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### RESEARCH ARTICLE

#### INFORMATION AND COMMUNICATION TECHNOLOGY COORDINATORS' COMPETENCY SKILLS AND CLIENTS' SATISFACTION

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#### Abstract

Information and communication technology (ICT) undoubtedly changes the lives of people, especially in this time of pandemics. Almost all the communications strategies of the different agencies have adopted the technology. ICT has posed a lot of benefits from making communication faster and circulating information. ICT brings impact to the educational field through rapid development and positive changes. The Department of Education designated ICT Coordinators to oversee the duties and functions of technological assistance in the school. This study determined the Information and Communication Technology Coordinators' competency skills and clients' satisfaction involving a total of 297 respondents including the ICT coordinators of each school. Employing the descriptive correlational research design, this study had utilize a researcher developed questionnaire to gather the data from the ICT coordinators and teachers from the elementary schools in the Division of Biliran. The results found that the ages of the respondents have ranged from 22 to 45 years, most of them are female, married, Master's Degree holders, mostly 10 to 14 years in the service, and have attended local training and seminars. The level of competency skills of ICT coordinators in terms of computer system servicing was moderately competent, and in terms of preventive maintenance was highly competent. There was a high level of clients' satisfaction. The sex and number of years in the service have a significant relationship to clients' satisfaction, while the age, educational attainment, and training and seminars attended have no significant relationship to clients' satisfaction. There was also significant relationship between the competency skills of ICT coordinators and clients' satisfaction. Moreover, results also indicated that ICT coordinators have encountered problems while rendering their services to their clients such as: no available funds allocated for the maintenance of the computers due to limited allocation of Maintenance and Other Operating Expenses (MOOE); ICT Coordinators were assigned to various school activities and under regular teaching hours; and some computer units were no longer functional. The school administrators shall conduct training and workshops which should focused on computer servicing to enhance the level of competency skills of ICT

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coordinators and fund may also be allocated for the maintenance of computer units and to upgrade the internet connectivity to improve the level of clients' satisfaction.

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## ..... **Introduction:-**

According to Agbo, (2015) the technology involves the generation of knowledge and processes to develop systems that solve problems and extend human capabilities. In other words, technology can change or alter how people access, gather, analyze, present, transmit, and simulate information. Schools, like all other social institutions, are rapidly embracing information and communication technologies (ICT).

Globalization and the knowledge-based economy are leaving no choices for education systems worldwide but to adopt ICT and weave it into their educational milieu (Abuhmaid, 2011).

Likewise, Volman & Van Eck (2001) stressed that the use of information and communication technology creates a powerful learning environment and it transforms the learning and teaching process in which students deal with knowledge in an active, self-directed, and constructive way.

ICT is not just regarded as a tool, which can be added to or used as a replacement for existing teaching methods. It is seen as an important instrument to support new ways of teaching and learning. It should be used to develop students' skills for cooperation, communication, problem-solving, and lifelong learning (Plomp et al., 1996; Voogt, 2003).

ICT means increasing access to information, inspiring new developments in teaching, and allowing individuals and communities to interact at any time. Although disputes over the value of using ICT in education are one factor, the lack of availability of ICT in schools is another reason why its use is limited. Other dynamics include the realities and culture of the typical classroom and teachers' knowledge, skills, beliefs, and expertise, and particularly the lack of ICT Coordinators' competency skills (CEO Forum on Educational Technology, 2011).

As education reform efforts have emphasized the importance of integrating ICT in the classroom, citing these factors, and the need for ICT coordinators' competency skills is important to do so (Donnelly, et. al 2011).

As stressed by Araiz, J. (2018) ICT coordinators play a significant role in the effective delivery of education in every school. There have been many studies carried out about ICT, but less has been done dealing specifically with the competency skills of ICT coordinators.

ICT coordinators' competency skills mean the confident and critical use of electronic media for work, leisure, and communication which are related to logical and critical thinking, high-level information management skills, and well-developed communication skills (Giavrimis, P. 2011).

Likewise, according to Pelgrum (2011), the success of educational innovations depends largely on the competency skills of ICT coordinators. Also, he found that ICT coordinators' lack of competency skills was the second most inhibiting obstacle to the use of computers in schools.

Meanwhile, Hennessy, S., et. al (2010) stressed that ICT coordinators who have a strong engagement towards their competency skills are more motivated to undertake activities which leads to clients' satisfaction.

Also, Ako-Nai, E. A. (2011) pointed out that the level of clients' satisfaction is the result of the clients' judgment of the service quality.

Likewise, Angelova, B (2011) opined that satisfaction or dissatisfaction is a measure or evaluation of a service's ability to meet a client's need or expectations. To achieve clients satisfaction, service to clients must be consistent and reliable.

Moreover, Zeleke, T. (2012) pointed out that clients are satisfied when their judgment of the service they have received equals or exceeds what they expected. If the level of competency skills of ICT coordinators is high, most

likely the level of clients' satisfaction will also be high. If the clients' satisfaction would be high, then, the effective delivery of education in every school has been, therefore, being achieved (Araiz, J. 2018).

Although ICT has the potential to improve education system of a country to a great extent, yet it is not the case in the developing countries. There are multiple issues and challenges confronting the implementation of ICT education in schools and educational institutions in these countries and the problems are much more magnified in case of schools located in remote villages and rural areas. For rural schools in specific, the introduction of ICT faces hindrances in the form of internal and external barriers. Internal barriers to ICT implementation in schools in rural locations include: Lack of trained teachers- A major obstacle in the use of ICT in rural education is the lack of knowledge and skills. There is dearth of dynamic teachers formally trained in ICT. Moreover, there is hardly any quality training imparted on a regular basis to teachers involved in ICT education. Unfavourable organizational culture and poor attitude and beliefs- Often in developing nations, the educational organizations and school management fail to perceive the importance and seriousness of the role of ICT in education enhancement. Also, the teachers attitudes and beliefs are outdated and orthodox. They are unaware and rigid and not willing to adapt to the change. They harbor false beliefs that ICT is meant primarily for the youngsters and are skeptical about the effectiveness and utility of ICTs in school education (digitalLEARNING Network (2020).

To address the aforecited gap, and in order to compete in a global competitive environment, a highly skilled and educated workforce with aptitude and skill sets in application of ICT is inevitable in every school.

Hence, this study aimed to assess the ICT coordinators' competency skills and clients' satisfaction in the Caibiran district.

### **Objectives of the Study:-**

This study generally aimed to determine the ICT coordinators' competency skills and clients' satisfaction.

Specifically, it sought to achieve the following:

1. To determine the demographic profile of the ICT coordinators in terms of:
  - 1.1 age;
  - 1.2 sex;
  - 1.3 educational attainment;
  - 1.4 number of years in the service, and;
  - 1.5 training and seminars attended.
2. To assess the level of competency skills of ICT coordinators as perceived by themselves in terms of:
  - 2.1 computer system servicing; and
  - 2.2 preventive maintenance.
3. To determine the level of clients' satisfaction.
4. To ascertain the significant relationship between the demographic profile of ICT coordinators and clients' satisfaction.
5. To ascertain the significant relationship between the competency skills of ICT coordinators and the clients' satisfaction.
6. To identify the problems encountered by the ICT coordinators.

### **Hypotheses**

H<sub>01</sub>: There is no significant relationship between the demographic profile of ICT coordinators and clients' satisfaction.

H<sub>02</sub>: There is no significant relationship between the competency skills of the ICT coordinators and the clients' satisfaction.

### **Framework of the Study**

This section presents the theoretical and conceptual framework of the study which have provided the foundation of this research.

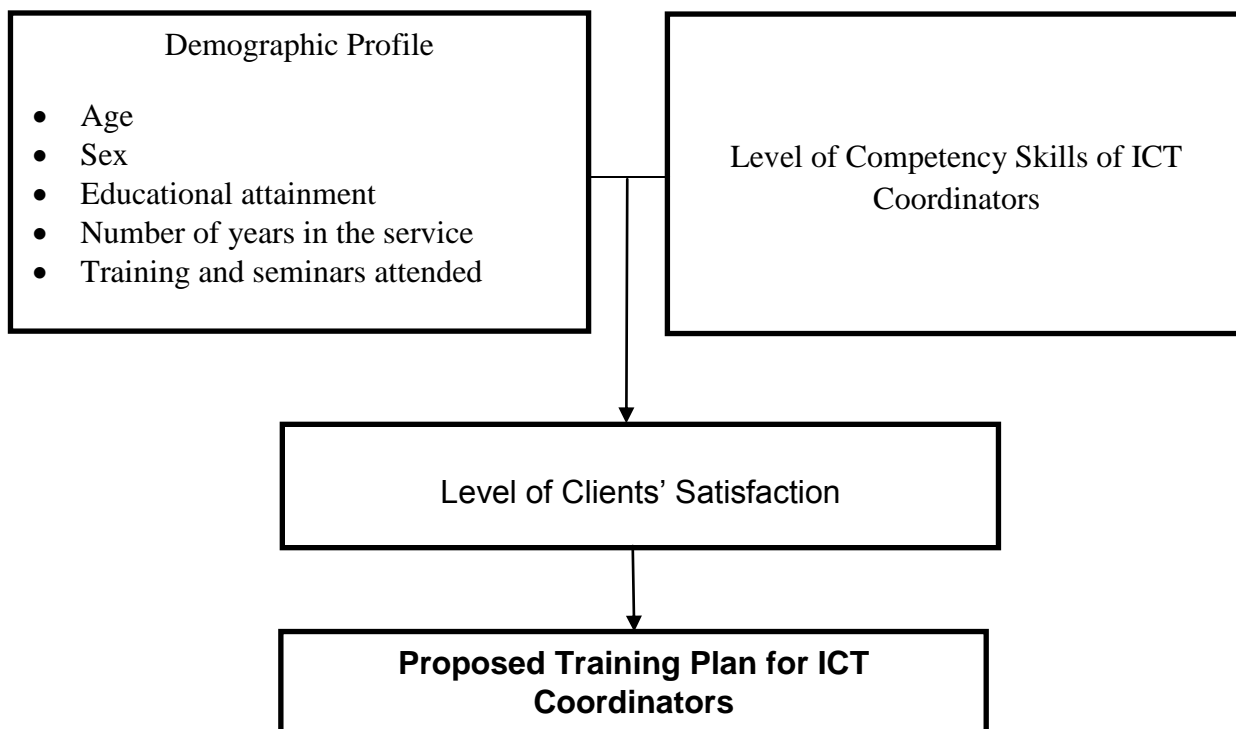
Theoretical Framework. The study is anchored on the theory espoused by Robert White (1959) known as "Competence Motivation Theory" which provided the foundation for this research.

According to said theory, individuals are attracted to participate in activities in which they feel competent. Within each domain, individuals are motivated to engage in mastery attempts for developing or demonstrating competence. If their mastery attempts result in success at an optimally challenging task and if they receive socio-emotional support from significant individuals for such task success, then they will experience perceptions of competence (belief in their abilities in that domain) along with perceptions of performance control (belief in their ability to control their performance).

This theory is related to the study as it seeks to determine the competency skills of ICT coordinators and clients' satisfaction.

**Conceptual Framework.** This study deals with ICT coordinators' competency skills and client satisfaction. Specifically, it sought to determine the demographic profile of the ICT coordinators in terms of age, sex, educational attainment, number of years in the service, and training and seminars attended. As well as, it tries to assess the level of competency skills of ICT coordinators. The demographic profile of the ICT coordinators and the competency skills are the independent variables. While the clients' satisfaction will be the dependent variable.

**Figure 1:-** Shows the conceptual framework of the study.



**Conceptual framework of the study.**

### **Review of Literature:-**

This section provides further elaboration of the concepts and findings relevant to the present study with a particular focus on the variables under investigation. This study made use of local and foreign literature and reference. It discussed the results of studies previously conducted focusing on ICT coordinators' competency skills and clients' satisfaction.

Information and Communication Technology (ICT) are used by key persons, known as teachers and ICT Coordinators in educational settings productively to get the maximum benefits for their students and integrate ICT into the curriculum and its implementation. Teachers are vital players to improve the teaching and learning processes at schools, colleges, teacher education institutes and universities to achieve their goals on a large scale (Usun, 2009).

Accordingly, Information and Communication Technology aims to improve the performance of teachers and students which increases the effectiveness and efficiency of the teaching-learning process (UNESCO, 2003).

Likewise, the importance of ICT adds value to the process of learning, assists with the organization and management of learning institutes, and cuts across all aspects of economic and social life. However, the adaptation of ICT is only possible with a sound understanding of the principles and concepts therein (UNESCO, 2002).

With these, teachers tend to teach as they were taught. They are expected to teach using ICT, they should be taught by ICT coordinators who use ICT and who structure their courses to model expert ICT approaches in teaching (Ghavifekr, S. 2015).

Meanwhile, in the research study conducted by Gabriel, E. G. R. (2020) entitled: "ICT competencies and performance of ICT coordinators in Moncada", results showed that the ICT coordinators are generally young adults, male, with bachelor's degree holders, have limited number of training related to ICT, and are newly designated as school ICT Coordinators. Further, the findings revealed that the ICT coordinators are highly competent as perceived by their immediate supervisors and by themselves.

On the other side, a computer system is one of the integral aspects of Information and Communication Technology. Computer system servicing refers to the work of installing, maintaining, configuring, and diagnosing computer systems and networks. While, preventive maintenance is the regular and routine maintenance of equipment and assets to keep them running and prevent any costly unplanned downtime from unexpected equipment failure (Beattie, R.M. 2002).

Computer system servicing is very important since every school needs IT infrastructure to run its work smoothly; because there can be technical problems; handling the problems can be an overhead; thus, professional computer services are needed to handle these overheads. Likewise, computer maintenance is very important for keeping your computer running smoothly. A computer that is left untreated, can accumulate dust and debris, which may result in slow performance. Additionally, your computer may get infected with a virus or malware if your antivirus is not updated. Thus, an ICT coordinator must have competency skills in handling all these works (Beattie, R.M. 2002).

By maintenance, we mean those preventive, diagnostic, updating, replacement, and repair procedures that a school or district has in place. Specific maintenance items might include: 1) periodic replacement of parts and renewal of consumable supplies; 2) repair or replacement of faulty components; 3) periodic inspection and cleaning of equipment; 4) updating or upgrading hardware and software, including installing new operating system versions; 5) adding or deleting users from a system, or modifying user rights and properties; 6) periodic backup of stored files on a school network; 7) monitoring the condition and functionality of networks and equipment, including testing web site accesses and links; and 8) installing and removing equipment and applications (Beattie, R.M. 2002).

According to Storm, A. (2015) there are five good reasons why computer maintenance is so important: 1) Detect issues early, before they become problems. Whether your computer is new or old problems can pop up at any time; 2) Prevent viruses and malware. When a computer is infected several symptoms may be felt, from annoying slowdowns to popup messages; 3) Speed up your computer. Over time, files that are stored on a computer can become disorganized and fragmented, which results in slow loading times and delayed access to programs and files; 4) Keep Antivirus Software Up-to-date. Antivirus software is vital and every PC should be protected but having antivirus software installed isn't the end of your IT security – it needs to be up-to-date and working as intended, and 5) Maximize Software Efficiency. Computers age and over time they start to slow down – software packages that performed quickly and efficiently, to begin with, can become sluggish and harm productivity.

Whereas, based on the Memorandum of June 26, 2019, issued by Undersecretary Alain Del B. Pascua, the ICT coordinators are responsible for computer system servicing as well as preventive maintenance of the ICT of the schools in the Department of Education.

In the same vein, the study of Araiz, J. (2018) entitled: "The Level of Competence of ICT Coordinators in the 57 Secondary Schools in the Division of Davao del Sur, Philippines", aimed to find out the level of competence of ICT coordinators, the findings suggest that ICT coordinators level of competence is effective in performing their duties and responsibilities.

Similarly, the study conducted by Tasir et al. (2012) revealed similar results. The research findings disclosed that Malaysian teachers had a high level of ICT competency (mean = 3.95) and a high level of clients satisfaction (mean = 4.02). The findings also showed that the correlation coefficient between ICT coordinators' competency and teachers' level of satisfaction was high ( $r = .749$ ).

Moreover, in the study conducted by Ventayen, R. J. M. (2018) entitled: "Competency in Computer Systems Servicing of Teachers in one Town in Northern Luzon: A Needs Assessment and Analysis". Based on the result of the study, the majority of the ICT coordinator of the primary and secondary schools were competent and experts in the field of computer systems servicing because high school ICT coordinators are the holder of National Certificate Level 2.

However, many types of research talk about clients' satisfaction. Satisfaction is that one that can be recognized in diverse senses depending on what needs the clients had before the service; it varies from feelings of fulfillment, contentment, pleasure, enjoyment, and relief (Zoe, D. 2006).

Clients' satisfaction is a clients' positive or negative feeling about the value that was received as a result of using a particular organization's offering in specific use situations. This feeling can be a reaction to an immediate use situation or an "overall" reaction to a series of use situation experiences" (Woodruff, 1996).

As, Looy, et al. (2003), pointed out that the level of client satisfaction is the result of the clients' judgment of the service quality.

According to Vanichkul (2010), satisfaction or dissatisfaction is a measure or evaluation of a product or service's ability to meet a customer's needs or expectations. To achieve clients satisfaction clients' service must be consistent and reliable.

As Buswell et al.(2003) pointed out, clients are satisfied when their judgment of the service they have received equals or exceeds what they expected.

In the study of Lee, Teo, Chai, Choy, Tan & Seah (2007); Tasir, et al. (2012) suggests that the level of a teacher's satisfaction toward ICT influences that teacher's competency and helps him to easily improve his capabilities of using ICT in his or her teaching job. It also increases the pleasure among teachers because students enjoy attending the ICT program and try to get help and answers to their questions

In contrast, in the study conducted by Vaisanen, P. & Sahito, Z. (2017) entitled: "Effect of ICT Skills on the Job Satisfaction of Teacher Educators: Evidence from the Universities of the Sindh Province of Pakistan", it was found that only (17.5%) TEs were found satisfied with their ICT competencies in installations of different software on their computers. Sometimes, they also help their friends and colleagues to install some software on their computers, too. Most of the software they used they installed themselves, but sometimes, when they have any difficulties, they get help from Information Technology (IT) expert available at the university.

There are many types of research about customer satisfaction. Satisfaction can be recognized in diverse senses depending on what needs the customer had before the service; it varies from feelings of fulfillment, contentment, pleasure, enjoyment, and relief (Zoe 2006).

Customers perceive service in terms of quality, but how satisfied they are with the overall experience, is what describes their satisfaction (Lam & Burton 2006).

In the study of Araiz, J. (2018) entitled: "The Level of Competence of ICT Coordinators in the Secondary Schools in the Division of Davao del Sur, Philippines" the results also found that ICT coordinators encountered problems in rendering their services to their clients such as; no available funds allocated for the maintenance of the computers due to limited allocation of MOOE. ICT coordinators are assigned to various activities in school and handled regular teaching hours, and some computers are no longer functional.

The preceding related literature and studies were presented as they were relevant to the present study and they formed the foundation of the research undertaking, without them the present study would not have an anchorage.

The purpose of the review of the literature was designed to establish the relevance to the study as it investigates the Information and Communication Technology coordinators' competency skills and clients' satisfaction as it tried to address the gap.

The literature gap is that there are multiple issues and challenges confronting the implementation of ICT education in schools and educational institutions and the problems are much more magnified in case of schools located in remote villages and rural areas. For rural schools in specific, the introduction of ICT faces hindrances in the form of internal and external barriers. Internal barriers to ICT implementation in schools in rural locations include: Lack of trained teachers- A major obstacle in the use of ICT in rural education is the lack of knowledge and skills. There is dearth of dynamic teachers formally trained in ICT. Moreover, there is hardly any quality training imparted on a regular basis to teachers involved in ICT education. Unfavourable organizational culture and poor attitude and beliefs- Often in developing nations, the educational organizations and school management fail to perceive the importance and seriousness of the role of ICT in education enhancement. Also, the teachers attitudes and beliefs are outdated and orthodox. They are unaware and rigid and not willing to adapt to the change. They harbor false beliefs that ICT is meant primarily for the youngsters and are skeptical about the effectiveness and utility of ICTs in school education (digitalLEARNING Network, 2020).

Thus, in order to fill the gap and compete in a global competitive environment, a highly skilled and educated workforce with aptitude and skill sets in application of ICT is inevitable in every school.

### Methodology:-

This chapter presents the design and methodology of the study. It covers the research locale, research respondents, research instrument, data gathering procedure, data scoring, and statistical treatment of the data. A descriptive correlational research design was employed in this study. This research design is appropriate to this study as it investigates the ICT coordinators' competency skills and clients' satisfaction as well as tried to establish the correlation among variables. The study had been conducted in the public elementary schools in Schools Division Office-Biliran, SDO Biliran's main office is located at Larrazabal, Naval, Biliran which is composed of 14 districts, 123 public elementary schools with a total of 1176 teachers. The respondents of this study were one (1) ICT coordinator per school and the teachers computed using the Cochran formula within the entire district of the division of Biliran and the respondents were randomly selected using cluster random sampling. The table below will reflect the name of schools, the number of ICT coordinators or teachers, and the actual number of respondents.

**Table 1:-** Research Respondents.

Name of Schools	Number of ICT Coordinators	Number of Teachers' Population	22.86% under Cochran Formula	Actual Number of Respondents
Almeria CS	1	15	3	4
Barubuhan ES	1	8	1	2
Caucab ES	1	9	1	2
Iyosan ES	1	7	1	2
Jamorawon ES	1	7	1	2
Lo-ok ES	1	7	1	1
Matanggo ES	1	7	1	1
Palayan ES	1	4	0	1
Pili ES	1	7	1	2
Pulang Bato ES	1	8	1	2
Salangi ES	1	7	1	2
Sampao ES	1	7	1	2
Tabunan ES	1	7	1	2
Talahid ES	1	8	1	2
Tamarindo ES	1	7	1	2
Bato ES	1	11	2	3
Biliran CS	1	22	4	5
Burabod ES	1	13	2	3
Busali ES	1	8	1	2

Canila ES	1	7	1	2
Core Shelter ES	1	7	1	2
Felimon Nierras Memorial ES	1	7	1	2
Hugpa ES	1	7	1	2
Julita ES	1	15	2	3
Pinangomhan ES	1	7	1	2
Sangalang ES	1	7	1	2
Villa Enage ES	1	7	1	2
Balaquid ES	1	19	3	4
Bunga ES	1	24	5	6
Caanibongan ES	1	5	0	1
Cabucgayán CS	1	21	4	5
Capayas ES	1	7	1	2
Casiawan ES	1	7	1	2
J.D.Garcia ES	1	9	1	2
Langgao ES	1	8	1	2
Looc ES	1	16	3	4
Pawikan ES	1	9	1	2
Salawad ES	1	8	1	2
Talibong ES	1	7	1	2
Alegria ES	1	7	1	2
Asug ES	1	7	1	2
Bariis ES	1	8	1	2
Binohangan ES	1	6	1	2
Cabibihan ES	1	8	2	3
Caibiran CS SPED Center	1	43	9	10
Katipunan ES	1	7	1	2
Kaulangohan ES	1	7	1	2
Kawayanon ES	1	7	1	1
Looc ES	1	6	1	2
Mainit ES	1	7	1	2
Manlabang ES	1	6	1	1
Maurang ES	1	13	2	3
Pulang Yuta ES	1	4	0	1
Tomalistis ES	1	8	1	2
Uson ES	1	18	3	4
Union IS	1	7	1	1
Acaban ES	1	5	1	2
Bacolod ES	1	4	0	1
Binongto-an ES	1	7	1	1
Bool ES	1	14	2	3
Calipayan ES	1	7	1	1
Culaba CS	1	25	5	6
Habuhab ES	1	5	1	1
Looc ES	1	7	1	1
Patag PS	1	6	1	1
Salvacion ES	1	6	1	1
San Roque ES	1	7	1	1
Pinamihagan IS	1	7	1	1
Baganito ES	1	7	1	1
Balacson ES	1	7	1	1
Bilwang ES	1	7	1	1
Bulalacao ES	1	7	1	1



Burabod ES	1	6	1	2
Kansanoc ES	1	7	1	2
Kawayan CS	1	14	2	3
L. Atillo ES	1	7	1	2
L.E. Gozon ES	1	7	1	2
Mapuyo ES	1	9	1	2
Masagaosao ES	1	7	1	2
Masagongsong ES	1	4	0	1
San Lorenzo ES	1	7	1	1
Tubig Guinoo ES	1	7	1	2
Tucdao ES	1	14	2	3
Ungale 1 ES	1	13	2	3
Ungale 11 ES	1	4	0	1
Villa Cornejo ES	1	8	1	2
Inasuyan IS	1	6	1	2
Agutay ES	1	3	0	1
Bato-Banlas ES	1	7	1	1
Binalayan ES	1	6	1	2
Calbani ES	1	6	1	2
Candahao ES	1	5	0	1
Casibang ES	1	4	0	1
Danao ES	1	3	0	1
Maripipi CS	1	9	1	2
Ol-og ES	1	7	1	2
Viga ES	1	7	1	2
Agpangi ES	1	14	2	3
Atipolo ES	1	15	2	3
Cornelio P. Limpiado ES	1	12	2	3
Larrazabal ES	1	17	3	4
Naval CS Sped Center	1	61	13	14
Sabang ES	1	4	0	1
Sto. Niño ES	1	15	2	3
Talustusan ES	1	14	2	3
Anislagan ES	1	4	0	1
Borac ES	1	7	1	2
Cabungaan ES	1	3	0	1
Calumpang ES	1	27	5	6
Capiñahan ES	1	14	2	3
Caray-caray CS	1	24	5	6
Catmon ES	1	9	1	2
Eden ES	1	7	1	2
Haguikhican ES	1	10	1	2
Imelda ES	1	7	1	2
Libtong Daku ES	1	9	1	2
Libtong Gamay ES	1	7	1	2
Lico ES	1	6	1	2
Lucsoon ES	1	10	1	2
P.S.Eamiguel ES	1	9	1	2
San Pablo ES	1	7	1	2
Villa Consuelo ES	1	15	2	1
Villa Caneja ES	1	7	1	1
<b>TOTAL</b>	<b>123</b>	<b>1176</b>	<b>174</b>	<b>297</b>

The validated researcher-made questionnaires adapted from the studies of Ventayen, R. J. M. (2018) composed of 2 seats were used. Seat A was for ICT coordinators composed of 3 parts. Part I inquired into the demographic profile of the respondents, Part II assessed the level of competency skills of ICT coordinators, and Part III determined the problems encountered by ICT coordinators. On the other hand, Seat B consists of Part I only which determines the level of clients' satisfaction. Before the formal conduct of the study, the researcher had first secured permission and approval from the Dean of the Graduate School of Biliran Province State University for the administration of survey questionnaires needed for the study. Upon said approval, the researcher, then sent a letter request to the Schools Division Superintendent of the Department of Education, Division of Biliran to administer the said survey questionnaires to the different respondents of the schools under the Schools Division Office (SDO)-Biliran. Then, upon approval of the said request, the researcher personally proceeded to administer the questionnaires to the different respondents of the different schools in SDO-Biliran. However, due to the present situation in the area, the researcher strictly followed the health safety protocol as the IATF implemented such as putting the questionnaires in sanitized plastic envelopes, wearing of facemask, face shield, and gloves during the distribution and retrieval of the questionnaires. Afterward, the retrieval of the questionnaires had been done by the researcher herself. Consequently, the data had been collated, tabulated, and analyzed to come up with the interpretation of the findings of the study.

Seat A, Part II for level of competency skills of ICT coordinators' were answerable using the Likert-type scale. Scoring was as follows:

Ranges		Description
4.51 – 5.0	-	Very Highly Competent
3.51 – 4.50	-	Highly Competent
2.51 – 3.50	-	Moderately Competent
1.51 – 2.50	-	Fairly Competent
1.0 – 1.50	-	Less Competent

Set B, Part I for clients' satisfaction were answerable using the Likert-type scale. Scoring was as follows:

Ranges		Description
4.51 – 5.0	-	Very Highly Satisfied
3.51 – 4.50	-	Highly Satisfied
2.51 – 3.50	-	Moderately Satisfied
1.51 – 2.50	-	Fairly Satisfied
1.0 – 1.50	-	Not Satisfied

Descriptive statistics such as frequency count, percentage and mean had been used in this study. Likewise, the Pearson r was also utilized to establish the relationships among variables.

## Results and Discussion:-

This chapter presents the results and discussion of the study on ICT coordinators' competency skills and clients' satisfaction.

### Demographic Profile of the ICT Coordinators

This section presents the demographic profile of the ICT coordinators in terms of age, sex, educational attainment, number of years in the service, and training and seminars attended.

**Table 2:-** Demographic Profile of ICT Coordinators.

Age	f	%
21 years old and below	0	0.0
22 to 45 years old	121	98.4
46 to 59 years old	2	1.6
60 years old and above	0	0.0
<b>Total</b>	<b>123</b>	<b>100.0</b>
Sex	f	%
Male	26	21.1
Female	97	78.9

<b>Total</b>	<b>123</b>	<b>100.0</b>
<b>Civil Status</b>	<b>f</b>	<b>%</b>
Single	10	8.1
Married	112	91.1
Separated	1	0.8
Annulled	0	0.0
Widow/Widower	0	0.0
<b>Total</b>	<b>123</b>	<b>100.0</b>
<b>Educational Attainment</b>	<b>f</b>	<b>%</b>
Bachelor's Degree Holder	0	0.0
With Master's Units	15	12.2
Master's Degree Holder	108	87.8
With Doctoral Units	0	0.0
Doctoral Degree Holder	0	0.0
<b>Total</b>	<b>123</b>	<b>100.0</b>
<b>Number of Years in the Service</b>	<b>f</b>	<b>%</b>
9 years and below	5	4.1
10 to 14 years	117	95.1
15 to 19 years	1	0.8
20 years and above	0.0	0.0
<b>Total</b>	<b>123</b>	<b>100.0</b>
<b>Training and Seminars Attended</b>	<b>f</b>	<b>Rank</b>
Local	88	1
Regional	35	2
National	0	3.5
International	0	3.5

Age. As shown in Table 2, 121 or 98.4% of the ICT coordinators' age ranged from 22 to 45 years old, while 2 or 1.6% belong to the 46 to 59 age bracket. This means that almost all ICT coordinators belonged to the middle age group. This implies that the respondents could be capable of enhancing their competency skills being at the middle ages. In the research study conducted by Gabriel, E. G. R. (2020) entitled "ICT competencies and performance of ICT coordinators in Moncada," results found that the ICT coordinators were generally at middle age.

Sex. As revealed in Table 2, 97 or 78.9% of the ICT coordinators are females, while 26 or 21.1% are males. This means that female ICT coordinators dominated the male group. This implies that females are more competent in terms of using ICT than males. This finding has been corroborated in the study of Vasquez-Cano, E., Meneses, E. L., and Garcia-Garzon, E. (2017) which data showed that women have greater perceived competence in digital cartography and online presentations.

Civil status. As disclosed in Table 2, 112 or 91.1% of the ICT coordinators are married, 10 or 8.1 % are singles while 1 or 0.8 % are separated. This means that the ICT coordinators are family-minded. This implies that married individuals are more technology-driven. These findings find support in the study of Lenhart, A. and Duggan, M. (2014) which results show that couples use technology in large moments at the same time they find that digital tools facilitate communication and support.

Educational attainment. As disclosed in Table 2, 108 or 87.8% of the ICT coordinators are Master's Degree holders, while 15 or 12.2% are with Master's units. This means that the ICT coordinators have high level skills in ICT. This implies that highest educational attainment is important to effectively perform the task. This finds support in the study of Guerin, C. et al. (2015) which findings showed that a knowledge of society relies on a workforce with high-level skills in Information and Communication Technology.

The number of years in the service. As shown in Table 2, 117 or 95.1% of the ICT coordinators' number of years in the service are within 10 to 14 years in the service, while, 1 or 0.8% are within 15 to 19 years in the service. This means that the ICT coordinators have sufficient work experience that could contribute to a higher level of ICT skills. This implies that ICT coordinators with more experience would be more likely to have greater ICT skills. These

findings were being corroborated in the study of Verhoeven, J. C., et al. (2016) which results showed that ICT individuals with more experience would be more likely to have greater skills in ICT.

Training and seminars attended. As gleaned in Table 2, local training and seminars attended got the most number of frequency of 88 or the highest rank, while, national and international got 0 frequency or the lowest rank. This means that the ICT coordinators attended training/seminars to enhance their competency skills. This implies that the ICT coordinators' training and seminars are very important to contribute to the greater work efficiency and effectiveness. Research conducted by Charalambous, K., and Karagiorgi, Y. (20012) also found that teachers are required to attend training and seminars related to ICT to upgrade their knowledge and competency skills in so far as using of ICT is concerned.

### Level of Competency Skills of ICT Coordinators As Perceived by Themselves

**Table 3:-** Level of Competency Skills of ICT Coordinators as Perceived by Themselves in Terms of Computer Servicing.

Indicators	WM	Description
<b>Computer System Servicing</b>		
1. Assemble computer hardware.	3.92	Highly Competent
2. Install the operating system and drivers for peripherals/ devices.	3.21	Moderately Competent
3. Install the computer application software	4.31	Highly Competent
4. Conduct testing and documentation	4.12	Highly Competent
5. Set-up computer networks	3.51	Highly Competent
6. Install network cables	3.10	Moderately Competent
7. Set network configuration	3.21	Moderately Competent
8. Set router/Wi-Fi/ wireless access point/repeater configuration	3.48	Moderately Competent
9. Inspect and test the configured computer networks	3.10	Moderately Competent
10. Set-up computer servers	2.56	Moderately Competent
11. Set-up user access	3.74	Highly Competent
12. Configure network services	3.03	Moderately Competent
13. Perform testing, documentation, and predeployment practices	3.20	Moderately Competent
14. Properly connect main components, configure peripherals and install drivers when required.	2.96	Moderately Competent
15. Configure computer settings of various software and hardware.	3.24	Moderately Competent
<b>AWM</b>	<b>3.38</b>	<b>Moderately Competent</b>

Table 3 presented the level of competency skills of ICT coordinators in terms of the Level of Competency Skills of ICT Coordinators in terms of Computer Servicing and Preventive Maintenance.

Level of Competency Skills of ICT Coordinators in terms of Computer System Servicing. As shown in Table 3, the statement: "Install the computer application software" obtained the highest weighted mean of 4.31 or described as "Highly competent", while "Set up computer servers" got the lowest weighted mean of 2.56 or described as "Moderately competent". The average weighted mean of 3.38 was interpreted as "Moderately Competent." This means that the ICT coordinators are moderately competent in terms of computer system servicing. This implies that they need to improve their competency to provide quality service to the schools. This finding is relevant to the study

of Araiz, J. (2018) which results suggested that ICT Coordinators need to upgrade their level of competence to become more proficient and capable in performing their duties and responsibilities especially in terms of computer system servicing. Accordingly, to maintain their high level of competence, a continuing high-quality training program should be provided.

**Table 4:-** Level of Competency Skills of ICT Coordinators as Perceived by Themselves in Terms of Preventive Maintenance.

Preventive Maintenance		
Indicators	WM	Description
1. Plan and prepare for maintenance and repair	4.02	Highly Competent
2. Maintain computer systems and networks	3.96	Highly Competent
3. Organize and manage computer files, folders, and directories.	4.21	Highly Competent
4. Use storage devices (i.e. hard disk, diskette, CD, flash memory, etc.) for storing and sharing computer files.	4.34	Very Highly Competent
5. Create back-ups for important files.	4.26	Highly Competent
6. Protect the computer from viruses, spyware, adware, malware, hackers, etc.	3.51	Highly Competent
7. Use online and offline help facilities for troubleshooting, maintenance, and updating of applications	3.72	Highly C0mpetent
8. Diagnose faults of computer systems	3.15	Competent
9. Rectify/correct defects in computer systems	3.46	Competent
10. Inspect and test the computer systems and networks	3.87	Highly Competent
<b>AWM</b>	<b>3.85</b>	<b>Highly Competent</b>

As shown in Table 4, the statement: "Use storage devices (i.e. hard disk, diskette, CD, flash memory, etc.) for storing and sharing computer files" obtained the highest weighted mean of 4.34 or was described as "Highly competent", while, the statement: "Diagnose faults of computer systems" got a lowest weighted mean of 3.15 or described as "Moderately competent". The average weighted mean was 3.85 was interpreted as "Highly Competent." This means that the ICT coordinators are highly competent in terms of preventive maintenance. This implies that the level of competence of the ICT coordinators in terms of preventive maintenance needs to be sustained and maintained to provide a high-quality service to the employees and students in school. This finding is relevant also to the study of Araiz, J. (2018) which results suggested that ICT Coordinators need to upgrade their level of competence to become more proficient and capable in performing their duties and responsibilities especially in terms of computer maintenance. Accordingly, to maintain their high level of competence, a continuing high-quality training program should be provided.

Level of Clients' Satisfaction. Table 5 presents the level of client satisfaction

**Table 5:-** Level of Clients' Satisfaction.

Indicators	WM	Description
1. Sufficient number of computers	3.15	Moderately Satisfied
2. Sufficient number of internet-connected computers	3.12	Moderately Satisfied
3. Sufficient internet bandwidth or speed	2.96	Moderately Satisfied
4. Sufficient number of interactive whiteboards	2.45	Fairly Satisfied
5. Sufficient number of laptops/notebooks	3.45	Moderately Satisfied
6. School computers are not out of date and do not need repair	3.56	Highly Satisfied
7. Adequate skills of teachers/ICT coordinators	3.97	Highly Satisfied
8. Sufficient technical support for teachers	4.12	Highly Satisfied
9. Sufficient pedagogical support for teachers	3.58	Highly Satisfied
10. Adequate content/material for teaching	3.41	Moderately Satisfied
11. Adequate content in the national language	3.56	Highly Satisfied
12. Integrate ICT use into the curriculum	3.75	Highly Satisfied
13. Adequate pedagogical models on how to use ICT for learning	3.98	Highly Satisfied
14. School time organization (fixed lessons time, etc.)	3.74	Highly Satisfied
15. School space organization (classroom size and furniture, etc.	4.32	Highly Satisfied

16. Prepare students for exams and tests	4.19	Highly Satisfied
17. Parents in favor of the use of ICT at school	4.15	Highly Satisfied
18. Teachers in favor of the use of ICT at school	4.31	Highly Satisfied
19. There is a clear benefit to using ICT for teaching	4.40	Highly Satisfied
20. Using ICT in teaching and learning is a goal in our school	4.21	Highly Satisfied
<b>AWM</b>	<b>3.72</b>	<b>Highly Satisfied</b>

As reflected in Table 5, the statement: "There is clear benefit to use ICT for teaching" got a highest weighted mean of 4.40 or described as "Highly Satisfied". While, the statement: "Sufficient number of interactive whiteboards" obtained a lowest weighted mean of 2.45 or described as "Fairly satisfied". The average weighted mean was 3.72 or described as "Highly satisfied." This means that the clients were highly satisfied with the service provided by the ICT coordinators. This implies that the services rendered by the ICT coordinators to the students and teachers were effective since the clients were satisfied in terms of the service provided by the ICT coordinators. In the study conducted by Tasir et al. (2012) revealed similar results. The research findings disclosed that Malaysian teachers had a high level of ICT competency (mean = 3.95) and a high level of clients satisfaction (mean = 4.02).

### Relationship Among Variables

This section presents the relationship among variables.

Relationship Between the Demographic Profile of ICT Coordinators and Clients' Satisfaction. Table 6 presents the data.

**Table 6:-** Relationship Between the Demographic Profile of ICT Coordinators and Clients' Satisfaction.

Variable	Correlation Coefficient	p-value	Decision
Age	0.056	.514	Failed to Reject Ho
Sex	0.312	.026	Ho is Rejected
Educational Attainment	0.223	.042	Failed to Reject Ho
Number of Years in the Service	0.115	.151	Ho is Rejected
Training and Seminars Attended	0.098	.312	Failed to Reject Ho

As shown in Table 6, at significant level (2 tailed) of the correlation @ 0.05, the age (Correlation Coefficient=0.056, and p-value=.514); educational attainment (Correlation Coefficient=0.223, and p-value p=.042); and training and seminars attended (Correlation Coefficient=0.098 and p-value=.312) showed no significant relationship. This means that there were no direct relationships between the age, educational attainment, and training and seminars attended by the ICT coordinators to clients' satisfaction. This implies that there was no sufficient evidence to show that the age, educational attainment, and training and seminars attended by ICT coordinators affect the clients' satisfaction.

On the other hand, sex (Correlation Coefficient=0.312, and p-value=.026) and the number of years in the service (Correlation Coefficient=0.115, and p-value=.151) showed any significant relationship. This means that there was a direct relationship between sex and the number of years in the service of ICT coordinators to clients' satisfaction. This implies that there was sufficient evidence that sex and the number of years in the service of ICT coordinators affect the clients' satisfaction.

Relationship Between the Competency Skills of ICT Coordinators and Clients' Satisfaction. Table 7 presents the data.

**Table 7:-** Relationship Between the Competency Skills of ICT Coordinators and the Clients' Satisfaction.

Variable	Correlation Coefficient	p-value	Decision
Competency Skills of ICT Coordinators	0.412	0.000	Ho is Rejected
Clients' Satisfaction			

Table 7 above showed that the competency skills of ICT coordinators and clients' satisfaction (Correlation Coefficient=0.412, and p-value=0.0000) showed any significant relationship. This means that the competency skills of ICT coordinators and clients' satisfaction have a direct relationship. This implies that there was sufficient evidence that the competency skills of ICT coordinators affect the clients' satisfaction. In the study conducted by Tasir et al. (2012) revealed similar results. The findings also showed that the correlation coefficient between ICT coordinators' competency and teachers' level of satisfaction was high ( $r = .749$ ).

Problems Encountered by ICT Coordinators. Table 6 presents the data.

**Table 8:-** Problems Encountered by ICT Coordinators.

Problem	f	Rank
No formal training for the designation as ICT Coordinator	52	4
Some computers are no longer functional	71	3
Assistance/support from Division Office ITO is seldom to never.	60	
No funds were allocated for the maintenance of the computers due to very little allocation of MOOE.	103	1
ICT coordinator is assigned to various committees and regular teaching hours.	79	2
Teachers are very dependent in terms of ICT concerns.	45	5
Computer rooms/laboratories are not secured	21	6
No Internet connectivity	10	7

\*\* multiple response set

As shown in Table 8, the statement: "No funds allocated for the maintenance of the computer units due to very little allocation of MOOE" obtained the highest frequency of 103 or posted the highest rank, 'while, the statement: 'No Internet connectivity' obtained a frequency of 10 or posted the lowest rank. This means that the ICT coordinators have encountered some challenges and problems in schools. This implies that these problems should be addressed as they could have affected the job of the ICT coordinators. In the study of Araiz, J. (2018) entitled: "The Level of Competence of ICT Coordinators in the Secondary Schools in the Division of Davao del Sur, Philippines", the results also found that ICT coordinators encountered problems in rendering their services to their clients such as; no available funds allocated for the maintenance of the computers due to limited allocation of MOOE. ICT coordinators are assigned to various activities in school and they have regular teaching hours, and some computer units are not anymore functional.

### Conclusion:-

After a thorough analysis of the findings obtained from the results of the study, a conclusion was drawn:

The respondents' ages ranged from 22 to 45 years, mostly female, married, Master's Degree holders, 10 to 14 years in the service, and have local training and seminars attended. The ICT coordinators were moderately competent in terms of computer system servicing but highly competent in terms of preventive maintenance. The level of clients' satisfaction was described as highly satisfied. There was significant relationship between the demographic profile of the ICT coordinators in terms of sex, the number of years in the service and the clients' satisfaction. However, there was no significant relationship between the demographic profile of the the ICT coordinators in terms of age, educational attainment, and training/seminars attended and the clients' satisfaction. Further, there was significant relationship between the competency skills of ICT coordinators and clients' satisfaction. Furthermore, no funds were allocated for the repair of defective computer units due to very little allocation of Maintenance and Other Operating Expenses (MOOE). Thus, it was recommended that the school officials may send the ICT coordinators to national training and seminars and may encourage them enroll in computer system servicing under the Technical Education Skills Development Authority (TESDA) or other recognized training institutions in order to enhance the ICT coordinators' level of competency skills especially in terms of computer system servicing. The school may also provide sufficient number of computer units or laptops which should be connected to internet with a high bandwidth or high speed, and sufficient ICT teaching materials in order to improve the level of clients' satisfaction. Finally, more research undertakings related to the present study may be conducted by the school in order to improve the ICT coordinators' competency skills.

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