Profile of School Heads and their Proficiency in Information and Communication Technology (ICT)

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Abstract— This study aimed to determine the profile and proficiency in Information and Communication Technology (ICT)of the school heads in Irosin District of the Division of Sorsogon Province for school year 2021-2022. It used the descriptive-survey method since questionnaire was devised for the gathering of the primary data as reflected in the problem. The respondents were the 31 school heads in Irosin District which were purposively chosen. The statistical tools utilized were the frequency, percentage, weighted mean, and Chi-square test for independence. The data revealed that majority of the school heads are 41 years old and above, female, married, and have 16 years and above teaching experience. Also, most of them are principal who acquired master's units and have attended the division level ICT-related training. The school heads have advanced proficiency level in basic computer operations while proficient in productivity tools, internet browsing, email management, online learning platforms, and online transaction. The profile of the school heads is not significantly related to their proficiency level along basic computer operations, productivity tools, internet browsing, email management, online learning platforms, and online transaction. An action plan was proposed in order to enhance the proficiency level in ICT of the school heads.

Keywords— school heads, proficiency, internet browsing, email management, online transaction.

I. INTRODUCTION

Information and Communication Technology (ICT) Proficiency refers to a measure of one's competence in the use of information and communication technology tools such as mobile devices, tablets, computers as well as the software programs that are run by these devices. It also refers to the ability to access, manage and share information in an efficient and productive way. Proficiency in ICT enables us to carry out tasks effectively and efficiently thus saving time for exploration of other developmental ideas. Its advancement has a significant impact on human achievements all over the globe.

School heads have great impact on the school's use of ICT. Public school principals have the power to move educational use of technology forward. Studies show that an effective technology leadership plays a significant role in today's education. Seemingly, technological leaders in the school, who are the principals, must be familiar with educational technology goals and standards. They must understand the benefits of how technology should be integrated into education and be able to develop staff development programs for teachers (Beytekin,2014).

School leaders' leadership predominantly concerns the use of technology aimed at teaching and learning in school, especially their role in managing ICT for instruction, learning, and other aspects related to ICT. Additionally, it has been found that ICT leadership is particularly vital for teachers to implement and foster innovations attached to ICT (Geir, 2013). In the same way, Marina (2013) considers computer literacy as a key to lifelong learning which includes information literacy, information technology literacy, literacy skills, information skills and learning to earn

Certain levels of competencies are required for the school management to carry out these functions. Competencies are skills in doing or performing an art well. According to Okeke and Ifesi (2018), it is defined as the proficiency or dexterity that is acquired or developed through training or experience. Therefore, the principals should be adequately prepared, trained and equipped with relevant ICT tool/skills such as computer-mediated communication, internet, electronic publishing, video conferencing and multimedia and in social networking as to fit into the modern-day system of management.

It has to come in history that computer utilization took off and became evident in almost all corners of the world. Computer literacy is the understanding of computer programming and how the computers work. It is considered to be the essential skill to be possessed. The Day curbs the digital divide that is present in the world today (Kabithra, 2020).

In the Philippine context, the presence of computers, information and communication technology paved the way for many Filipinos to create a most convenient workplace as they can easily provide fast and quality works. To manifest the effect of computer technology to people, it was said that the Philippines lined itself to one of the leading countries utilizing computers and other modern gadgets. Along this line, this abrupt change and technological transformation brought large scale of competence in terms of delivering services in almost all sectors utilizing computers in their daily routine. One more big sector of society responded to the demand of this modern time is the Department of Education (DepEd). The use of computers had been considered by the department as the avenue in uplifting and promoting quality education services across the country as the learners and teachers embraced the trend of using computers in their learning activities.

Furthermore, as the frontline institution of education, the school has its mandate of ensuring a resounding and quality services in all its clientele. It was clearly defined in the Philippine Constitution that the state shall protect and promote the right of all the citizens to quality basic education and to make such education accessible to all. Hence, school manager is given tasks ensuring that the school is working out to provide and maintain quality services to its clientele. As emphasized in Republic Act of 9155 or Governance of Basic Education Act of 2001, the prime role of the school head is to effectively deliver quality educational programs, projects and services which all are responsive and satisfying to its people. Thus, developing one's skills, knowledge and expertise specifically in the field of information and communication technology is vital on the part of school leaders.

As to ensure that quality learning services is delivered, DepEd begun to deploy educators with computer skills, very appropriate in today's new trends of education, where variety of computer gadgets are present in the workplace. In this context, the government through the education programs dreams to create a country which is very responsive in this computer and technological age. In realization, computer literacy has been set as the requirement in the hiring of teachers and it was given full effect through DepEd Order No. 37, series of 1997. In this view, the education sector is optimistic that educators with computer knowledge can help the government attain its vision to compete with the challenge of globalization specifically in education. By

doing so, learners would be equipped with additional competences like being computer literate learners. Relatedly, while developing the computer skills of teacher and learners, it will also lead for the department to produce leaders who are equally computer literate. The role of school heads in promoting excellent and quality education is vital. Thus, school heads must also be knowledgeable in the use of computer applications as they are all responsible in providing essential supplemental learning assistance to teachers and learners

Hence, possessing an extra skill like utilizing diverse of computer gadgets, application and other products of technology are very significant specially in administering the school. School Head is responsible for the entire operation and routine of the school. In many aspects, they must be knowledgeable enough more than what the school people have. In most part, the success of the school lies in the hand of school manager.

The current trend of administering the school today is being run with the support of the computer technology specifically in its daily business operations. The application of computer program and operation is seen to be inevitable in the workplaces from the DepEd Central office down to the school levels. Thus, school managers and administrators are expected to perform his duty accompanying their skills and knowledge about different application and usage of computer applications and its features, online transactions and browsing in the worldwide net.

The DepEd Irosin District is composed of 31 elementary schools spearheaded by Principals, Head Teachers and Teachers-In-Charge (TICs). The researcher assumed that there are variations on the part of ICT proficiency level of the school heads since they also have different personal and professional development. Determining the ICT proficiency level is an essential step to provide a blueprint of information with regards to capability and skills of school heads in the use of computers.

With the said situation the researcher felt the need to find new information which is essential in the future policy formulation and for human resource development. In some aspects, conducting research like determining the profile and information and communication technology proficiency of the school heads would mean a lot as no one of them would be spared from the reality that computers really work for the success of every

professional. The job of school head does not stop from their comfort zone, rather it is coupled with full awareness and commitment even by investing more in personal and professional development. Computers work in support of man's daily work routine. Thus, determining the ICT proficiency level of school heads are very essential to cope with the new trends of this modern technological advancement where the use of computer is at hand.

Generally, this study aimed to determine the profile of the school heads and their proficiency in Information and Communication Technology (ICT) in Irosin District, Division of Sorsogon Province for school year 2021-2022. Specifically, it sought answers to the following problems: (1) What is the profile of school heads in terms of age,, sex, civil status, length of service, position, educational attainment, and ICT-related training and seminar? (2) What is the proficiency level of school heads along basic computer operations, productivity tools, internet browsing, email management, online learning platforms, and online transactions? (3) Is there a significant relationship between the profile of school heads and their proficiency level along the identified variables? (4) What training program could be proposed based on the result of the study?

II. METHODOLOGY

Research Design

This study aimed to determine the profile of school heads and their proficiency in Information and Communication Technology (ICT) in Irosin District of the Division of Sorsogon Province for the school year 2021-2022. It utilized the descriptive-survey method of research in knowing the profile of school heads and their level of proficiency in ICT. Meanwhile, the correlational method was used in finding the relationship between these variables. The instrument used was researcher-made questionnaire.

Similarly, the respondents were the 31 school heads which include the principal, head teachers, and teacher in charge in the elementary schools at Irosin District. The statistical tools employed were the frequency, percentage, ranking, and Chi-square test for association.

The Sample

The primary source of the data were the school heads of the elementary schools in Irosin District. It involved all the teachers-in-charge, head teachers and principals. These respondents were chosen because they were holding school managerial and administrative position. The table below contains the distribution of the respondents.

Table 1. The Respondents

Respondents	f	%
Principal	17	55
Head teacher	8	26
Teacher in charge	6	19
Total	31	100

From the table above, it showed that that there are 17 (55%) are principals, eight (26%) are head teaches, and six (19%) are teachers-in-charge. It can be noticed that more than haft of the respondents is principal/

The Instrument

This study used a researcher-made questionnaire in which the sequence followed the research questions. Initially, the researcher crafted the questionnaire with the assistance of the adviser. It included two parts. The Part 1 covered the profile of the school heads in terms of age, sex, civil status, length service, position, educational attainment, and ICT-related training attended. Then, the Part II included the proficiency level of School Heads along basic computer operations, productivity tools, internet browsing, email

management, online learning platforms and online transactions. (see Appendix B)

In addition, the questionnaire was submitted to the panel members for comments and suggestions. Then, with the comments given to the researcher, the questionnaire was revised incorporating with it the comments before the final form was then prepared. A dry run of the revised questionnaire was instituted to the five school heads in the nearby district to test if the items are clear and understood by the respondents. With no corrections on the questionnaire, the final form was prepared and presented to the adviser for approval prior to its administration to the target respondents. Likewise, the Cronbach-Alpha method was applied, and the result got a 0.75 with a reliability factor of 'acceptable'

Data Collection Procedures

With the instrument ready for administration, the researcher sought the approval of Schools Division Superintendent by submitting a letter of request which was personally delivered to the office. Then, the same activity was done with the Public Schools District Supervisor of the covered district for the implementation of the said study. (see Appendix A)

Similarly, the researcher personally handed the instrument to the prospective respondents in their schools, and they were given a week or two for them to accomplish the survey form. Afterwards, the accomplished instrument was retrieved by the researcher attaining a 100 percent retrieval rate.

Data Analysis Procedures

The collected data from the respondents were subjected to various statistical analysis depending on its nature and level of measurement. The profile of the school heads in terms of age, sex, civil status, length of service, position, educational attainment, and ICT-related training and seminar attended were treated using frequency and percentage.

Similarly, the weighted mean was used to determine the proficiency level of School Heads along basic computer operation s, productivity tools, internet browsing, email management, online learning platforms and online transactions. The following scale was utilized in describing the level from DepEd Order No. 31, s. 20. The scale is 1.00-1.49 (Beginning); 1.50-2.49 (Developing); 2.50-3.49 (Approaching Proficiency); 3.50-4.49 (Proficient); and 4.50-5.00 (Advanced). Likewise, the Chi-square test for association was used to determine whether the profile of the school heads and their proficiency level along the identified variables are significantly related or not.

III. RESULTS AND DISCUSSION

1. Profile of the School Heads

Table 2 contains the profile of school heads in terms of age, sex, civil status, length of service, position, educational attainment, and ICT-related training and seminar. The frequency and percentage were used in the data analysis.

Table 2. Profile of the School Heads

Variables	f (n=31)	%
AGE (YEARS)		
• **31 to 40**	4	13
• **41 and above**	27	87
SEX		
• **Male**	11	35
• **Female**	20	65
CIVIL STATUS		
• **Single**	3	10
• **Married**	28	90
LENGTH OF SERVICE		
• **11 to 15**	6	19
• **16 to 20**	14	45
• **21 and above**	11	36
POSITION		
• **Teacher-in-charge**	4	13
• **Head teacher**	9	29
• **Principal**	18	58
EDUCATIONAL ATTAINMENT	2	6

• **Bachelor's degree**	12	55
• **With master's units**	7	23
• **Master's degree**	2	6
• **With doctoral units**	8	10
• **Doctoral degree**		
ICT-RELATED TRAINING ATTENDED	6	19
• **District**	19	62
• **Division**	4	13
• **Regional**	2	6
• **National**		

The data revealed that relative to age, there are four (13%) school heads who are 31 to 40 years old and 27 (87%) of them aged 41 years old and above. This means that with this age bracket the school heads may have the ability to lead and manage the school and its academic community. It would imply that somehow, they have the capability of educational, people, and strategic leadership as mentioned in the guidelines for school heads for designation (DepEd Order 42, 2007).

In terms of sex, 11 (35%) of the school heads are male and 20 (65%) are female school heads. This means that more than half of the school administrators are female which may be because of their qualifications as compared to male that is why they were given the opportunity to be assigned to manage the school. Along with civil status, there are three (10%) school heads who are still single and 28 (90%) of them who are married. In relation to years in service, six (19%) school heads have 11 to 15 years of working experience, 14 (45%) of them have gained 16 to 20 years of teaching experience, and 11 (36%) school heads acquired 21 years and above of experience in school.

Relative to position, four (13%) school heads are teacher-in-charge, 9 (29%) of them are head teachers, and 18 (58%) school heads are principal. This indicates that a school must be headed by school principal who passed the qualifying test given by the NEAP.

In terms of educational attainment, there are two (6%) school heads who finished bachelor's degree, 12 (55%) of them earned master's units, and seven (23%) school heads have acquired their master's degree. The rest are still pursuing the doctorate degree and attained the highest educational qualification (PhD or EdD). It is also relatively evident that very few school heads already accomplished their Doctorate degrees, while others were merely starting to take graduate studies. This implies that majority of the school heads pursued their advanced education. This would one way or another may contribute and aid them in their supervision and administrative functions, especially in managing and influencing their subordinates.

Relative to ICT-related training attended, six (19%) school heads have attended the district level training, 19 (62%) of them went to the division level training, and six (19%) school heads witnessed the regional and national ICT-related training. This means that various level of trainings were attended by the school heads but more than half of them went to the division level which perhaps was due to the availability of the said training. Also, the allocation of training in the MOOE is of minimal amount which limited their regularity in attending ICT-related training and seminar.

It would imply that there is a need for them to attend a higher level of training to be updated with the latest trends on ICT. The inability for them to attend may be attributed to the Covid-19 pandemic in which the opportunity is hampered by the internet connectivity, since most of the trainings are delivered virtually.

2. Proficiency level of School Heads in ICT

This section discusses the proficiency level of school heads in ICT along basic computer operations, productivity tools, internet browsing, email management, online learning platforms, and online transactions. The weighted mean was utilized in analyzing the data.

Basic Computer Operations. Table 3A presents the weighted mean and description of the proficiency level of school heads along basic computer operations.

The data revealed that relative to basic computer operations, generally the school heads have advanced

level with an overall weighted mean of 4.62. Specifically, they are advanced in starting and exiting a computer program with the highest weighted mean of 4.77. Also, they have developed the advanced level of turning on and off a computer with the next highest

weighted mean of 4.77. However, the school heads are proficient in changing the monitor brightness and contrast with weighted mean of 4.48 and connecting the external cable in the computer with the lowest weighted mean of 4.26.

Table 3A. Proficiency level of school heads along Basic Computer Operations

Indicators	Weighted Mean	Description
1. I can properly turn on and shut down a computer.	4.74	Advanced
2. I can start and exit a computer program.	4.77	Advanced
3. I can change monitor brightness and contrast.	4.48	Proficient
4. I can minimize, maximize and move windows on the desktop.	4.68	Advanced
5. I can perform file management including deleting and renaming files.	4.68	Advanced
6. I can plug in/out the computer/laptop DC cord.	4.71	Advanced
7. I can connect the printer cable to the printer port.	4.74	Advanced
8. I can connect the projector cable in the computer/laptop port properly.	4.55	Advanced
9. I can plug in/out the speaker cable in the computer/laptop.	4.55	Advanced
10. I can connect the external camera cable/cord in the computer/laptop.	4.26	Proficient
Overall	4.62	Advanced

This means that the school heads may have developed the advanced level in operating a computer that includes the input operations, output operations, storage operations, controlling operations, and processing operations which are evident in the results. This proficiency level may be attributed to the continuous use of the machine in their day-to-day activities in school and even at home.

It would imply that the school heads may perform their tasks and prepare the documents electronically since it is evident that they are proficient enough. Similarly, this may be attributed to the experiences acquired during their graduate studies and the trainings attended on ICT as mentioned in the interview conducted. Also, they developed the said proficiency level ss they progressed in the teaching and administrative works. As mentioned in the informal interview conducted, this ability may have been developed as they continually utilized the computers in their work as they prepared for the reports and presentation. Similarly, they sustained this proficiency in basic computer operations due to the demand in their functions as school heads in which the tasks were done electronically and online.

The result is supported by the study of Abraham, Dzakpasu, and Amenyedzi (2019) which revealed that principals had a high proficiency level with the use of ICT materials such as computer for making a presentation, computer for teaching, browsing on the internet using different websites. However, the result of the study of Bermudo (2019) is in contrast which found out that half of elementary school heads are less competent and not competent in basic computer skills.

Productivity Tools. Table 3B presents the weighted mean and description of the proficiency level of school heads along productivity tools. It can be gleaned from the table that in terms of productivity tools, the school heads are advanced in creating a basic word document with the highest weighted mean of 4.74. Similarly, they have acquired the advanced level in saving/opening word document and transferring text to a document with weighted means of 4.71 and 3.58, respectively. On the other hand, they are proficient in using spreadsheet application in computing and interpreting data with the lowest weighted mean of 4.03. generally, the school heads are proficient in productivity tools with an overall weighted mean of 4.47.

Table 3B. Proficiency level of school heads along Productivity Tools

Indicators	Weighted Mean	Description
1. I can create a basic Word document.	4.74	Advanced
2. I can save/open documents to/from.	4.71	Advanced

3.	I can use the excel application for computations and interpretation of data	4.03	Proficient
4.	I can copy, cut and paste text in a document.	4.58	Advanced
5.	I can use power point application when presenting reports.	4.29	Proficient
	Overall	4.47	Proficient

It indicates that the school heads are proficiency in using the word processing, spreadsheet, and power point presentation in preparing the documents and presentation during meetings. However, they may have limited know-how on the productivity tools such as database, project, and others which are seldom utilized in the workplace.

This may imply that the delivery of services may be done efficiently if done electronically which explains why the proficiency in productivity tools is very much needed. As mentioned by the school heads in the interview conducted, most of them said that they developed the said level in the constant use of these tools in the daily activities.

From the unstructured interview done, it was uttered by the school heads that their proficiency in using the productivity tools because of the Covid-19 pandemic when meetings were held online. There was also a need to make use of word processing in composing letters, electronic spreadsheet in making calculations, and preparing power point presentation for webinars.

The study of Novela (2022) is in contrast with the result in which it was concluded that the level of competency of the teachers along productivity tools, web browsing, video conferencing, and other online applications were all less competent while moderately competent along email management. Thus, it was recommended that the school heads may prioritize the enhancement of teachers' computer competency and address the factors affecting the teacher's use of ICT.

Internet Browsing. Table 3C presents the weighted mean and description of the proficiency level of school heads along internet browsing.

The data showed that generally the school heads are proficient in relation to internet browsing with an overall weighted mean of 4.46. In particular, they are advanced in connecting manually to the internet with the highest weighted mean of 4.65. Likewise, they developed the advanced level in surfing and navigating the web with weighted mean of 4.58. On the other hand, they are proficient in resolving the common errors encountered while navigating the web with the lowest weighted mean of 4.00.

Table 3C. Proficiency level of school heads along Internet Browsing

Indicators	Weighted Mean	Description
1. I can connect to the internet manually.	4.65	Advanced
2. I can surf the internet and navigate the web pages (go to next, or previous page).	4.58	Advanced
3. I can search for information online using a Web search engine.	4.55	Advanced
4. I can download and save files from the Web (e.g., text, graphic, PDF files).	4.55	Advanced
5. I can resolve common errors while surfing the internet such as " page not found" or "connection timed out".	4.00	Proficient
Overall	4.46	Proficient

It means that the school heads may have acquired the proficiency in using the world wide web in looking for information quickly. Nowadays, the internet has become a necessity because most of the activities were done in the web and there was cost incurred to get connectivity. So, the school heads must allot certain amount from their school budget to maintain the internet connection.

This would imply the importance of internet as an important tool of communication. The proficiency level acquired by the school heads is evident that they can browse the internet in which somehow needed in submitting reports online and downloading communications coming from the Division office and/or directly from the DepEd. As mentioned in the interview done, there are instances that internet connection is very

slow in the area, and they must look for a location where they can access the internet.

The result is supported by the study of Gimao and Benavides (2021) which revealed that Science teachers are proficient in internet browsing which are prompted by the searching of information to be included in the development of the learning activity sheets to be utilized by the students in modular distance learning. Similarly, this ability of the teachers made them more creative in crafting the instructional materials that the students can use as supplement to their acquisition of learning in the subject areas.

Email Management. Table 3D presents the weighted mean and description of the proficiency level of school heads along email management.

Table 3D. *Proficiency level of school heads along Email Management*

Indicators	Weighted Mean	Description
1. **I can use my email in sending messages with file attachment.**	4.68	Advanced
2. **I can open the link sent to my email address.**	4.68	Advanced
3. **I can add "cc" when sending messages and files to others.**	4.23	Proficient
4. **I can make bookmark on the important messages I received in my email.**	3.84	Proficient
5. **I can add or include signature in my email.**	3.48	Approaching Proficiency
Overall	4.18	Proficient

From the table, it can be observed that the school heads are advanced in utilizing the email in sending messages with file attached and opening the link sent in the email with the highest weighted mean of 4.68. Similarly, they are proficient in using the carbon copy feature in the email when sending communications with weighted mean of 4.23. Consequently, the school heads have approaching proficiency in including the signature in the email with the lowest weighted mean of 3.48. Generally, the school heads are proficient in email management with an overall weighted mean of 4.18.

It means that the proficiency of managing email may be required for the school heads since the advisories, circulars, memoranda, and department orders are sent electronically. Similarly, they need to access internet for their information dissemination. This implies that it is evident that the school heads may have the ability to systematically control the quality and quantity of the electronic messages sent and received by them.

Also, the department have issued their email accounts for them to utilize in exchanging messages immediately especially if documents must be forwarded and attached to the email. As revealed from the informal interview, some school heads mentioned that they were able to acquire the proficiency in managing their emails since most of the communications like memoranda and advisories were sent electronically. So, they have to learn the intricacies of opening the emails and even composing communications. The study of Gayola and Janer (2021) partly support this result which concluded that social media accounts and collaborations aided in delivering curriculum but although slow internet connectivity is one of the challenges. On the other hand, fear in using laptops and computers was identified as challenge in performing data management, online research, and email management

Online Learning Platforms Table 3E presents the weighted mean and description of the proficiency level of school heads along basic online learning platforms.

Table 3E. *Proficiency level of school heads along Online learning platforms*

Indicators	Weighted Mean	Description
1. **I can open the link sent to my email address.**	4.58	Advanced
2. **I can use video conferencing & chatting applications (zoom app., google meet)**	4.23	Proficient
3. **I can use video conferencing application in presenting reports online.**	3.87	Proficient
4. **I can use picture editor app., video creator app., and design creator app.**	3.52	Proficient

5. I can use asynchronous tools (eg. Discussion boards, chat tools) effectively	3.48	Approaching Proficiency
Overall	3.94	Proficient

The data showed that the school heads are generally proficient in using the online learning platforms with an overall weighted mean of 3.94. Specifically, they are advanced in opening the link sent through email with the highest weighted mean of 4.58. Also, they have acquired the proficient level in using application software like picture editor app, video creator app and design creator app with the lowest weighted mean of 3.48.

This indicates that, with the emergence of the Covid-19 pandemic, the mobility of the people was restricted, and the learning modality was transformed into online delivery. Likewise, the conduct of the meetings and seminars was done online using various applications such as Zoom, Google meet, and others. With these, the school heads shown proficiency in navigating the online learning platforms as reflected in the results shown in the table.

It implies that the Covid-19 pandemic may not hinder the teaching-learning process in the school. The various online learning platforms available on the internet have replaced the usual face-to-face classes due to the restrictions aside from the modular distance learning. In the same manner, the school heads mentioned in the interview conducted that they adjusted the working conditions and mobility because there were instances that meetings are held online using either Zoom or Google meet. Also, they need to be acquainted with these applications by requesting their colleagues for assistance and support.

The result is partially supported by the study of Gimao and Benavides (2022) which deduced that the Science teachers have very satisfactory ICT skills in productivity tools, video presentation, internet searching, and email management. However, they have satisfactory skills in other online learning tools.

Online Transactions. Table 3F presents the weighted mean and description of the proficiency level of school heads along online transactions.

Table 3F. Proficiency level of school heads along Online Transactions

Indicators	Weighted Mean	Description
1. I can use the internet for sending online reports.	4.58	Advanced
2. I can use the internet for shopping and banking.	3.94	Proficient
3. I can manually set my privacy setting before making an online transaction using the internet.	3.68	Proficient
4. I can scan QR code when making online purchases or transactions.	3.68	Proficient
5. I can send scanned documents using the internet.	3.90	Proficient
Overall	3.95	Proficient

It can be asserted that the school heads may have developed the advanced level of utilizing the internet in sending reports with the highest weighted mean of 4.58. In the same manner, they are proficient in using the web in doing online shopping and banking with weighted mean of 3.94. However, the school heads have proficient level in manually setting the privacy before doing online transaction and scanning the QR code when making online purchases with the lowest weighted mean of 3.68. Generally, the school heads are proficient in online transactions with an overall weighted mean of 3.95.

This indicates that the school heads may have the ability to comply with the requirements demanded by the concerned agencies especially in the submissions of documents and reports online. However, they experienced difficulty in using the online banking which is an option of paying bills and even depositing cash as stated in the interview conducted.

It would imply that despite of the limited mobility due to the pandemic, still they have the means to comply with the requirements because of the online transactions. This somehow make their life easier since they do not need to go to the office or any agency that may demand physical presence. Also, the use of these tools such as Gcash, Pay Maya, Dragon pay, etc. have made

transactions electronically efficient especially if internet connection is fast.

The finding is supported by the informal interview done with some school heads as reflected in the verbatim conversation mentioned below by one of the school heads:

... kaipuhan maging maaram san mga bag o na pagbayad san mga bills san school nan an mga iba pa na bayadan (There is a need to be proficient in paying bills online and other transactions.) ..."

This showed that with the emergence of Covid-19 pandemic, most of the business transactions were conducted online especially in banks. The other transactions are made through the application software installed in the smartphone like GCash and PayMaya. Likewise, it was also revealed that they need to acquaint themselves with the submission of reports online and even the affixing of digital signatures. The intricacies

and complexity of doing these things made them proficient through the assistance of the ICT coordinator and those who are familiar with this mode of submission.

3. Relationship between the profile of school heads and their proficiency level

This portion encompasses the relationship between the profile of school heads and their proficiency level along basic computer operations, productivity tools, internet browsing, other online learning platforms, and online transaction.

The Chi-square test of independence was used in determining whether the relationship is significant or not.

Basic Computer Operations. Table 4A includes the statistical bases and statistical analyses of the relationship between the profile of school heads and their proficiency level along basic computer operations.

Table 4A. *Relationship between profile of school heads and their proficiency level along basic computer operations*

Statistical Bases	Statistical Analyses						
	Age	Sex	Status	Service	Position	Education	Training
Degree of freedom	1	1	1	2	2	2	2
Level of significance	0.05	0.05	0.05	0.05	0.05	0.05	0.05
c2critical value	3.84	3.84	3.84	5.99	5.99	5.99	5.99
c2computed value	0.25	0.10	0.01	1.42	0.56	0.30	0.42
Decision on H0	DNR	DNR	DNR	DNR	DNR	DNR	DNR
Conclusion	NS	NS	NS	NS	NS	NS	NS

Legend: DNR-Do Not Reject; NS-Not Significant

The data revealed that relative to basic computer operations, the c2 computed values of 0.25, 0.10 and 0.01 for sex, age, and civil status, correspondingly, are lower than the c2 critical value of 3.84 at 0.05 level of significance with degree of freedom of 1. Thus, the non-rejection of the null hypothesis which says that the sex, age and civil status of the school heads is not significantly related to their level of proficiency along basic computer operations.

Moreover, the c2 computed values of 1.42, 0.56, 0.30, and 0.42, for length of service, position, educational attainment, and training, respectively, are less than the c2 critical value of 5.99 at 0.05 level of significance with degrees of freedom of 2. Thus, the hypothesis is not rejected which states that there is no significant relationship between the identified profile of the school heads and their proficiency level along basic computer operations.

This means that the ICT proficiency level along basic computer operations of the school heads is not affected by their profile. This can be attributed to the demand by the agencies to submit online reports regardless of their personal background. Nowadays, the school heads are becoming younger and dynamic in which the tasks in the school demand more time and effort. It implies that the use of ICT in the workplace is independent of personal information in which the school heads may have to be ICT literate in performing their activities in the office and in school.

The result is supported with the unstructured interview done as shown in the verbatim conversation below:

Nakaaram na lang ako magcomputer sa sadiri ko napag adal.(I have learned using the computer on my own initiative)

Lagi ako humuhingi ng tulong sa aming ICT coordinator pag may problema ang aking computer. (I always asked technical assistance from our ICT coordinator if problem arises)

This means that most of them stated that they may have learned using the computer on their own aside from the training that they attended. Also, they may have asked the technical assistance from the ICT coordinator every time they encountered difficulties.

Productivity Tools. Table 4B includes the statistical bases and statistical analyses of the relationship between

the profile of school heads and their proficiency level along productivity tools.

From the table, it can be gleaned that relative to productivity tools, the c_2 computed values of 0.04, 0.26, and 0.44 for age, sex, and civil status, respectively, do not exceed the c_2 critical value of 3.84 with degree of freedom of 1 at 0.05 level of significance. Therefore, the null hypothesis is not rejected. This means that the mentioned profile of the school heads is significantly independent of their level of proficiency along productivity tools.

Table 4B. *Relationship between profile of school heads and their proficiency level along productivity tools*

Statistical Bases	Statistical Analyses						
	Age	Sex	Status	Service	Position	Education	Training
Degree of freedom	1	1	1	2	2	2	2
Level of significance	0.05	0.05	0.05	0.05	0.05	0.05	0.05
c2critical value	3.84	3.84	3.84	5.99	5.99	5.99	5.99
c2computed value	0.04	0.26	0.44	0.70	0.07	0.11	0.02
Decision on H0	DNR	DNR	DNR	DNR	DNR	DNR	DNR
Conclusion	NS	NS	NS	NS	NS	NS	NS

Legend: DNR-Do Not Reject; NS-Not Significant

Furthermore, the c_2 computed values of 0.71, 0.07, 0.11, and 0.02 for length of service, position, educational attainment, and training, correspondingly, are less than the c_2 critical value of 5.99 with degrees of freedom of 2 at 0.05 level of significance. Hence, the hypothesis which is stated in null form is not rejected. It would imply that the said variables are not significantly associated with identified profile of the school heads.

It indicates that computer literacy is not affected by the profile of the school head. Thus, everyone may be required to learn the utilization of the device and gadgets especially in the delivery of services in the school and in performing their functions. Although in this study, it showed that there are more female school heads than males, both are ICT proficient in performing their tasks in the school.

This would imply that the assignment of school heads in schools may not be a difficulty to the appointing officer since it is assumed that they are computer literates. In those days, majority of the designated school heads are male teachers in which it was assumed that they can administer well than their counterparts. The situations changed, however, when equal opportunities were given to female teachers to act as school heads, too. Also, the scenario becomes more competitive when ICT has been

part of the delivery of services in which this mode has been a necessity.

The result is corroborated with the informal interview conducted in which the verbatim conversations are presented below:

Nakaaram ako maggamit san productivity tools batog san pag eskwela ko sa college (I was able to learn the productivity tools in college).

Mas gumaling ako gumamit ng word, excel at power point presentation dahil sa araw-araw na paggamit nito sa office at bahay (I was enhanced to use word, excel and power point presentation due to constant use at home and in the office)

It was disclosed that they may have learned using the productivity tools during college days and were able to become proficient every time they used it in preparing reports and projects.

Likewise, other participants said that they became more adept with the constant utilization of the tools in the school and even at home.

Internet Browsing. Table 4C includes the statistical bases and statistical analyses of the relationship between the profile of school heads and their proficiency level along productivity tools.

***Table 4C.** Relationship between profile of school heads and their proficiency level along internet browsing*

Statistical Bases	Statistical Analyses						
	Age	Sex	Status	Service	Position	Education	Training
Degree of freedom	1	1	1	2	2	2	2
Level of significance	0.05	0.05	0.05	0.05	0.05	0.05	0.05
c2critical value	3.84	3.84	3.84	5.99	5.99	5.99	5.99
c2computed value	1.01	0.53	0.62	0.73	0.04	0.81	0.19
Decision on H0	DNR	DNR	DNR	DNR	DNR	DNR	DNR
Conclusion	NS	NS	NS	NS	NS	54	NS

Legend: DNR-Do Not Reject; NS-Not Significant

The data showed that in relation to internet browsing, the c2 computed values of 1.01, 0.53, and 0.62, for age, sex, and civil status, respectively, do not exceed the c2 critical value of 3.84 with degree of freedom of 1 at 0.05 level of significance.

Therefore, the null hypothesis is not rejected. This means that the mentioned profile of the school heads is significantly independent of their level of proficiency along internet browsing.

Furthermore, the c2 computed values of 0.73, 0.04, 0.81, and 0.19 for length of service, position, educational attainment, and training, correspondingly, are less than the c2 critical value of 5.99 with degrees of freedom of 2 at 0.05 level of significance.

Hence, the hypothesis which is stated in null form is not rejected. It would imply that the said variable is not significantly associated with identified profile of the school heads.

It means that the ICT proficiency level along internet browsing cannot be associated with profile as shown in the result with the school heads surveyed.

As reflected in the profile that most of them are married in which both the school and family are being investigated. Indeed, the school head must balance the attention to the activities to be undertaken in such a way that overlapping and conflict may be avoided and put in place.

This can perhaps be done efficiently if the school heads are ICT literate regardless of whether they have family or no family because things can be electronically performed.

This would indicate that the school heads may perform their duties regardless of their personal background. The acquisition and know-how in ICT are not hampered even though the married school heads have limited time allotted to honing the skills in computer as mentioned in the interview conducted.

The result is supported by the study of Gimao and Benavides (2022) which concluded that the age, sex, length of service, position, educational attainment, and ICT-training attended are significantly associated with productivity tools, video presentation, and internet searching.

Email Management. Table 4D includes the statistical bases and statistical analyses of the relationship between the profile of school heads and their proficiency level along email management.

***Table 4D.** Relationship between profile of school heads and their proficiency level along email management*

Statistical Bases	Statistical Analyses						
	Age	Sex	Status	Service	Position	Education	Training
Degree of freedom	1	2	2	4	4	2	2
Level of significance	0.05	0.05	0.05	0.05	0.05	0.05	0.05
c2critical value	3.84	5.99	5.99	9.49	9.49	5.99	5.99
c2computed value	0.09	2.30	0.41	1.20	1.73	0.61	2.45
Decision on H0	DNR	DNR	DNR	DNR	DNR	DNR	DNR

Conclusion	NS	NS	NS	NS	NS	NS	NS

Legend: DNR-Do Not Reject; NS-Not Significant

It can be gleaned from the table that in relation to email management, the c2 computed value of 0.09 for age is less than the c2 critical value of 3.84. Also, the c2 computed values of 2.30, 0.41, 0.61, and 2.45 for sex, civil status, educational attainment, and training, respectively, do not exceed the c2 critical value of 5.99 with degrees of freedom of 2 at 0.05 level of significance. Thus, the null hypothesis is not rejected. It means that the level of proficiency along email management are not significantly related to the identified profile variables of the school heads.

In addition, the length of service and position of the school heads are not associated with the proficiency level along email management because the c2 computed values of 1.20 and 1.73, correspondingly, are less than the c2 critical value of 9.49 at 0.05 level of significance with degrees of freedom of 4. Therefore, the null hypothesis is not rejected.

This means that the length of service spent by the school heads in the school has no effect on their ICT proficiency level since they have acquired it may be either in the schooling or self-taught, seasoned through time. Similarly, those with longer years may have similar proficiency with those who are newly designated in which they were given the same exposure. It would imply that regardless of the number of years stayed in the school they will be able to perform the roles and responsibilities with the aid of ICT.

The result is in contrast with the study of Gimao and Benavides (2022) which revealed that sex and educational attainment have significant relationship with email management and other online learning platform. It was recommended that the teachers may be equipped with skills and knowledge in the use of technology in instructional design and delivery to learn all the necessary skills. Positive attitude to encourage individuals to use ICT effectively and improve the skills required.

Other Online Learning Platforms. Table 4E includes the statistical bases and statistical analyses of the relationship between the profile of school heads and their proficiency level along other online learning platforms.

Table 4E. Relationship between profile of school heads and their proficiency level along other online learning platforms

Statistical Bases	Statistical Analyses						
	Age	Sex	Status	Service	Position	Education	Training
Degree of freedom	2	2	2	4	4	4	4
Level of significance	0.05	0.05	0.05	0.05	0.05	0.05	0.05
c2critical value	5.99	5.99	5.99	9.49	9.49	9.49	9.49
c2computed value	0.10	0.21	1.01	0.71	0.61	1.14	5.04
Decision on H0	DNR	DNR	DNR	DNR	DNR	DNR	DNR
Conclusion	NS	NS	NS	NS	NS	NS	NS

Legend: DNR-Do Not Reject; NS-Not Significant

It can be asserted from the table that relative to other online learning platform, the c2 computed values of 0.10, 0.21, and 1.01 for age, sex, and civil status, respectively, are lower than 5.99 with degrees of freedom of 2 at 0.05 level of significance. Hence, the null hypothesis is not rejected which tells that there is no significant relationship between the proficiency level along other online learning platform and identified variables of the profile of school heads.

Moreover, the c2 computed values of 0.71, 0.61, 1.14, and 5.04, for length of service, position, educational attainment, and training, correspondingly, are lower than the c2 critical value of 9.49 with degrees of freedom of 4 at 0.05 level of significance. Thus, the said profile variables are independent of proficiency level along other online learning platform since the null hypothesis is not rejected.

It indicates that teachers in charge, head teachers, and principals do not vary with their ICT proficiency. In

addition, they were provided equal opportunities in attending seminars and trainings on ICT-related topics which might have improved their capability of managing the school. This would imply that the school heads may be different in their position yet all of them are proficient in carrying their tasks efficiently using ICT. The result is corroborated as disclosed in the interview held, some of them have exerted efforts in doing the activities by asking from the senior school heads.

Online Transaction. Table 4F includes the statistical bases and statistical analyses of the relationship between the profile of school heads and their proficiency level along online transaction.

Table 4F. Relationship between profile of school heads and their proficiency level along online transaction

Statistical Bases	Statistical Analyses						
	Age	Sex	Status	Service	Position	Education	Training
Degree of freedom	2	2	2	4	4	4	4
Level of significance	0.05	0.05	0.05	0.05	0.05	0.05	0.05
c2critical value	5.99	5.99	5.99	9.49	9.49	9.49	9.49
c2computed value	0.81	0.25	0.46	0.91	0.78	0.34	4.06
Decision on H0	DNR	DNR	DNR	DNR	DNR	DNR	DNR
Conclusion	NS	NS	NS	NS	NS	NS	NS

Legend: DNR-Do Not Reject; NS-Not Significant

The data revealed that the profile of the school heads is not significantly related to their level of proficiency along online transaction. The said non-association could be reasoned out from c2 computed values that are less than the c2 critical value as implied in the decision rule. Therefore, the non-rejection of the null hypothesis.

This means that the school heads regardless of their personal background are ICT proficient since this may be a requirement for them to qualify for the position. Also, the computer literacy has been part of their schooling in the advanced education the ability to deliver reports using ICT so perhaps the experienced derived was carried out in the workplace. It implies that the services may be delivered in the school efficiently even if they differ in the educational attainment. Although it somehow assumed that those who finished the doctorate program may be ICT proficient than those who have just started their graduate studies. The finding is supported by some of them stated in the interview conducted as evident with the verbatim conversation below:

Mapagal magtransact online pag wara ka aram lalo na kun kwarta an ipadara para ibayad kaipuhan pirmi magpaassist (It is difficult to transact online if you do not have the technical know-how so you always ask for assistance.)

Mapagal man magsubmit san reports online kay daghanun an inpipindot nan kun masala sap ag attach san files kaya kaipuhan magpatukdo … (There is difficulty in submitting reports online that is why assistance is always sought.)

This means that that they may have acquired their proficiency when enrolled in master's studies especially in Computer Education subject in which their skills were enhanced.

Similarly, they mentioned about the difficulty encountered in submitting reports online in which the attachment of files sometimes caused them to experience the complexity.

4. Proposed Training Program on ICT for School Heads
This portion presents the proposed training program which emerged as an output based on the results of the study. It includes the key results areas, objectives, activities, persons involved, budgetary requirements, time frame, and expected outcome.

Rationale
Information and Communications Technology (ICT) can impact students' learning when teachers and school heads are digitally literate and understand how to integrate it into curriculum. Also, the ICT in education is the mode of education that use information and communications technology to support, enhance, and optimize the delivery of information.

Moreover, school heads play an important role in managing media and technology integration into school teaching. They can foster the use of ICT at a strategic level, even supporting the introduction of media literacy education activities into teaching.

With the result that emerged, it was revealed that school heads have advanced proficiency in basic computer operations. They are proficient in productivity tools, internet browsing, email management, online learning platforms, and online transaction. However, the said areas need to be reviewed and sustained that is why this refresher course is anchored on these with the hope that they will attain the advanced proficiency level in ICT.

General Objective

The main goal of this training program is to sustain the proficiency level in ICT of the school heads.

Specific Objectives

a. To sustain the advanced proficiency level of the school heads in basic computer operations.
b. To reinforce the productivity tools proficiency of the school heads.
c. To provide assistance to school heads on internet browsing and email management.
d. To introduce application software on online learning platforms and online transaction which are not familiar to school heads

IV. CONCLUSION AND RECOMMENDATIONS

This study concluded that majority of the school heads are 41 years old and above, female, married, and have 16 years and above teaching experience. Also, most of them are principal who acquired master's units and have attended the division level ICT-related training. The school heads have advanced proficiency level in basic computer operations while proficient in productivity tools, internet browsing, email management, online learning platforms, and online transaction. The profile of the school heads is not significantly associated to their proficiency level along basic computer operations, productivity tools, internet browsing, email management, online learning platforms, and online transaction. An action plan was proposed to enhance the proficiency level in ICT of the school heads.

It was recommended that the school heads may be encouraged to upgrade their qualifications by attending professional growth and development programs. The school heads may be provided appropriate ICT-related training to upskill their proficiency to the highest level especially on online transactions .The Division Office may augment the ICT capability es of the school by giving additional funding intended for the procurement of ICT equipment and infrastructures. The action plan may be submitted to the concerned authorities for further review and evaluation prior to its adoption and implementation. Further study may be conducted which may include the other school heads in the Division of Sorsogon Province and the inclusion of other variables not covered. \

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