also served as respondents in this study. Non - probability sampling was employed. Particularly, this research utilized the purposive sampling complete enumeration technique. Since every public school in Moncada has only one (1) school ICT coordinator, all of the public elementary school ICT coordinators as well as their respective school heads in the said municipality served as the respondents of this research.

### *Data Gathering Instrument and Procedures*

In this study, a five – point Likert – type researcher - made questionnaire served as a research instrument. The instrument consists of two parts: part A is about the profile of the respondents and part B includes the level of competency of the ICT coordinators. Another set of questionnaire was also used in determining the level of

performance of the ICT coordinators. The second set of questionnaire is for the school administrators and school ICT Coordinators. It is a five – point Likert researcher – made questionnaire which is likened to an Individual Performance and Commitment Review Form (IPCRF) having five (5) indicators such that each indicator has five (5) sub – indicators as well. In gathering the data needed for the study, the researcher asked permission from the dean of the university to conduct the study. Next, she got the consent of the schools division superintendent and school heads where the questionnaires were floated. After which, the researcher distributed the instruments and were also retrieved the same day. The data gathered were given to the statistician for thorough tabulation and analysis.

### *Statistical Analysis of Data*

To analyze the data gathered, descriptive statistics, Paired t – test and Pearson product-moment correlation coefficient were used. Descriptive statistics including frequencies, percentages, and weighted means were employed to present and analyze the data gathered for the first, second and third problems. Further, for the fourth problem, Multivariate Analysis of Variance (MANOVA) was used to identify the difference between the levels of competency across respondents' profile. Additionally, paired t - test was employed to identify the difference between the level of performance of the ICT coordinators as perceived by their immediate supervisors and by themselves. Likewise, Pearson product-moment correlation coefficient was utilized to find the relationship between the level of ICT Competencies and Performance of ICT Coordinators.

## RESULTS AND DISCUSSION

### Profile of the Respondents

Table 1 presents the profile of the respondents in terms of age, sex, highest educational attainment, number of trainings attended related to ICT and the length of experience as ICT coordinator.

**On Age.** As shown in table 1, ICT coordinators whose age ranges from 31 – 40 posted the highest frequency (15 or 48. 94%) followed by those who are 21 – 30 years old (13 or 41. 94%). Two of the respondents are in their middle adulthood (41 – 50 or 6.45%) and one (1) ICT coordinator aged 51 – 60 (3.23%). The results indicate that majority of the respondents are middle aged.

**Table 1**
**Profile of the ICT Coordinators in Moncada**
**n = 31**

| Profile | Category | Frequency | Percentage |
|---|---|---|---|
| Age | 21-30 | 13 | 41.94 |
| | 31-40 | 15 | 48.39 |
| | 41-50 | 2 | 6.45 |
| *(Mean: 32.71)* | 51-60 | 1 | 3.23 |
| Sex | Male | 23 | 74.19 |
| | Female | 8 | 25.81 |
| Highest Educational Attainment | BS/BA graduate | 11 | 35.48 |
| | BS with MA/MS units | 10 | 32.26 |
| | MA/MS graduate | 5 | 16.13 |
| | MA/MS with Doctoral units | 1 | 3.23 |
| | Ed. D. /Ph. D. | 3 | 12.92 |
| No. of Trainings Attended Related to ICT | None | 2 | 6.45 |
| | 1 to 5 | 28 | 90.32 |
| | 6 and above | 1 | 3.23 |
| Length of Experience As ICT Coordinator | Less than 1 Year | 3 | 9.68 |
| | 1-5 Years | 20 | 64.52 |

| | | | |
|---|---|---|---|
| *(Mean: 3.97)* | 5 Years Above | 8 | 25.81 |

**On Sex.** As to sex, majority of the respondents are male (23 or 74.19% )while female ICT coordinators only posted a frequency of eight (8) or 25.81%. This denotes that most of the ICT coordinators in Moncada are male.

**On Highest Educational Attainment.** It can be seen in the table that eleven (11) or 35. 48% of the ICT coordinators are bachelor's degree holders while ten (10) or 32.26% have master degree units, followed by five (5 or 16.13%) who are graduates of master degree, three (3 or 12.92%) have finished their Doctorate degrees and only one (1 or 3.23%) has Doctorate units. Generally, this indicates that the ICT coordinators in Moncada continue to pursue higher education for the betterment of their craft.

**On Number of trainings Attended Related to ICT.** The ICT coordinators attend number of seminars related to ICT which ranges from zero to six. Majority (28 out of 31) of the ICT coordinators had 1 to 5 in service training pieces while only one (3.23%) had attended six or more seminars and trainings. The remaining two (6.45%) ICT coordinator – respondent had not attended any in service training related to ICT. The results show that the ICT coordinators give high value in attending seminars and trainings for it will contribute significantly in performing their job competently and for them to become more updated and upgraded in the field of ICT.

**On Length of Experience as ICT Coordinator.** It can be gleaned from the data that most (20 or 64.52%) of the ICT Coordinators in Moncada have been assigned as coordinators within the range of 1 to 5 years, and eight (25.81%) of them are doing the job for about 6 years and above, while the remaining three (9.68%) are newly assigned in the job. This shows that majority of the respondents are assigned as coordinator for a short period of time thus it can be deduced that they have minimal experience as to doing the job as ICT coordinator.

**Level of Competency of ICT Coordinators in Performing their Duties and Functions**

Tables 2 to 5 reveal the level of competency of ICT coordinators in performing their duties and functions along ICT systems and school infrastructure management, ICT programs and projects, ICT technical assistance and ICT programs and projects and policies and standards implementation. Table 6 shows the summary of the level of competencies of ICT coordinators in performing their duties and functions

**ICT Systems and School Infrastructure Management**

The respondents rated themselves as 'highly' competent along ICT systems and school infrastructure management with a weighted mean of 3.63. Further, the results show that the ICT coordinators have 'high' competency levels in all the indicators under ICT systems and school infrastructure management with 'conducting inventory of all the school ICT equipment and submits this to the school property custodian' having the highest weighted mean (WM) of 4.16.

**Table 2**
**Level of Competency along ICT systems and school infrastructure management**
**n=31**

| | Indicators | VH | H | MH | L | VL | WM | DE |
|---|---|---|---|---|---|---|---|---|
| 1. | Inspects and oversees the maintenance of the ICT equipment inside the school E – classroom | 4 | 12 | 12 | 2 | 1 | 3.52 | H |
| 2. | Makes use of the ICT equipment inside the E – classroom | 3 | 12 | 14 | 1 | 1 | 3.48 | H |
| 3. | Identifies problems regarding ICT packages and reports these to suppliers and SDO – ICT Unit | 3 | 11 | 14 | 3 | 0 | 3.45 | H |
| 4. | Conducts inventory of all the school ICT equipment and submits this to the school property custodian | 12 | 12 | 7 | 0 | 0 | 4.16 | H |
| 5. | Prepares ICT Development Plan as part of the School Improvement Plan | 2 | 14 | 14 | 0 | 1 | 3.52 | H |

| | | |
|---|---|---|
| | **Weighted Mean** | **3.63 (High)** |

*Note: DE=Descriptive Equivalent; WM=Weighted Mean;*
***4.21 – 5.00** Very High (VH), **3.41 – 4.20** High (H), **2.61 – 3.40** Moderately High (MH), **1.81 – 2.60** Low (L) and **1.00 – 1.80** Very Low (VL)*

This indicates that in managing the ICT systems and school infrastructure, ICT coordinators always seek the assistance of the school property custodian in maintaining a comprehensive record of all the ICT equipment in the school since the property custodian is the one who is accountable of all the school properties. This is supported by the booklet released by the Department of Education of Papua New Guinea in 2008 [8] which states that in managing school infrastructure, a school should establish a managing committee for infrastructure because they believe that quality facilities has an impact not only on educational outcomes but on the well – being of students and teachers as well. Moreover, the result is in consonance with the "Hierarchy of Elements of Knowledge Leading the Roles of ICT Coordinators" designed by Avidov – Ungar, et.al [9] which stated that ICT coordinators should identify partners who can help them perform their roles. By doing so, they are able to become "agents of change for ICT Implementation".

Moreover, results also indicate that an ICT coordinator is a "planner" for he / she assists in the crafting of the ICT Development Plan. This is supported by research of A. Devolder, et. al. [10] which enumerates the roles of ICT coordinators, i.e. an ICT coordinator is responsible for the development, preservation, implementation and succession of the ICT – policy plan.

Meanwhile, the respondents rated lowest (3.45) on 'identifying problems regarding ICT packages and reports these to suppliers and SDO – ICT Unit' which may indicate that this process seem to be very time consuming since there are many papers to be prepared upon the reporting of defective and non – functional ICT units in schools.

**ICT Programs and Projects**

It can be viewed in Table 3 that the respondents perceived themselves having 'high' level of competency along ICT Programs and Projects (4.15). Moreover, it can be gleaned on the table that the ICT coordinators have 'very high' level of competency in facilitating, updating and mentoring teachers in the encoding of schools Learner Information System (LIS), Enhanced Basic Education Information System (EBEIS) accounts and other DepEd online programs.

This points out that the ICT coordinators are very competent in updating their school's LIS and EBEIS accounts since they do this monthly. They have to monitor the learner's status every month whether such learner has transferred out, dropped out or no longer in school due to particular reasons like family feud, distance of home to school, attitude towards learning, etc. By doing this, the school enrolment is also updated via the Enhanced Basic Education Information System (EBEIS) which is used as basis of the central office for the allotment of school facilities and even the deployment of teachers.

**Table 3**
**Level of Competency along ICT Programs and Projects**
**n=31**

| Indicators | VH | H | MH | L | VL | WM | DE |
|---|---|---|---|---|---|---|---|
| 1. Leads in the implementation of ICT Literacy via school LAC sessions | 6 | 16 | 9 | 0 | 0 | 3.90 | H |
| 2. Initiates in the updating of school Learner Information System (LIS) and Enhanced Basic Education Information System (EBEIS) accounts | 20 | 9 | 1 | 1 | 0 | 4.55 | VH |
| 3. Guides teachers on LIS online encoding | 15 | 12 | 4 | 0 | 0 | 4.35 | VH |
| 4. Facilitates in the early accomplishment of the different ICT – related DEPED programs like LRMDS, EHRIS and other alike | 11 | 16 | 4 | 0 | 0 | 4.23 | VH |
| 5. Oversees the effective use of E – classroom and the utilization of ICT | 7 | 10 | 13 | 1 | 0 | 3.74 | H |

| | | |
|---|---|---|
| equipment | | |
| | **Weighted Mean** | **4.15 (High)** |

*Note: DE=Descriptive Equivalent; WM=Weighted Mean;*
***4.21 – 5.00** Very High (VH), **3.41 – 4.20** High (H), **2.61 – 3.40** Moderately High (MH), **1.81 – 2.60** Low (L) and **1.00 – 1.80** Very Low (VL)*

The result is consistent with the studies of Honiges [11] and Cucchiara and Horvat [12] which stated the importance of a school website. According to their studies, a school website serves as a platform in promoting the school programs and projects and it could be a good avenue for the school stakeholders to be informed of the happenings inside the school. Thus, an updated LIS and EBEIS accounts which are likened to a school website is a must in every school and the ICT coordinator is the one who is responsible in updating the information in the school website. [13]

**ICT Technical Assistance**

The results show that the respondents have 'high' level of competency along ICT Technical Assistance (3.67). It is also revealed that the ICT coordinators are 'highly' competent in all of the indicators.

It indicates that ICT coordinators are able to provide assistance to their co-workers especially in integrating ICT in the teaching – learning process. They are taking the role of a "technician" which is defined as "taking responsibility for the management and maintenance of the ICT equipment and being available for communication concerning technical assistance and problems". [10]

**Table 4**
**Level of Competency along ICT Technical Assistance**

| Indicators | VH | H | MH | L | VL | WM | DE |
|---|---|---|---|---|---|---|---|
| 1. Serves as guide to peers, learners and school heads with regards to the integration of ICT in teaching and learning | 6 | 18 | 6 | 1 | 0 | 3.94 | H |
| 2. Collaborates with the District ICT and Division ITO on the monitoring and evaluation of ICT programs and projects to ensure effective feedback and collaboration | 9 | 9 | 12 | 1 | 0 | 3.84 | H |
| 3. Directs schools and learning centers on ICT implementation | 3 | 13 | 14 | 1 | 0 | 3.58 | H |
| 4. Diagnoses of ICT needs and requirements | 3 | 13 | 13 | 2 | 0 | 3.55 | H |
| 5. Suggest solutions / ways to address ICT needs and requirements | 4 | 10 | 14 | 2 | 1 | 3.45 | H |
| **Weighted Mean** | | | | **3.67 (High)** | | | |

*Note: DE=Descriptive Equivalent; WM=Weighted Mean;*
***4.21 – 5.00** Very High (VH), **3.41 – 4.20** High (H), **2.61 – 3.40** Moderately High (MH), **1.81 – 2.60** Low (L) and **1.00 – 1.80** Very Low (VL)*

Likewise, A. Devolder, et. al. [10] also stated that the technical role of an ICT coordinator is carried out in daily practice thus, he / she spends the largest amount of his / her time in fulfilling technical roles such as being the contact person for all the technical questions and problems, being responsible for the installation of the hardware and software, and showing teachers the possibilities to learn about ICT and the use of ICT.

Consequently, the main role of ICT coordinators is to work with and guide teachers in the implementation of ICT in the classroom. In fact, according to an interview with the District ICT leader, teachers nowadays are encouraged to use laptops, projectors, televisions, speakers in delivering their lessons because doing this may pose a great impact in the learning outcome of the learners. Furthermore, in

the STAR observation checklist of the Division of Tarlac Province, one of the indicators in improving the teaching – learning process is through Computer – Aided Instruction (CAI).

On the other hand, the indicator 'suggests solutions / ways to address ICT needs and requirements' got the lowest mean (3.45), which may denote that the respondents somewhat neglected this because of minimal resources such that there is no allotted budget in purchasing ICT facilities and equipment.

**ICT Programs and Projects and Policies and Standards Implementation**

It is noted in Table 5 that the respondents perceived themselves as 'highly' competent along ICT Programs and Projects and Policies and Standards Implementation (3.51). Additionally, all of the indicators posted a 'high' level of competency.

This suggests that ICT Coordinators are mandated to align their individual work plan (IWP) to the district, division, regional and national programs and projects. They should devise or localize a plan that is suited in their respective areas without neglecting the greater umbrella from the higher implementing bodies.

However, though the ICT coordinators align their plans with the plans, programs and projects of the higher implementing bodies, there is no confirmation of this alignment because there is no designated quality assurance authority to do so whether in the district, division, regional, or national offices. The IWPs of the ICT coordinators remain as plans. It is supported by A. Devolder et al. [10] which states that in many cases the ICT coordinator has assigned multiple, complex and demanding tasks, therefore only a few can be done in practice.

**Table 5**
**Level of Competency along ICT Programs and Projects and Policies and Standards Implementation**

| Indicators | VH | H | MH | L | VL | WM | DE |
|---|---|---|---|---|---|---|---|
| 1. Develops school plans on programs and projects aligned with the district, division, regional and national PPs | 4 | 10 | 16 | 1 | 0 | 3.55 | H |
| 2. Helps in the implementation of the PPs in the school / district / division | 3 | 12 | 15 | 1 | 0 | 3.55 | H |
| 3.Hnsures alignment of the schools policy standards with the District / Division / Regional / National policies and standards for Basic Education | 2 | 11 | 17 | 1 | 0 | 3.45 | H |
| 4. Manages the provision of ICT services including the maintenance of technology infrastructure and operation of ICT – based systems | 2 | 12 | 16 | 1 | 0 | 3.48 | H |
| 5. Ensures that service delivery standards are met through regular and systematic monitoring of system / technology performance | 1 | 16 | 12 | 2 | 0 | 3.52 | H |
| **Weighted Mean** | | | | | | **3.51 (High)** | |

*Note: DE=Descriptive Equivalent; WM=Weighted Mean;*
***4.21 – 5.00** Very High (VH), **3.41 – 4.20** High (H), **2.61 – 3.40** Moderately High (MH), **1.81 – 2.60** Low (L) and **1.00 – 1.80** Very Low (VL)*

Table 6 reveals, generally, that the respondents perceived themselves with a 'High' (WM = 3.74) level of competency which may indicate that they have the sufficient knowledge, skill and attitude as school ICT Coordinators.

The table also shows that the indicator 'ICT Programs and Projects' has the highest level of competency with a weighted mean of 4.15 which means that the respondents are fully equipped regarding ICT Programs and Projects such that they are used to doing their duties and functions especially in terms of the online systems of the DepEd.

**Table 6**
**Summary in the Level of Competency of ICT Coordinators**

| Indicators of Level of Competencies | Weighted Mean | Descriptive Equivalent |
|---|---|---|
| a. ICT Systems and School Infrastructure Management | 3.63 | High |
| b. ICT Programs and Projects | 4.15 | High |
| c. ICT Technical Assistance | 3.67 | High |
| d. ICT Programs and Projects and Policies and Standard Implementation | 3.51 | High |
| **Average Weighted Mean** | **3.74** | **High** |

*Legend:* ***4.21 – 5.00*** *Very High (VH),* ***3.41 – 4.20*** *High (H),* ***2.61 – 3.40*** *Moderately High (MH),* ***1.81 – 2.60*** *Low (L) and* ***1.00 – 1.80*** *Very Low (VL)*

However, ICT Programs and Projects and Policies and Standard Implementation received the lowest mean (WM = 3.51) which may imply that though ICT Coordinators know the programs and projects and policies and standards, they are not fully oriented on the guidelines on implementation maybe because the DepEd does not conduct workshops or seminars regarding this matter and in fact, there is no Implementing Rules and Regulations (IRR) about this.

**Level of Performance of ICT Coordinators in Performing their Duties and Functions**

Tables 7 to 10 reveal the level of performance of ICT coordinators in performing their duties and functions along ICT systems and school infrastructure management, ICT programs and projects, ICT technical assistance and ICT programs and projects and policies and standards implementation as perceived by their immediate supervisors and by themselves.

**ICT Systems and School Infrastructure Management**

The school heads perceived their ICT coordinators as 'very satisfactory' (WM = 3.57) while the ICT coordinators rated themselves as 'satisfactory' (WM = 3.27) in performing their duties and functions along ICT systems and school infrastructure management. Furthermore, the immediate supervisors gave their respective ICT coordinators a 'Very Satisfactory' (WM = 3.61) level performance in crafting the ICT Development Plan as part of the School Improvement Plan.

This points out that in order to manage the ICT systems and infrastructure of the school well, the ICT coordinators should devise a plan that is in consonance with the School Improvement Plan hence, such plan will serve as guide in improving the ICT area of the school.

The result is supported by the study of A. Devolder, et. al. [10] which stated that ICT coordinators are also considered as "planners" such that they devise an ICT – policy plan and they are ones responsible for the implementation, preservation and succession of such plans.

**Table 7**
**Level of Performance along ICT Systems and School Infrastructure Management as perceived by Supervisor and ICT Coordinator**

| Indicators | Group | O | VS | S | US | P | WM | DE |
|---|---|---|---|---|---|---|---|---|
| 1. Inspects and oversees the maintenance of the ICT equipment inside the school E – classroom | S | 0 | 21 | 8 | 0 | 2 | 3.55 | VS |
| | C | 2 | 11 | 13 | 4 | 1 | 3.29 | S |
| 2. Makes use of the ICT equipment inside the E – classroom | S | 2 | 19 | 7 | 1 | 2 | 3.58 | VS |
| | C | 1 | 13 | 13 | 3 | 1 | 3.32 | S |
| 3. Identifies problems regarding ICT packages and reports these to | S | 4 | 12 | 14 | 0 | 1 | 3.58 | VS |

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| suppliers and SDO – ICT Unit | C | 3 | 3 | 23 | 2 | 0 | 3.23 | S |
| 4. Conducts inventory of all the school ICT equipment sand submits this to the school property custodian | S | 6 | 13 | 4 | 7 | 1 | 3.52 | VS |
| | C | 3 | 6 | 18 | 3 | 1 | 3.23 | S |
| 5. Prepares ICT Development Plan as part of the School Improvement Plan | S | 5 | 14 | 8 | 3 | 1 | 3.61 | VS |
| | C | 1 | 10 | 17 | 3 | 0 | 3.29 | S |
| **Weighted Mean** | S | **3.57 (Very Satisfactory)** | | | | | | |
| | C | **3.27(Satisfactory)** | | | | | | |

*Note: DE=Descriptive Equivalent; WM=Weighted Mean; S=Supervisor, C=ICT Coordinator*
***4.21 – 5.00** Outstanding (O), **3.41 – 4.20** Very Satisfactory (VS), **2.61 – 3.40** Satisfactory (S), **1.81 – 2.60** Unsatisfactory (US) and **1.00 – 1.80** Poor (P)*

**ICT Programs and Projects**

Table 8 generally shows a 'very satisfactory' (WM = 4.10) level of performance among ICT coordinators as perceived by their immediate supervisors and an 'outstanding' (WM = 4.34) performance as perceived by themselves along ICT programs and projects.

Moreover, receiving the highest means which both fall in the 'outstanding' level and are according to the ICT Coordinators and immediate supervisors, respectively, are the indicators 'mentors teachers on LIS online encoding' (WM = 4.74) and 'updates schools LIS and EBEIS accounts' (WM = 4.52).

This may indicate that the ICT Coordinators oversee the completeness of the LIS online encoding since they are also the schools' LIS coordinator. This is supported by the studies of Honiges [11] and Cucchiara and Horvat [12] about the importance of an updated school website or online systems such that these platforms help the school to reach its stakeholders.

Also, the results mean that the ICT coordinators are diligent and prompt in complying in all the ICT enabled system reports. This is true because DepEd Tarlac Province's practice in submitting online reports is five days before the set national deadline.

**Table 8**
**Level of Performance along ICT Programs and Projects as perceived by Supervisor and ICT Coordinator**
**n = 62**

| Indicators | Group | O | VS | S | US | P | WM | DE |
|---|---|---|---|---|---|---|---|---|
| 1. Leads in the implementation of ICT Literacy via school LAC sessions | S | 11 | **15** | 3 | 0 | 2 | 4.06 | VS |
| | C | **17** | 11 | 3 | 0 | 0 | 4.45 | O |
| 2. Initiates in the updating of school Learner Information System (LIS) and Enhanced Basic Education Information System (EBEIS) accounts | S | **18** | 11 | 2 | 0 | 0 | 4.52 | O |
| | C | **21** | 8 | 2 | 0 | 0 | 4.61 | O |
| 3. Guides teachers on LIS online encoding | S | **17** | 12 | 1 | 0 | 1 | 4.42 | O |
| | C | **24** | 6 | 1 | 0 | 0 | 4.74 | O |
| 4. Facilitates in the early accomplishment of the different ICT – related DEPED programs like LRMDS, EHRIS and other alike | S | **13** | 10 | 6 | 0 | 2 | 4.03 | VS |
| | C | **17** | 8 | 5 | 1 | 0 | 4.32 | O |
| 5. Oversees the effective use of E – classroom and the utilization of ICT equipment | S | 2 | **16** | 9 | 2 | 2 | 3.45 | VS |
| | C | 1 | **16** | 13 | 1 | 0 | 3.55 | VS |
| **Weighted Mean** | S | **4.10 (Very Satisfactory)** | | | | | | |
| | C | **4.34 (Outstanding)** | | | | | | |

*Note: DE=Descriptive Equivalent; WM=Weighted Mean; S=Supervisor, C=ICT Coordinator*

***4.21 – 5.00*** *Outstanding (O),* ***3.41 – 4.20*** *Very Satisfactory (VS),* ***2.61 – 3.40*** *Satisfactory (S),* ***1.81 – 2.60*** *Unsatisfactory (US) and* ***1.00 – 1.80*** *Poor (P)*

**ICT Technical Assistance**

It can be seen on Table 9 on the next page that the ICT coordinators' immediate supervisors rated them as 'very satisfactory' (WM = 3.46) while the ICT Coordinators rated themselves as 'satisfactory' (WM = 3.19) in performing their task along Technical Assistance.

In fact, in terms of providing technical assistance to peers, learners and school heads with regards to the integration of ICT in teaching and learning, both the school head respondents and the ICT coordinators ratings fall on the 'very satisfactory' level with a weighted mean of 3.84 and 3.42, respectively. This indicates that the ICT coordinators are always available in assisting their colleagues as well as the learners in improving the quality of education through the integration of ICT in the teaching - learning process.

The results are supported by the studies of Ali, Haolader, & Muhammad [14] and Egwali, Igodan [15] which say that ICT coordinators supports both teachers and learners in operating, manipulating, retrieving information and it also encourages independent and active learning. Likewise, according to Valverde & Sosa-Díaz [16], ICT coordinators must respond to teachers' demands in both technical, such as maintenance equipment, and pedagogical tasks. They must take the lead in working along with their colleagues to raise children's digital competence throughout the school education. They also have responsibility to provide suitable and contextualized training for teachers, thus supporting staff development in the use of ICT.

**Table 9**
**Level of Performance along ICT Technical Assistance as perceived by Supervisor and ICT Coordinator**
**n = 62**

| Indicators | Group | O | VS | S | US | P | WM | DE |
|---|---|---|---|---|---|---|---|---|
| 1. Serves as guide to peers, learners and school heads with regards to the integration of ICT in teaching and learning | S | 8 | **14** | 6 | 2 | 1 | 3.84 | VS |
| | C | 4 | 7 | **18** | 2 | 0 | 3.42 | VS |
| 2. Collaborates with the District ICT and Division ITO on the monitoring and evaluation of ICT programs and projects to ensure effective feedback and collaboration | S | 3 | **14** | 9 | 4 | 1 | 3.45 | VS |
| | C | 4 | 7 | **17** | 3 | 0 | 3.39 | S |
| 3. Directs schools and learning centers on ICT implementation | S | 5 | **12** | 11 | 2 | 1 | 3.58 | VS |
| | C | 5 | 7 | **16** | 3 | 0 | 3.45 | VS |
| 4. Diagnoses of ICT needs and requirements | S | 3 | 9 | **13** | 2 | 4 | 3.16 | S |
| | C | 2 | 4 | **13** | 12 | 0 | 2.87 | S |
| 5. Suggest solutions / ways to address ICT needs and requirements | S | 6 | 7 | **10** | 5 | 3 | 3.26 | S |
| | C | 3 | 3 | **12** | **12** | 1 | 2.84 | S |
| **Weighted Mean** | S | **3.46 (Very Satisfactory)** | | | | | | |
| | C | **3.19 (Satisfactory)** | | | | | | |

*Note: DE=Descriptive Equivalent; WM=Weighted Mean; S=Supervisor, C=ICT Coordinator*
***4.21 – 5.00*** *Outstanding (O),* ***3.41 – 4.20*** *Very Satisfactory (VS),* ***2.61 – 3.40*** *Satisfactory (S),* ***1.81 – 2.60*** *Unsatisfactory (US) and* ***1.00 – 1.80*** *Poor (P)*

**ICT Programs and Projects and Policies and Standards Implementation**

It can be gleaned from the table below that, generally, the school head – respondents rated the ICT coordinators with a 'satisfactory' (WM = 3.08) level of performance while the ICT coordinators perceived themselves as 'satisfactorily' (WM = 2.65) performing along ICT Programs and Projects and Policies and Standards Implementation.

**Table 10**
**Level of Performance along ICT Programs and Projects and Policies and Standards Implementation as perceived by Supervisor and ICT Coordinator**
**n = 62**

| Indicators | Group | O | VS | S | US | P | WM | DE |
|---|---|---|---|---|---|---|---|---|
| 1. Develops school plans on programs and projects aligned with the district, division, regional and national PPs | S | 4 | **10** | 2 | 7 | 8 | 2.84 | S |
| | C | 2 | 3 | **10** | 7 | 9 | 2.42 | US |
| 2. Helps in the implementation of the PPs in the school / district / division | S | 4 | 8 | 4 | 5 | **10** | 2.71 | S |
| | C | 2 | 4 | 8 | 8 | **9** | 2.42 | US |
| 3. Ensures alignment of the schools policy standards with the District / Division / Regional / National policies and standards for Basic Education | S | 7 | 7 | **10** | 3 | 4 | 3.32 | S |
| | C | 4 | 2 | 8 | **11** | 6 | 2.58 | US |
| 4. Manages the provision of ICT services including the maintenance of technology infrastructure and operation of ICT – based systems | S | 3 | **12** | 7 | 5 | 4 | 3.16 | S |
| | C | 3 | 5 | **10** | **10** | 3 | 2.84 | S |
| 5. Ensures that service delivery standards are met through regular and systematic monitoring of system / technology performance | S | 6 | **12** | 5 | 4 | 4 | 3.39 | S |
| | C | 4 | 4 | 11 | **12** | 0 | 3.00 | S |
| **Weighted Mean** | S | **3.08 (Satisfactory)** | | | | | | |
| | C | **2.65 (Satisfactory)** | | | | | | |

*Note: DE=Descriptive Equivalent; WM=Weighted Mean; S=Supervisor, C=ICT Coordinator*
***4.21 – 5.00** Outstanding (O), **3.41 – 4.20** Very Satisfactory (VS), **2.61 – 3.40** Satisfactory (S), **1.81 – 2.60** Unsatisfactory (US) and **1.00 – 1.80** Poor (P)*

It can be noticed that the performance rating given by the ICT coordinators to themselves is quite low such that some of the indicators fall on 'unsatisfactory' level, though, overall, it still falls on the 'satisfactory' level. The results may denote that the ICT coordinators are not that quite knowledgeable about the guidelines and standards in instigating the programs and projects and policies and standards prescribe and as mandated by the Department of Education.

**Table 11**
**Summary of the Level of Performance of ICT Coordinators as perceived by their Immediate Supervisors and by themselves**
**(n=62)**

| Indicators of Level of Performance | Group | Weighted Mean | Descriptive Equivalent |
|---|---|---|---|
| **a.** ICT Systems and School Infrastructure Management | S | 3.57 | Very Satisfactory |
| | C | 3.27 | Satisfactory |
| **b.** ICT Programs and Projects | S | 4.10 | Very Satisfactory |
| | C | 4.34 | Outstanding |

| | | | |
|---|---|---|---|
| **c.** ICT Technical Assistance | S | 3.46 | Very Satisfactory |
| | C | 3.19 | Satisfactory |
| **d.** ICT Programs and Projects and Policies and Standard Implementation | S | 3.08 | Satisfactory |
| | C | 2.65 | Satisfactory |
| **Average Weighted Mean** | **S** | **3.55** | **Very Satisfactory** |
| | **C** | **3.36** | **Satisfactory** |

*Note: DE=Descriptive Equivalent; WM=Weighted Mean; S=Supervisor, C=ICT Coordinator*
***4.21 – 5.00** Outstanding (O), **3.41 – 4.20** Very Satisfactory (VS), **2.61 – 3.40** Satisfactory (S), **1.81 – 2.60** Unsatisfactory (US) and **1.00 – 1.80** Poor (P)*

Overall, the level of performance of ICT Coordinators as perceived by their Immediate Supervisors falls on the 'very satisfactory' level. This may indicate that the ICT Coordinators do their duties and functions efficiently and effectively based on the perception of their immediate supervisors. This result differs from the result of the study done by Jamil, Jamil & Rasheed [17] which said that teachers' ICT performance falls only on 'satisfactory' level and on the study of Chuan and Kho [18] which revealed that in the evaluation of teacher's performance, none of the 10 – item criteria was rated as "excellent".

On the other hand, ICT Coordinators perceived their level of performance as 'satisfactory' which may indicate that if they were to appraise themselves, they will not give themselves a high rating because being an ICT Coordinator is just an additional workload hence, they somewhat neglect their tasks as ICT Coordinator.

Furthermore, the table reveals that the ICT Coordinators are performing 'very satisfactorily' and 'outstandingly' in terms of ICT Programs and Projects based on their immediate supervisors and as perceived by themselves which means that they are perceived by their colleagues and peers as the most knowledgeable persons in this area. In fact, according to one school head, whenever there are problems regarding ICT may be it with the online systems of the DepEd or with the integration of ICT in the teaching – learning process, the go-to person for these problems is the school ICT Coordinator.

**Difference in the Level of ICT Competencies of ICT Coordinators across Profile Variables**

This part deals with the difference in the level of ICT competencies among ICT coordinators across their profile variables.

As viewed on table 12, overall, there is no significant difference between the level of ICT competencies of ICT coordinators across their profile variables based on the values of the multivariate Wilk's **Λ** with corresponding significance values greater than the level of significance set at 0.05. Therefore, the null hypothesis was accepted.

**Table 12**
**Difference in the Level of ICT Competencies across the Respondents' Profile**
**(n = 31)**

| Profile | Wilk's Λ | Sig. |
|---|---|---|
| Age | 0.777 $^{ns}$ | 0.402 |
| Sex | 0.786 $^{ns}$ | 0.428 |
| Highest Educational Attainment | 0.755 $^{ns}$ | 0.344 |
| Number of Trainings | 0.759 $^{ns}$ | 0.356 |
| Length of Service | 0.768 $^{ns}$ | 0.378 |

$^{ns}$ *Not Significant*

The findings denote that the Level of ICT Competencies of ICT Coordinators could not be determined by their profile viz: age, sex, highest educational attainment, number of trainings related to ICT, and length of service.

This finding is in contrast with the study done by Vitanova, et. al [19] which stated that as teachers age, the level of their ICT competency decreases. Younger teachers aged below 35 pose a higher mean of competency than their older counterparts, i.e. aged 40 to 65 years old [20].

Moreover, with respect to sex, the result of this study is not in accordance with the studies of Mahmood and Bokhari [21] and Vitanova, et. al. [19] which both concluded that there was a significant difference between the ICT Competency of males and females such that males pose a higher mean competency scores because, generally, males are more likely to participate in ICT – based activities.

The results regarding highest educational attainment is similar to the research done by Marcial [22] which stated that there is no significant difference between the level of ICT competency of teachers whatever educational degree they hold.

Furthermore, opposing to the result of this study, Kerckaert, et. al [23] stated that professional engagements of teachers play an important role in stimulating their ICT competence and attitudes. Likewise, experienced teachers are less likely ready to integrate ICT in their teaching according to Baek, Jong, Kim [24] thus, newly qualified teachers had a higher perception of their ICT skills than the experienced ones [3].

**Difference in the Level of Performance of ICT Coordinators in Public Elementary Schools in Moncada**

Table 13 shows the difference between the Level of Performance of the ICT Coordinators in Public Elementary Schools in Moncada as perceived by their immediate supervisors and by themselves, respectively.

Table 13 below shows that overall, there is no significant difference in the Level of Performance in the assigned ICT Duties and Functions of ICT Coordinators between ICT coordinators and Supervisors based on the associated significance value higher than the .05 level. Thus, the null hypothesis was accepted.

**Table 13**
**Difference in the Level of Performance of ICT Coordinators in Public Elementary Schools in Moncada (n = 62)**

| Assigned ICT Duties and Functions | Group | Mean | Mean Difference | tc | Sig. |
|---|---|---|---|---|---|
| Systems and School Infrastructure Management | Supervisor | 3.57 | .30 | $1.54^{ns}$ | .134 |
| | ICT Coordinator | 3.27 | | | |
| Programs and Projects | Supervisor | 4.10 | -.24 | $-2.03^{ns}$ | .052 |
| | ICT Coordinator | 4.34 | | | |
| Technical Assistance | Supervisor | 3.46 | .26 | $1.26^{ns}$ | .219 |
| | ICT Coordinator | 3.19 | | | |
| Programs and Projects and Policies and Standards Implementation | Supervisor | 3.08 | .43 | $1.39^{ns}$ | .176 |
| | ICT Coordinator | 2.65 | | | |

$^{ns}$ *Not Significant*

The findings indicate that both the ICT coordinators and their immediate supervisors have the same perception of their performance. Furthermore, their immediate supervisors perceived them as hard working and very diligent in performing the tasks assigned to them because they still manage to comply with whatever their work demands as much as being an ICT coordinator is concerned.

**Relationship Between the Level of Competency and Performance of ICT Coordinators in Public Elementary Schools in Moncada**

This part deals with the relationship between the Level of Competency and Performance of the ICT Coordinators in Public Elementary Schools in Moncada.

**Table 14**
**Relationship Between the Level of ICT Competencies and Performance of ICT Coordinators in Public Elementary Schools in Moncada**
**(n = 31)**

| Level of Competency | Level of Performance | |
|---|---|---|
| | r | Sig. |
| Systems and School Infrastructure Management | .029 | .876 |
| Programs and Projects | -.148 | .427 |
| Technical Assistance | .146 | .433 |
| Programs and Projects and Policies and Standards Implementation | .193 | .299 |

Table 14 displays that there is no significant relationship between the Level of ICT Competencies and Performance of ICT Coordinators based on p values higher than the .05 level of significance.

This finding remains the null hypothesis at 0.05 level of significance. Thus, this does not support the notion that if someone is competent, he or she will register a high level of performance on the said duties and functions. In fact, according to the district ICT specialist of Moncada South, being an ICT Coordinator is an additional workload for the teachers since most of the assigned school ICT coordinators are classroom teachers with six – hour teaching load. Thus, most of the times, they neglect their duties and functions. Subsequently, this was affirmed by A. Devolder, et. al [10] which states that the more tasks assigned to ICT Coordinators, the less likely those tasks can be done into practice.

## CONCLUSIONS

Based on the findings stated above, the following conclusions are drawn: (1) most of the ICT coordinators in public elementary schools in Moncada are middle aged, male, bachelor degree holders with minimal number of trainings attended regarding ICT and are newly assigned as school ICT Coordinators; (2) the ICT Coordinators perceived that they are 'Highly' competent in performing their duties and functions; (3) the school administrators rated their ICT Coordinators with a 'Very Satisfactory' performance while the ICT Coordinators rated themselves as 'Satisfactory'; (4) ICT coordinators are competent regardless of their profile; (5) there was no significant difference between the Level of Performance of ICT Coordinators in Public Elementary Schools in Moncada as perceived by themselves and their immediate supervisors; and (6) there was no significant relationship between the Level of Competency and Performance of ICT Coordinators in Public Elementary Schools in Moncada.

## RECOMMENDATIONS

Based on the conclusions, the researcher recommends the following:

1. Administrators shall conduct trainings and workshops which are focused on ICT Infrastructure Management and ICT Programs and Projects and Policies and Standards Implementation.
2. Design comprehensive Key Result Areas (KRAs) as basis for Individual Performance and Commitment (IPC) for designated school ICT Coordinators alone.
3. Provide job description for ICT Coordinators' designation.
4. Monitor the strict implementation of the Individual Work Plan (IWP) of each ICT Coordinator and provide the impacts of such plan.

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