

The Profile of Basic Computer Skills of Elementary School Teacher's in Ternate City

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Abstract: Knowledge of technological developments and understanding and application of technology are very important in this era. Teachers as the main actors in the process of education in schools need to get more attention through systematic training and education activities in the mastery of Information Technology and Computers (ICT). This study aims to get preliminary information about IT Literacy perceptions and knowledge of elementary school teachers throughout Ternate City, as well as obtain elementary knowledge profiles of elementary teachers regarding IT literacy. This study uses survey research methods with a quantitative approach. Data collection techniques used are by distributing questionnaires and conducting interviews on predetermined samples in 25 schools with teacher samples at each school determined randomly. Data analysis is calculated based on the number of checklists filled in by the respondent, then percentage to determine the level of perception of each teacher. The results showed that the highest ability of teachers in operating Microsoft Office was in primary schools in the central and northern areas of Ternate City, namely 58% and 50% respectively. While the average IT ability of supporting elementary school teachers has not met the standard, which is <50%. The basic IT literacy skills of teachers are also still low, at 56%. Researcher's recommendation is the need for IT training for elementary school teachers in the 4 districts of Ternate city, and ongoing mentoring so that the learning process becomes quality and student learning outcomes increase.

1 INTRODUCTION

The industrial revolution has brought many changes in the lives of mankind. This is marked by changes in the way of work that begins with changes in mindset and changes in human skills as the driving force of the industrial revolution. Changes in perspective and ways of working are changing gradually from the first industrial revolution until the industrial revolution stage 4 or 4.0.

In the world of education, the era of industrial revolution 4.0 will change many things, changes in curriculum and implementation of the curriculum at the education unit level, namely the teachers as the spearhead of the success of the curriculum. Teachers are required to have basic skills related to the era of industrial revolution 4.0. These skills are not only about basic literacy in writing, reading and counting, but important literacy that teachers must also have is information and communication technology literacy.

Based on Dapodik data in 2018, the total number of teachers in Ternate City is 2,814. The number of elementary school teachers in Ternate City is approximately 1,166 (more than 50% of the total number of teachers) and the number of elementary school students in Ternate City is 20,704 students (dapodik data <http://dapo.dikdasmen.kemdikbud.go.id/> accessed in April 2018). Teachers who are in the four main sub-districts of Ternate City are as many as 1058 people, the rest are scattered in other districts, outside Ternate Island.

The quantity of teacher is ideally in line with the quality of the teacher in terms of managing learning, so that student achievement and learning outcomes become more improved. Nonetheless, there are several factors that influence the professional quality of teachers and one of them is the ICT skills of teachers who are now no longer just supporting skills, but have become a necessity in the current Industrial Revolution 4.0 era.

It is not yet clear (in terms of numbers and authentic data) how and how the ICT skills of elementary school teachers in Ternate City. From the experience of managing Teacher Professional Education and Training (PLPG) activities in offices, there are still many elementary school teachers and others who have not mastered well, the basics of computer operation. When carrying out computer-based exams (CBT), many teachers find it difficult to work on problems whose entire system uses access through a server.

In addition, teachers at the education unit level are often seen using personal cellphones in the form of smartphones and tablets, which are limited to social media. In fact, with the presence of technology and applications today, it makes it easy for teachers to manage learning until the implementation of learning evaluation.

2 METHOD

This study uses survey research methods with a quantitative approach. Data collection was carried out through surveys in all elementary schools in Ternate City. Samples that can represent the population are taken using a multistage random sampling technique. Determination of the sample size of the population, determined by using a formula from Slovin (Fatimah Saleh & Lim, 2010) as follows:

$$N = N / 1 + Ne^2$$

The data collection technique used is by distributing questionnaires and conducting interviews on a sample that has been determined in 10 schools with a sample of teachers in each school determined randomly. The instruments used were questionnaires about the use of IT and IT knowledge related to the Industrial Revolution 4.0.

Data analysis was calculated based on the number of checklists filled out by the respondents, then it was challenged to determine the level of perception of each teacher. Interviews were conducted at respondents randomly to find out information that supports questionnaire contents.

1. The category of each indicator is transferred to an absolute number as follows:

Table 1: Indicator Category.

No.	Category	Score
1	Proficient	3
2	Able	2
3	Underprivileged	1
4	Disable	0

Furthermore, each respondent scores summed with other respondents and averages so that the overall score of respondents' perceptions is obtained as follows:

$$\text{Average Score} = \frac{\text{Score of all Respondents}}{\text{Total Respondents}}$$

For frequency data and school facilities support, the same thing is also done, namely:

Table 2: Frequency of School Facility Support.

No.	Category	Score
1	Often (more than twice)	3
2	Rarely (more than once)	2
3	Ever (once time)	1
4	Never	0

Data processing and analysis is carried out through several steps, namely data editing, coding, tabulation, and data validation. Furthermore, the analysis is carried out using descriptive statistical techniques and associations for correlational data.

3 RESULT AND DISCUSS

The target school that became the sampling in this activity was representative of 4 sub-districts of Ternate City, namely Ternate Island sub-district, South Ternate sub-district, Central Ternate sub-district, and North Ternate sub-district. The number of elementary schools that were sampled was 25 schools / madrasas. Of the 25 schools that took data using questionnaire and interview instruments, they were presented in the form of teacher ability profiles with 4 indicators, namely (1) whether or not they had participated in training activities, (2) the ability to operate Microsoft office, (3) IT support capabilities, and (4) basic IT literacy skills.

The data needed to measure indicators of the ability to operate Microsoft Office for teachers is with a number of questions to measure teacher knowledge related to their ability in office operations and general problems that exist in office software.

The data needed to measure the indicators of IT supporters' abilities are a number of questions in the questionnaire to gather information related to the teacher's knowledge of other IT supporting software such as photoshop, corel draw, spss, and windows movie maker. Some of the software is a support for teachers in making learning media or supporting media so that the presentation looks interesting.

IT basic literacy ability is one of the teacher's soft skills related to its relationship with the internet, and its problems and ability to operate learning online. Some indicators of elementary school teachers' IT skills are obtained through questionnaires with closed or open answers. The data that has been analyzed is shown in the following figure.

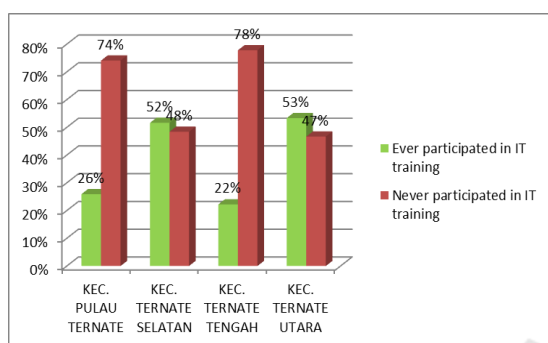


Figure 1: The State of Elementary School Teachers Related to Whether or not Attended IT Training.

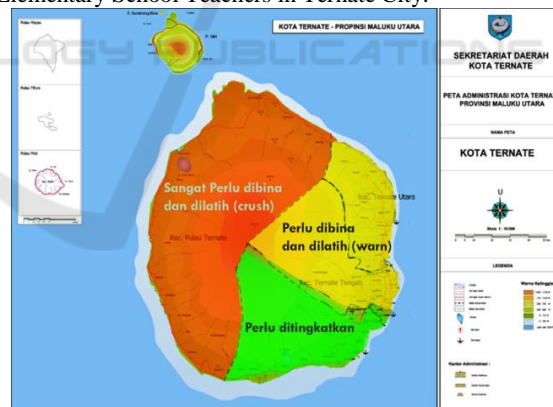
Based on the graph, we can see that the distribution of teachers participating in IT training is still very small in 2 sub-districts within Ternate City, namely schools in Ternate Island and Ternate Tengah Districts (more than 70% of teachers have never participated in IT training activities). Teachers who were in schools in the areas of Central and North Ternate, were counted as having participated in training activities, namely > 50%. However, this figure is still not ideal. In understanding and obtaining basic and advanced IT skills, continuous training is needed and intensive mentoring is needed. Not limited to fulfilling program implementation and purely project fulfillment.

The ability of teachers to cultivate IT literacy in the form of searching and browsing the internet, and making learning online is still very low. There are still many teachers who do not have a correspondence address (personal email), and are actively used. Of the 4 sub-districts that were sampled, only schools in Ternate Tengah sub-district were on average familiar with internet terms, and were able to answer questionnaire questions well, especially those related to the internet. The ability of teachers in sampling schools in 3 other sub-districts is still below 50%. This shows that there are still many teachers whose learning is conventionally based. More than 60% of teachers concluded that

they did not have good IT (internet) literacy skills. However, this figure is still not ideal. IT training is needed immediately for teachers to support their soft skills, so that learning becomes meaningful, more interesting and fun for students.

Based on the analysis of the data displayed in the zoning distribution system based on the ability of IT teachers in the four sub-districts of Ternate City, it is described as follows; (1) Pulau Ternate sub-district is categorized as red zoning, because there are still many teachers in the region (73%) do not yet have qualified IT skills. This needs serious attention from the regional government (Ternate City National Education Office) or who are competent to carry out routine and ongoing activities related to improving the quality of IT teacher training in the region. Teachers need to be fostered and accompanied, trained and given motivation to learn IT so that the learning process can take place calmly, and the quality of education can be improved, (2) for the districts of North Ternate and Middle Ternate, categorized as potentially warning, if training programs increase teacher IT quality is not implemented, (3) for the regions of South Ternate sub-district, teachers are categorized as having many IT skills. However, the figures shown are still below 80%, so training needs to be carried out routinely and ongoing assistance.

Figure 2: The Distribution of IT Capabilities of Elementary School Teachers in Ternate City.



4 CONCLUSIONS

There are still many teachers in the Ternate sub-district area who do not yet have qualified IT skills. This needs serious attention from the regional government (Ternate City National Education Office) or who is competent to carry out routine and ongoing activities related to teacher quality improvement training.

There are still many teachers whose learning is conventionally based. More than 60% of teachers concluded that they did not have good IT (internet) literacy skills. IT training is needed immediately for teachers to support their soft skills, so that learning becomes meaningful, more interesting and fun for students.

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