

Competency of Teachers in the Utilization of Information and Communication Technology on Christian Education Learning

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ABSTRACT--*This research aimed to determine how the competency of the teachers in the utilization of information technology and communication on the study of Christian Education in Manado city. The method used in this study is survey research with a quantitative approach of descriptive. The result of this research was the competence of teachers in Manado city in the use of information technology and communication on the learning of Christian Education is medium, this is demonstrated by information created from the processing of competency data teachers in the mastery of software applications in learning is to control an average of 33.91% and slightly control the average of 42.62%, while for the average digital competency is 41.67% teacher mastery and 44.55% less mastered, the aspect of knowledge pedagogical average is 60.34 teacher mastered pedagogical knowledge, and averaged 57.34% teachers mastered pedagogical knowledge and technology.*

Keywords-- *competence, Christian education teacher, information communication technology*

I. INTRODUCTION

According to the teachers and lecturers Law No. 14 of 2005 Article 1 paragraph 1 is explained that teacher is a professional educator with the primary task of educating, teaching, guiding, directing, training, assessing, and evaluating students in early childhood formal education, primary education, and secondary education while in the Ministerial regulation of religion No. 16 years 2010 on the Management of Religious Education in Schools it is explained that religious education teachers are professional educators with the primary task of educating, teaching, guiding, directing, training, exemplary, assessing and evaluating students. To improve the quality of education is certainly about how the educators (teachers) teach professionally. The teacher's role is important as a curriculum executor, whether the curriculum is success or not is determined by the role of teachers. Teachers should: (1) Fulfill good professional, pedagogy, social, and personality competencies; and (2) can act as a good facilitator or a companion for student learning process, able to motivate the students and be able to be exemplary role models. In the Minister Regulation of Religion Affairs No. 16 of 2010 on the Management of Religious Education in School article 16 paragraph 1 mentioned that Religious Education Teachers should have pedagogic competence, personality, social, professional, and Leadership. One of the elements of the pedagogic competence that must be developed in article 16 or 2e is the utilization of information and communication technology for the purpose of organizing and developing religious education.

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Nowadays, the development of information and communication technology increasingly penetrated in the implementation of education. The world of education in addition to equip students with information and communication technology, is also required to use information and communication technology, in the process of planning, implementing and evaluating learning. Teachers as the spearhead of education have the main tasks of educating, teaching, guiding, directing, training, assessing, and evaluating students with the responsibility of planning, administering and evaluating learning. The execution of teachers' duties in the information and communication technology era should be supported by the utilization of information and communication technology, so that it can provide better education services. Competence of religious education teachers in information and communication technology field has at least two benefits for students and for themselves. Teachers who have sufficient competence in the information and communication technology can utilize it to improve education service for students in the process of learning. Information and communication technology utilization In addition to improving the efficiency and effectiveness of learning, also to give students the opportunity to learn about information and communication technology. Information and communication technology is needed in learning to develop a capable environment for the learning of 21st century prowess. Through the use of information and communication technology, learning can be designed to facilitate students in developing 21st century proficiency. Teachers as change agents in educational innovations require information and communication technology skills needed in facilitating learning. Competent teachers in information and communication technology can improve their competence by utilizing information and communication technology as a learning resource. The process of setting up a learning device is also easier and can be quickly performed so as to increase its effectiveness. The competence of Christian teachers in information and communication technology for themselves has an impact on the professional development of teachers. Based on the problem, it is conducted research on the competency of Christian education teacher in the utilization of information technology and communication on Christian religious Studies in Manado.

The various problems identified above, may not be all solved through a single study, therefore in this research limited to the competency of Christian education teacher in the utilization of information and communication technology On the study of Christianity in SD in Manado city.

This research aims to know How the Competency of Christian Education in the Utilization of Information and Communication Technology in the study of Christianity in Manado City Elementary School. Theoretically, the results of this research are expected to serve as a research material in order to develop the field of Christian education, especially about the Christian religion education teacher competency study, while practically, the results of this research can be used Education teacher at the elementary school of Christianity in Manado.

II. THEORETICAL STUDY

Competence

Teachers have a wide influence in the educational world. At school he is an education administration administrator who is responsible for education can take place well. Teachers must have academic qualifications, competencies, educator certificates, healthy physical and spiritual, and have the ability to realize national

educational objectives The term competence has many meanings. There are several definitions of competency understanding. In LAW No. 14 of 2005 about teachers and lecturers mentioned that competence is a set of knowledge, skills and behaviors that must be owned, carried out, mastered by teachers or lecturers in carrying out their professional duties. Teachers' efforts to improve the quality of education can be done in a variety of policies to support the creation of an education process that is more productive (effective and efficient), both aspects of infrastructure, curriculum, and improvement quality human resource educators. According to Suharsaputra competence is the main characteristic of the individual to create superior performance or performance that excels at doing the work that includes the personality, motives, attitudes, concepts of self, knowledge, and expertise. According Mulyasa in Suharsaputra competence is a mixture of knowledge, skills, values, and attitudes reflected in the habit of working and acting According to Trianto, the competency of teachers is the skills owned by a person who is tasked with educating students to have a noble personality as the purpose of education. From the explanation above, it appears that competence refers to the ability to implement something gained through education. The competency of teachers refers to performance and rational action to meet certain specifications in carrying out educational tasks. It is said to be rational because the competence has direction and purpose, while the performance is the real behavior of someone observed by others.

According to Gordon as quoted by E. Mulyasa, that there are six aspects or domains contained in the concept of competency, namely as follows:

- a. Knowledge, that is awareness in the field of cognitive, for example a teacher knows how to identify learning needs, and how to conduct learning to students according to their needs.
- b. Understanding, that is, the cognitive and affective that belongs to individuals, such as a teacher who will implement learning should have a good understanding of the characteristics and condition of learners.
- c. Ability (skill), is something that is owned by the individual to perform tasks or work that is charged to him, such as the ability of teachers in selecting and creating simple props to provide easy learning to learners.
- d. Value, is a standard of behavior that has been believed and psychologically integrated in a person, such as the standard of teacher behavior in learning (honesty, openness, democratic, etc.).

Of the six aspects contained in the competency concept above, if studied deeper it covers four areas of competency for a teacher, namely pedagogic competence, personality competence, social competence, and professional competence . The four competencies must be fully mastered by the teacher. Even for teachers of Christian religion education according to ministerial regulation of religion Republic of Indonesia number 16 year 2010 required leadership competence. It is expressly stated in the National Education Standards that "educators must have academic qualifications and competencies as learning agents, healthy physically and spiritually, and have the ability to achieve national educational objectives" The teacher's role is important as a curriculum executor, whether the curriculum is success or not is determined by the role of teachers. Teachers should: (1) Fulfill a good professional, pedagogic, social, and personality competence; and (2) can act as a good facilitator or a companion for student learning, able to motivate the students and be able to be exemplary role models. Awareness of the competence also demands a heavy responsibility for the teachers themselves. They must dare to

face challenges in their duties and environments, which will affect their personal development. Meaning they must also dare to change and perfect themselves according to the demands of the times.

e. Pedagogic competence

Pedagogic is an educational theory that questioned what and how to educate the most. Meanwhile, according to the Greek sense, pedagogic science leads children who discuss problems or issues in education and educational activities, such as educational objectives, educational tools, how to implement education, students, educators and so on. Therefore pedagogic is seen as a process or activity that aims to have human behavior change. Based on law No. 14 of 2005 on Teachers and Lecturers, it is explained that pedagogic competence is the ability of a teacher to manage learning processes related to learners, including understanding of insights or foundations education, understanding of students, curriculum or syllabus development, learning planning, educational and dialogical learning, utilization of learning technology, evaluation of learning outcomes, and development of participants students to actualize their potential. Pedagogic competence that is the ability of teachers in the management of students' learning, according to E. Mulyasa at least include the following things:

a. Understanding of teachers' education and foundations as educators who also have an important role in increasing the quality of education in the country, must first know and understand the education and foundation of basic knowledge. The initial knowledge of this educational insight and foundation can be obtained when the teacher takes education in college.

b. Understanding of the students is anyone who accepts the influence of a person or group of people who are conducting educational activities. The objective of the teacher to know students is so that teachers can help the growth and development effectively, determine the material to be provided, using a matching teaching procedure, conducting a diagnosis of learning difficulties experienced students, and other teacher activities relating to individual students. In understanding students, teachers need to pay particular attention to the individual differences of students, such as:

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Understanding of students Students are any person who receives influence from a person or group of people who run an educational activity. The objective of the teacher to know students is so that teachers can help the growth and development effectively, determine the material to be provided, using a matching teaching procedure, conducting a diagnosis of learning difficulties experienced Students, and other teacher activities relating to individual students. In understanding students, teachers need to pay particular attention to the individual differences of students, such as:

Intelligence level

The intelligence of a person consists of several levels: the lowest class is those whose IQ is between 0-50 and in say idiots. The second group is those who are the IQ between 50-70 known as the morons, namely mental limitations. The third group of those who are the IQ between 70-90 is referred to as a slow or foolish child. The

middle class is a large part of the group that is IQ 90-110. They can learn normally. As for the IQ 140 and above is called a genius, they are able to learn much faster than others

Creativity

Everyone has a difference in the creativity of both inter and between individuals. People are able to create something new called creative people. Creativity is closely related to intelligence and personality. A creative person generally has a high level of intelligence and is like new things.

Physical condition

Physical conditions relate to vision, hearing, speech, limb (foot), and paralyzed due to brain damage. Teachers should provide different services to students who have such abnormalities in order to help their personal development. For example, in terms of media types used, help and set the sitting position and so on.

Cognitive development

Growth and development can be classified on cognitive, psychological and physical. Growth and development is associated with changes in the structure and function of human characteristics. The change takes place in steady progress and is a process of maturity. These changes are the result of interactions of the inherent potential and environment. C. Curriculum Development/Syllabus

The curriculum is a set of plans and arrangements regarding the purpose, content, and learning materials, as well as the way that is used as a guide for learning implementation to achieve specific educational objectives While the syllabus is a set of plans and arrangements to help develop the entire potential that encompasses the physical, intellectual, emotional, and moral abilities of religion. In the learning process, the teacher's ability to develop curriculum/syllabus according to the needs of learners is very important, so that learning can take place effectively and enjoyable.

D. Learning Design

The learning design is one of the pedagogic competencies that teachers must have, which will be directed to the implementation of the learning. The Learning Plan consists of at least three activities

I. Identification needs

The need is a gap between what is supposed to be with the actual conditions. Identify the need aimed to engage and motivate learners so that learning activities are felt as part of life and they feel they have it. This can be done by:

- A) Students are encouraged to declare the need for learning the form of specific competencies that they want to have and gained through learning activities.
- B) Students are encouraged to recognize and empower the environment as a learning resource to meet learning needs.
- C) Students are assisted to recognize and declare the possibility of barriers in the effort to meet the needs of learning, both from inside and outside.

Based on the identification of learning needs for the establishment of student competencies, then identified a number of competencies to be used as learning materials.

II. Competency Identification

Competence is something students want to have and are the main components that must be formulated in the learning, which has an important role in determining the direction of learning. Competence will give clear instructions to the material to be studied, the determination of methods and media of learning and assessment. The competency achievement assessment needs to be done objectively based on students' performance, with evidence of their mastery of a competency as a result of learning.

III. Preparation of Learning Programs

The preparation of the learning program will be on the Learning Implementation Plan, as a product of short-term learning programs, which includes the components of program learning activities and program execution process. Program components include basic competencies, standard materials, methods and techniques, media and learning resources, learning time and other supporting power.

E. Implementation of educational and dialogical learning

In government regulations about teachers is explained that teachers must have the competence to implement educational and dialogical learning. This means that the implementation of learning must depart from the dialogical process among the subjects of learning, giving birth to critical and communicative thinking. Without communication there will be no true education. In general, the implementation of learning includes:

I. Pre Test (Preliminary test)

II. Process

The quality of learning and the creation of student competencies can be seen in terms of processes and outcomes. In terms of process, learning and competency formation are said to be successful and qualified when wholly or mostly (75%) Students are actively, mentally, physically, or socially involved. In terms of results, the learning process and competency formation is said to be successful if there is a change of competence and positive behavior in the students wholly or mostly (75%). More, the process of learning and forming competencies is said to be successful and quality when the input is evenly, producing a high quality and higher output, and according to the needs of community development and development.

III. POST Test

F. Utilization of learning Technology

The education facility generally includes learning resources, facilities and other supporting infrastructures, so the improvement of education facilities should be emphasized on improving learning resources, both quality and quantity that are in line with the development of education technology today. The development of these learning resources allows students to learn indefinitely, not only in classrooms, but can be in laboratories, libraries, at home and in other places. Learning technology is a supporting tool to help facilitate the achievement of learning

objectives and the establishment of competencies, facilitate the presentation of data, information, learning materials, and cultural variations

G. Evaluation of Learning outcomes

I. Class Rating

Class assessments were conducted to learn about the students' progress and learning outcomes, diagnose learning difficulties, provide feedback, improve the learning process and build up the competence of learners and determine class ascension. Class assessments are conducted with daily replay and final exam.

II. Basic Ability Test

The basic ability test is performed to determine the ability to read, write and count necessary to improve the learning program (remedial program).

III. Final assessment of Education Unit and certification

At the end of each semester and the year of study organized assessment activities to get a full and thorough picture of the submission of students' learning in a given time unit and also for certification, performance and learning outcomes are included in the letter of completion of study.

IV. Benchmarking

Benchmarking is a standard for measuring ongoing performance, processes and results to achieve a satisfactory advantage. To be able to obtain data and information about the achievement of benchmarking can be held nationally conducted at the end of the unit of education.

V. Program Assessments

The program assessment is conducted by the Ministry of National Education and the Education Office continuously. The program assessment is conducted to determine the conformity of curriculum with the basis, function and objectives of national education, as well as its suitability with demands of community development, and progress of the times.

H. Student development to actualize the potential of its own.

Along with the advancement of information technology that has been so rapidly, teachers no longer only act as presenter of information but also have to be able to act as a facilitator, motivator, and guidance to give more students the opportunity to search and cultivate their own information. Thus the teacher's expertise must continue to be developed and not only limited to the mastery of teaching principles.

The Minister of National Education (now the Ministry of Education and Culture) has established regulation of the Minister of National Education of Republic of Indonesia No. 16 of 2007 concerning standard of academic qualification and teacher competence. In the appendix of the rule, the four core competencies were standardized. Teacher of Christian Religious Education in elementary, junior high school, and senior high school, vocational school competence in particular is "interpret the material, structure, concept, and mindset of the sciences relevant to the learning of Christian education". Secondly, "analyzing the materials, structures, concepts, and mindset of the sciences relevant to the learning of Christian education".

A good teacher is a teacher who is always objective, open to receive criticism of the deficiency that exist in him, for example in how to teach, and continue to develop his knowledge related to his profession as an educator. This is necessary in the effort to improve the quality of education for the benefit of learners so that the objective of education is really well achieved.

III. PEDAGOGIC COMPETENCE INDICATOR

A professional teacher is a person who has skills and expertise in the field of teaching or in other words he has been well educated and trained. Educated and trained not only get a formal education but also have to master various strategies or techniques in the nature of teaching and learning activities and mastering educational foundations as stated in the competency of teachers.

Competence that must be owned by a teacher is: professional competence, personality, pedagogic, and social, while the competency that must be owned for teachers of religious education is a pedagogic competence, personality, social, professional, and leadership. Pedagogic competence according to the regulation of the Minister of Religious Affairs No. 16 year 2010 on the management of religious education in schools in article 16 paragraph 2 there are 10 sub-competency items namely:

Understanding the characteristics of students from physical, moral, social, Cultural, emotional, and intellectual;

- a. Mastery of the theory and principles of learning religious education;
- b. Development of religious education curriculum;
- c. Implementation of religious education development activities;
- d. Utilization of information and communication technology for the benefit of organizing and developing religious education;
- e. Developing potential students to actualize various potential owned in the field of religious education;
- f. Communicate effectively, emphatically and politely with students;
- g. Assessment and evaluation of processes and learning outcomes of religious education;
- h. Utilization of assessment results and evaluation for religious education learning interests; and
- i. Reflective action for improved religion educational learning quality.

Among the ten grains, the only competency that undertakes a further standard explanation is the 5th point, the competency of teachers in the utilization of information and communication technology for the purpose of organizing educational development activities. These competencies are only described with the sentence "Utilizing information and communication technology to improve the quality of educational development activities", without further description (Permendiknas Republic of Indonesia number 16 year 2007 about standard academic qualifications and teacher competence). Even in the Permendiknas is only the core competencies of teachers who do not get a detailed description at every level of education. As an example of the pedagogic core competencies in "Mastering the characteristics of students from physical, moral, social, cultural, emotional, and intellectual aspects" there are four competency teachers for kindergarten teachers, elementary/MI teachers and subject teachers in elementary/MI, junior high school/MTs, senior high school/MA and vocational school/MAK. This needs to be further described in relation to the magnitude of the influence of information and communication Technology in each implementation of educational activities. The existence of information and communication technology in

education is already considered absolute necessity. The education agency of the World, UNESCO, in its publications has stated the importance of information and communication technology utilization in education. The joint team of the Ministry of Communication and Information, Ministry of Education and Culture and the Ministry of Religious Affairs identified several strategic roles of information and communication technology in the basic and secondary education system. That role is 1) as the warehouse of Science, 2) as a learning tool, 3) as an educational facility, 4) as a standard of competence, 5) as a supporting education administration, 6) as a tool for school management/Madrasah, and 7) as an educational infrastructure

Utilization of Information and Communication Technology in Learning

The nature of information and communication technology

The development of information and communication technology has been influential in various aspects of human life. This encourages a new era of human civilization from the industrial era to the information era. Society's era of information focuses more on knowledge assets compared to capital assets. Teachers who are competent in the utilization of information and communication technology are needed to develop personal, pedagogical, social, and professional competence in accordance with Permendiknas No 16 years 2007 about Teacher Competence. This has become the cornerstone of achievement of 2045 gold generation and students who are intelligent, creative and innovative to become human capital in social and economic development as a consequence, the way people live, work and learning information becomes transformed. This paradigm shift certainly demands a fundamental change in the 21st century education system. Today's education aims to build knowledgeable communities that not only possess information and communication technology literacy and information literacy, but also through a process of thinking in establishing, deepening, creating, discovering and siphoning knowledge to the wider community. Information technology as a product and process has evolved in such a way that affects all our lives in various forms of application. In general, developments in the information era show the following traits: (1) increased loading power to collect, store, manipulated, and present information data; (2) Increased information presentation speed; (3) Miniaturization of hardware accompanied by abundant availability; (4) Diversity of information options to serve a wide range of needs; (5) Cost of obtaining information especially the cost for rapid transmission of data in long distances, which is relatively down; (6) The ease of use of communication and information technology products, both in the form of hardware and software (7) the ability to distribute rapidly and wider information and therefore more easily acquired information through geographical, political, or sovereign boundaries; (8) Increased usability of information with the diversity of services that can be provided to enable better problem solving.

information and communication technology Utilization in Learning

Communication and information technology should not be viewed as an artifact, but it is also viewed as a certain process and structure. This means that this communication and information technology should be an integral part of the education system. As an integral part, the inclusion of this technological component will affect other components of which the teacher's role changes in school education units. The role of teachers in this case is no longer the only source of learning, but rather serves as the learning process designer, facilitator, and motivator for the student learning process. Information and communication technology utilization in learning became an urgent demand in the 21st century. The rush of information flows and the demands of an increasingly advanced age is at least a small possibility for teachers to be the only most authentic learning resources. However, it is

undeniable that in school education teachers have a strategic role. Therefore, the use of information and communication technology in schools should start from the strategic point of regard, the teacher. Teachers should be assured that information and communication technology has a use in facilitating the learning process of students and that information and communication technology will not replace its position as a teacher, but rather help it to, at the very least, save and present the concepts, principles, procedures he wants to teach. The strategic effort that needs to be done is that teachers need to be increased in confidence and involved and participate in the development, which is the growth of information and communication technology for learning to improve the quality of process and student learning outcomes.

The potential of information and communication technology in helping with the effectiveness of this learning is also supported by the research results referenced by Ade Kusnandar (2008) which concluded that: 1) 10% of information is obtained by reading (text), 2) 20% information obtained by listening (voice), 3) 30% information obtained by viewing (graphic/photo), 4) 50% information obtained by viewing and listening (video/animation), 5) 80% of information obtained by way of speaking, and 6) 80% of information obtained by speaking and do (interactive).

RESEARCH METHODS

This type of research was research survey data presented in a descriptive form. The survey was conducted to describe the competence of teachers in Manado city in the use of information technology and communication on the learning of Christian Education, conducted in October – December year 2016.

The population of this research is all Christian Education teachers in Manado city civil servants and Non civil servant who spread in elementary, junior high school, senior high school/vocational school in 11 sub- district. Sampling was done with simple random sampling technique.

Data collection was conducted through instruments/polls adapted by researchers based on *Survey of Pre-service Teachers' Knowledge of Teaching and Technology*, Schmidh & Koehler, Michigan & Iowa State University, 2009 and *Auditing the TPACK Competence and Confidence of Australian Teachers: The Teaching With ICT Audit Survey (TWictAS)*, Albion & Jamiesen-Proctor, University of Southern Queensland Australia, 2010. The poll consists of: (1) Teacher identity (2) Access profile to and Internet (3) confidence in using information and communication technology with students to learn to teach (4) Mastery application/Software (5) (6) Pedagogical knowledge (7) Knowledge of content (8) Pedagogical Knowledge and technology (9) Technological knowledge, pedagogical, content.

Polls were deployed manually and through a Google Form survey application.

IV. RESULTS OF RESEARCH AND DISCUSSION

Research respondents consisted of Christian Education teachers who are in Manado city civil servant and Non civil servants who spread in elementary, junior high school, senior high school/vocational school in 11 sub-district. In this study samples amounted to 52 respondents.

The identity of the respondent consists of: gender, age, level of education, teacher status, school name, school address.

Based on the results of the analysis on the identity of respondents, first expressed about the identity of respondents as many as 52 people. When viewed by gender, as contained in the following table.

Table 1: Respondents' Gender

Gender	Frequency	Percentage
Male	13	25
Female	39	75
Total	52	100

The age of the respondent can be quite varied, so there was a representation of various groups of respondents seen from the age. It meant that there were respondents who are senior in the work, but that still junior also exists. For ease the analysis, done with classed distribution technique. Age classification was made ten years. Description of the respondent's age is presented in the table below:

Table 2: Respondent's Age

Age	Frequency	Percentage
20-30	21	40,38
31-40	13	25,00
41-50	13	25,00
51-60	5	9,62
Total	52	100

Table 3: Last education

Education	Frequency	Percentage
Religion Teacher Education	1	1,92
Bachelor	48	92,31
Master	3	5,77

Table 4: T type of teacher in education unit

Education Unit	Frequency	Percentage
Elementary	32	61,54
Junior high school	8	15,38
Senior high school/ vocational school/ technology vocational school	12	23,08

Tabel 5.:Type of Teacher

Type of Teacher	Frequency	Percentage
Civil Servant	32	61,54
Non Civil Servant	20	38,46

Information and Communication Technology Competence of Christian Education Teacher

In this study, found that 88.46% of Christian Education Teacher in Manado City had their own temporary computer which did not have only a small portion of 11.54%. This meant that most teachers already have computers to use in their daily activities. In terms of access to broadband Internet (such as Speedy) at home as much as 42.31% already had a while 57.69% have not had broadband Internet access at home, but mostly that was 84.62% have access to mobile computing devices such as 3G phones or Iphone/Android that can access the Internet at home through mobile phone telecommunication networks while not having this access was only 15.38%. This meant that most teachers can get the internet out of their homes and wherever they go with their mobile computing devices. While Internet access provided at school 53.85% Teachers replied that the school has provided internet facilities and 46.15% do not provide access, so even though the school does not provide facilities to access the Internet most of the teachers can access the Internet through a mobile phone device owned.

Christian Education Teachers were interested in using information and communication technology for personal needs and for teaching learning purposes, most teachers are 65.38% using information and communication technology to improve student learning outcomes.

A total of 40.38% of Christian Education Teachers have high confidence in using information and communication technology with students to learn to teach while 34.62% ordinary, 19.32% a confident and 5.77 were not confident in using information and communication technology in learning.

In terms of mastering the applications/software used by the teachers were asked about their knowledge and competence about the applications that were commonly used. For each software a number of capabilities and questions about mastering the teacher to such software are provided. The teacher's ability to the software varies and the results were as follows:

Table 6: Mastery of Application. Software

No.	Mastery of Application. Software	Not Competent (%)	Less Mastered (%)	Mastered (%)	Very mastered (%)
1	Word manager (e.g. Microsoft Word, Open Office Writer)	5,77	38,46	53,85	1,92
2	Presentation Application (e.g. Microsoft PowerPoint, OpenOffice Impress)	7,69	42,31	44,23	5,77

3	Spreadsheets (e.g. Microsoft Excel, OpenOffice Calc)	15,38	63,46	21,15	-
4	Graphic Manager (e.g. Paint, IrvanView, Adobe Photoshop, Paint Shop Pro)	26,92	50	34,62	-
5	Digital Picture Recording (e.g. with Digital Camera, and Scanner)	15,38	50	34,62	-
6	Multimedia Preparation (e.g. Adobe Flash)	30,77	50	17,31	1,92
7	Concept/ Mind Mapping (e.g. Inspiration, MindMapple, MindJet)	34,62	57,77	9,62	-
8	Digital Video Manager (e.g. Adobe Premier, MovieMaker, iMovie)	36,54	40,38	21,15	1,92
9	Email (Outlook, Gmail, Lotus, Yahoo)	7,69	38,46	51,92	1,92
10	Internet Explorer (Internet Explorer, Mozilla Firefox, GoogleChrome)	9,62	30,77	46,15	13,46
11	Web Search (Google, Yahoo, Bing)	11,54	34,62	48,08	5,77
12	Web Design (Adobe Dreamweaver, Frontpage)	32,69	50	9,62	7,69
13	Web 2.0 and Social Media (Facebook, Twitter, Path, Youtube, Ning)	11,54	28,85	50	9,62
14	Online Class Manager (Moodle, Blackboard, Edmodo, Schoology, Kelase)	38,46	42,31	19,23	-
15	Online Publishing (Wordpress, Blogspot, podcast, publikasi video di	34,62	40,38	19,23	5,77

	Youtube)				
16	Print (using printer)	9,62	25	48,08	17,31
17	Use of LCD projector for Presentation	7,69	42,31	42,31	7,69
18	Online Educational Data Utilization (Dapodik, Padamu, dll)	13,46	42,31	36,54	7,69
19	Utilization of digital learning resources (Buku Sekolah Elektronik, Rumah Belajar, dll)	17,31	42,31	36,54	3,85

From the table above it looked that the percentage of teachers who mastered the Word Manager app (MS-Word, Open Office), Presentation application (Powerpoint), Email, Web search, and social networking were quite large on average mastery of more than 49.03%. But the teacher-mastery percentage of software such as Spreadsheet (MS-Excel), graphics management (Adobe Photoshop), Digital image recording, multimedia drafting (Adobe Flash), Mind Mapping/Concepts (Mindmaple), Digital Video Manager (Moviemaker), web Designing, online classroom management, and online publishing were still a little more controlling on an average of 49.36%. While the average total of the slightly mastered was 42.62% and the master was 33.91%.

The use of printing applications by using the printer 48.08% mastered and for the use of LCD projector 42.31% mastered, 42.31% slightly mastered while 7.69% incompetent. For applications developed by the Ministry of Education and culture such as online educational data utilization (Dapodik, you, etc.) and the use of digital learning resources 42.31% little mastered. This was due to the lack of information to Christian education teachers who were mostly under the auspices of the Ministry of Religious Affairs so that master teacher had less use of digital learning resources from Ministry of Education and culture.

In terms of the competency of digital technology on average 41.67% teachers mastered and 44.55% a little mastered, among which 42.31% of Christian education teachers feel comfortable using digital technology, 46.15% stated that they can be a little mastered easily learn about the new digital technology while 38.46% said it can master easily the new digital technology. 42.31% said that continuing to find out about new digital technologies and 48.08% little mastered about new digital technologies. When faced with technical issues on digital technology then 40.38% of teachers can counter their own technical problems, 46.15% a little mastered, and 11.54% incompetent, 42.31% teachers have the necessary skills in using digital technology in achieving personal goals and the skill of using digital technology to achieve professional objectives (learning and teaching).

On the mean pedagogical aspect of knowledge 60.34 teachers master the Pedagogical knowledge, of whom 63.46% of teachers know how to assess student performance, 69.23% can adapt teaching based on what is currently known and unknown to students, 63.46% can adapt teaching styles to diverse learning, 65.38% can assess students ' diverse learning, 57.69% can use different teaching approaches in the classroom. 63.46% know how to do class management, and 55.77% master How to do active learning with technology support. The majority of Christian

education teachers, on average, 65.38%, can choose an effective teaching approach by guiding thinking in student learning and mastering technology that can be used to understand and application them in learning. In relation between pedagogical knowledge and the average technology of 57.34% teachers Mastering pedagogical knowledge and most of the technology teachers above 57% can choose the technology used in the enhancement of learning, teachers used technology for classroom learning, can use a strategy that combines content (content mate lessons), technology and teaching approaches in class as Teachers use technology to help improve the learning and learning outcomes of Christian education teacher.

V. CONCLUSIONS AND SUGGESTIONS

1. The competence of teachers in Manado city in the use of information technology and communication on learning Christian Education was medium, this was demonstrated by the information resulting from the data processing competence of the teacher in the mastery of the application of the software in which the learning was mastered an average of 33.91% and a slight control averages 42.62%, while for the average digital competence 41.67% Teachers Master and 44.55% little mastered, the pedagogical aspect of knowledge was average 60.34 teachers Master pedagogical Knowledge, and an average of 57.34% of teachers mastered pedagogical knowledge and technology. Survey Data shows that all teachers have ever used information and communication technology in learning. Teachers stated that information and communication technology could improve learning achievement, an important part of a curriculum, and have a major impact on student learning. Schools should improve information and communication technology facilities and teacher access to information and communication technology activities.

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