The Analysis of Students' Difficulties in Using Computer Terms

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A R T I C L E I N F O

A B S T R A C T

Computer is used for many purposes especially for improving and supporting in education system. Students can operate computer as well as possible, but most of them don't know the meaning of some terms in computer science. The aims of this study are to investigate the Students' difficulties in Using Computer Science Terms at STMIK Pelita Nusantara, then to explore the students' difficulties in Using Computer Science Terms at STMIK Pelita Nusantara. This is a qualitative research. The participants of this study were students of second semester of STMIK Pelita Nusantara. The total of students were 35 students that consist of 17 males and 18 females. The result showed that computer terminology is the one problem that the students face. The lack of vocabulary become the main reason why the students cannot use the terms well. Students' obstacles were not only in mastering vocabulary but also in mastering the translation in using computer terms. Sometimes the students know the usage of computer terms but they don't know the meaning of them.

INTRODUCTION

Computer is used for many purposes especially for improving and supporting in education system. Many schools have applied computer as a must thing that the students bring to school. In 2019 the uses of computer was at peak because the spread of corona virus disease (covid-19) and the government has decided that the students had to studying from home and they had to use computer for studying from online learning. There are many applications that can be used to learn online at this time, namely WhatsApp, Telegram, Edmodo, Google Classroom, Zoom, Google Meet and Email. Furthermore, Means, Toyama, Murphy, Bakia, & Jones (2010: 1) explain "one class of online learning models uses asynchronous communication tools (e.g., e-mail, threaded discussion boards, newsgroups) to allow users to contribute at their convenience.

Most students have computers (laptop) and they already know how to use computers, because computer science has long been applied since elementary school. Students can operate computer as well as possible, but most of them don't know the meaning of some terms in computer science (e.g., CPU, RAM, secondary storage). The students have difficulty interpreting the meaning of the terms because they found some vocabularies that the students do not know.

This issue goes hand in Ramli's journal (2022) stated that "There are some difficulties that the students face during the learning process", some causes that make the obstacle of students' leaning should be solved.

Based on the explanation above, the researcher is interested in analyzing the students' ability in using computer science terms. Thus, this research is entitled "An Analysis of Students' Ability in Using Computer Science Terms at STMIK Pelita Nusantara".

Based on the background of the problem, the researcher would like to state the problem as follow:

1. How is the Students' Ability in Using Computer Science Terms at STMIK Pelita Nusantara"?
2. What are the Students' difficulties in Using Computer Science Terms at STMIK Pelita Nusantara"?

Objectives of the Research Based on the statements of the problems which were written above, the objectives of the research are as follow :

1. To investigate the Students' difficulties in Using Computer Science Terms at STMIK Pelita Nusantara.
2. To explore the students' difficulties in Using Computer Science Terms at STMIK Pelita Nusantara.
3. This research can be used as a reference for next research or journal with the same scientific filed

LITERATURE REVIEW
The Definition of Computer

Once most people hear the word computer, they think of a personal computer such as a desktop or laptop. However, computers come in many shapes and sizes, and they perform many different functions in our daily lives.

When you withdraw cash from an ATM, scan groceries at the store, or use a calculator, you're using a type of computer.

A computer is an electronic device that manipulates information, or data. It has the ability to store, retrieve, and process data. You may already know that you can use a computer to type documents, send email, play games, and browse the Web. You can also use it to edit or create spreadsheets, presentations, and even videos.

Computer science is considered as part of a family of five separate yet interrelated disciplines: computer engineering, computer science, information systems, information technology, and software engineering. This family has come to be known collectively as the discipline of computing. These five disciplines are interrelated in the sense that computing is their object of study, but they are separate since each has its own research perspective and curricular focus. (Since 1991 the Association for Computing Machinery [ACM], the IEEE Computer Society [IEEE-CS], and the Association for Information Systems [AIS] have collaborated to develop and update the taxonomy of these five interrelated disciplines and the guidelines that educational institutions worldwide use for their undergraduate, graduate, and research programs.)

The major subfields of computer science include the traditional study of computer architecture, programming languages, and software development. However, they also include computational science (the use of algorithmic techniques for modeling scientific data), graphics and visualization, human-computer interaction, databases and information systems, networks, and the social and professional issues that are unique to the practice of computer science. As may be evident, some of these subfields overlap in their activities with other modern fields, such as bioinformatics and computational chemistry. These overlaps are the consequence of a tendency among computer scientists to recognize and act upon their field's many interdisciplinary connections.

Development of Computer Science

Computer science emerged as an independent discipline in the early 1960s, although the electronic digital computer that is the object of its study was invented some two decades earlier. The roots of computer science lie primarily in the related fields of mathematics, electrical engineering, physics, and management information systems.

Mathematics is the source of two key concepts in the development of the computer—the idea that all information can be represented as sequences of zeros and ones and the abstract notion of a "stored program." In the binary number system, numbers are represented by a sequence of the binary digits 0 and 1 in the same way that numbers in the familiar decimal system are represented using the digits 0 through 9. The relative ease with which two states (e.g., high and low voltage) can be realized in electrical and electronic devices led naturally to the binary digit, or bit, becoming the basic unit of data

Electrical engineering provides the basics of circuit design—namely, the idea that electrical impulses input to a circuit can be combined using Boolean algebra to produce arbitrary outputs. (The Boolean algebra developed in the

19th century supplied a formalism for designing a circuit with binary input values of zeros and ones [false or true, respectively, in the terminology of logic] to yield any desired combination of zeros and ones as output.) The invention of the transistor and the miniaturization of circuits, along with the invention of electronic, magnetic, and optical media for the storage and transmission of information, resulted from advances in electrical engineering and physics. storage and transmission in a computer system. Management information systems, originally called data processing systems, provided early ideas from which various computer science concepts such as sorting, searching, databases, information retrieval, and graphical user interfaces evolved. Large corporations housed computers that stored information that was central to the activities of running a business—payroll, accounting, inventory management, production control, shipping, and receiving.

Computer Terms

Computer terms are the terms or words used in computer science. They could be words or abbreviations. The computer terms are used to make it easier to mention when using a computer. sometimes there are several uses of words that are very widely used in computer science, so several terms were created to make it more efficient.

In this research is qualitative research. In this research the researcher focuses to analysis students' obstacles in using computer terms, computer terminology is the terms or words used in computer science. Qualitative research was chosen to find out the problem in depth about students' difficulties in using computer terms.

The researcher classifies the findings into several points, namely students' difficulties in using computer terms, finding the causes of difficulties in using computer. To obtain data, the researcher used test to analyze students' difficulties in using computer terms. The researcher also used a questionnaire to find out students' difficulties in using computer terms. The subject used is limited for second semester at STMIK Pelita Nusantara.

METHODOLOGY

In this study is qualitative research. In this study the researcher focuses to analysis students' obstacles in reading comprehension using Google Classroom, Google Classroom is the application that researcher choose because when the researcher did teaching practice the application used is Google Classroom. Qualitative research was chosen to find out the problem in depth about students' obstacle toward reading comprehension using Google Classroom. In this approach, the researcher makes a complex picture, examines the words, detailed re- ports from the respondents' views, and conduct studies on natural situation (Creswell, 1998:15).

The study was conducted at STMIK Pelita Nusantara from March 2022 to July 2022. The participants of this study were students of second semester of STMIK Pelita Nusantara. The total of students were 35 students that consist of 17 males and 18 females. The students had problem in reading comprehension

skill using Google Classroom and they still confuse if the lecturer give assignment reading comprehension.

In research there are so called instruments, there are two main things that affect the quality of research, namely, the quality of the instruments and the quality of data collection. In this study, researchers used data collection techniques such as reading tests, which explained as follows:

Reading Test

Researcher give tests to students to measure students' ability to comprehend reading. Based on the reading test, the researcher tries to find out whether the students answered well or not. The answers from students are used as indicators to find out whether the student is having difficulty working on the questions or not. The researcher conducted a test which consist of 20 multiple choice question, and the value of every questions is 5 points. The re- searcher also used four aspects of understanding in this study, namely under- standing to determine the main idea, understanding vocabulary, making inferences and detailed information.

Table 1. Rubric of Reading Test

Reading skill	Total
Main idea	4
Vocabulary	6
Making inferences	3
Detailed information	7

In the data analysis, the researcher refers to stages described by Miles and Hu- berman, which consists of three stages as follow data reduction, critical data, and conclusions drawing. According to Miles and Huberman (1984) activities in qualitative data analysis are carried out interactively and continue to completion, so that the data is saturated. Activities in data analysis, namely data reduction, data display, and conclusion drawing/verification:
a. Data Reduction
b. Data display
c. Conclusion Drawing/Verification

RESULT

The researcher classified the findings into several points, namely The Analysis Of Students' Difficulties In Using Computer Terms. To obtain data, the researcher used test to analyze students' obstacles in comprehending English reading. The researcher also used a questionnaire to find out students' difficulties in using computer terms.

The data were taken from 35 students from the second semester of STMIK Pelita Nusantara. The researcher identified students' difficulties in using computer terms. the researcher calculates it using the insert in table and converts it into the table. below is a table of classification of students' difficulties in using computer terms for the second semester of STMIK Pelita

Nusantara. After collected and analyzed the data, there were 216 obstacles from students in reading descriptive text. Based on the 216 obstacles are classified into several section below:

Table 2. The Classification of Students' Difficulties in Using Computer Terms

No	Name	Determining Main Idea	Vocabulary	Inferences	Information
1	AF	1	2	1	2
2	AI	1	1	2	3
3	AP	0	1	3	0
4	AD	3	2	1	2
5	AS	1	1	2	3
6	AD	0	0	1	1
7	AF	0	1	3	2
8	AA	1	1	2	3
9	AN	3	5	1	3
10	AN	2	4	1	3
11	CP	1	1	0	0
12	DN	0	0	1	2
13	DP	0	0	3	1
14	FA	2	1	1	2
15	FN	1	1	2	3
16	FS	2	2	2	5
17	GO	1	3	0	2
18	IS	1	1	0	0
19	MA	2	1	0	4
20	MB	1	1	0	2
21	MW	2	0	1	2
22	MF	2	2	1	4
23	MF	2	2	1	2
24	NA	1	0	0	3
25	NA	0	0	1	4
26	OF	2	2	1	2
27	PG	1	0	2	4
28	PA	3	3	2	2
29	RD	1	0	2	1
30	RA	1	3	0	2
31	SF	2	0	1	2
32	SS	2	0	1	2
33	TC	1	0	2	1
34	WA	4	1	1	4
35	YI	0	1	2	3
Total of Each Obstacles		**47**	**43**	**44**	**81**
Total of All Obstacles		**215**			

a. Determining Main Idea = 47
b. Understanding Vocabulary = 43
c. Making Inferences = 44
d. DetailInformation=81

The research finding, the researcher presented the results of the analysis of the data obtained during the research, there are 35 data collected by researcher. The type of test has been carried out with students is multiple choice in which one question has multiple choices, namely a, b, c, d, e. The obstacles created by these students analyzed here, the researcher will give wrong answers based on the reading obstacles category. The researcher calculates the frequency of students obstacles using the formula below:

P= F/N x 100%

Notes:

P= Percentage
F= Frequency of obstacles
N= Number of cases (total frequent)

Table 3. Types of Difficulties, Frequency and Percentage in Using Computer Terms

No	Types of Difficulties	Frequency	Percentages
1	Understanding the	47	21,9%
2	Undesrtanding Vocabulary	43	20%
3	Making Inferences	44	20,4%
4	Detail Information	81	37,7%
Total		215	100%

The percentage above explain the various difficulties that students encounter on reading comprehension.

Determining Main Idea
Based on the data above, the research explained that most students had obstacles determining the main idea of the text. The average percentage of students was 21,9%. Question model to find out the main idea of students tests can be seen below:
a. What is long term of CPU?
(Multiple choice number 3). 14 students answered this question with a wrong answer, such as **"CPU"** this answer is wrong, the correct answer is **"Central Processor Unit"**.
b. What is the long term of HTTP?
(Multiple choice number 5). 9 students answered this question with a wrong answer, such as **"HTTP"** this answer is wrong, the correct answer is **"HyperText Transfer Protocol"**.

c. What is the long term of WWW?
(Multiple choice number 12). 12 of students answered this question with a wrong answer, such as **"WWW"** this answer is wrong, the correct answer is **"World Wide Web"**.

d. What is the long term of Error?
(Multiple choice number 20). 12 of students answered this question with a wrong answer, such as **"Error"** this answer is wrong, the correct answer is **"something wrong happens"**.

To see all the students' test questions specifically for the main idea, it can be seen in the appendix.

DISCUSSION

In this study, the researcher discussed the results of the study that had been carried out by the researcher, namely the students obstacles in reading comprehension and students obstacles in using Google Classroom. The researcher found that 21,9% of students experienced obstacles in determining the main idea in reading comprehension text, there are 20% of students who also experience obstacles to understanding the vocabulary contained in the test questions, there are 20,4% of students who have obstacles in making inferences. from a reading comprehension text, and then there are 37,7% of students who experience obstacles in finding detail information in a reading comprehension text. After categorizing the students' scores, the researcher concluded that the students experienced obstacles to determining the main idea of a text, understanding the vocabulary in a text or a question, making inferences on a text, looking for detailed information on a text.

CONCLUSION AND RECOMMENDATION

Based on research and analyzing the data, the researcher wants to conclude that reading is one of the skills that must be mastered by students. The result and discussion have been explained in chapter 4, and computer terminology is the one problem that the students face. The lack of vocabulary become the main reason why the students cannot use the terms well.

Based on the research conducted, the researcher found that students' obstacles were not only in mastering vocabulary but also in mastering the translation in using computer terms. Sometimes the students know the usage of computer terms but they don't know the meaning of them.

ADVANCED RESEARCH

The researcher analyze that this research paper is not perfect. There are lots theories or method or maybe ideas that haven't been conveyed because of the lack of skills of the researcher. And also for researcher who want to research students' ability in using Computer Terms, it is better if the analysis uses a different aspects that researcher has done. Therefore, the researcher hopes that the researcher can use a strategy or method of students' obstacles toward reading comprehension using Google Classroom.

REFERENCES

Azhar, K. A., & Iqbal, N. (2018). Effectiveness of Google classroom: Teachers' perceptions. Prizren Social Science Journal, 2(2), 52-66.

Banditvilai, C., & Cullen, R. (2018). Problems and Obstacles in Learning English as a Foreign Language. International Journal of Social Science and Human- ity, 8(12).

Brown. H. Doughlas. (1987). Principles of Language Learning and Teaching While Plaints (New York: Longman).

Cakrawati, L. M. (2017). Students' Perceptions on the Use of Online Learning Platform in EFL Classroom. English Language Teaching and Technology Journal, 1(1), 22-30

Creswell, John W. (1998). Research Design Pendekatan Kualitatif, Kuantitaif, and mixed. Yogyakarta: Pustaka Belajar

Elyas, T., & Al Grigri, W. H. (2014). Obstacles to Teaching English in Saudi Arabia Public Schools: Teachers' and Supervisors' Perceptions. International Journal of English Language Teaching, 2(3(, 74-89

Hornby. (1978). Oxford advanced learners'. Dictionary of Current English, USA: Oxford University.

Huda, A. (2020). Improving Students' Reading Comprehension Through SVO (Subject Verb Object) Mapping Strategy (A Classroom Action Research) at Tenth Grade Students in SMKN 1 Kemlagi. Language-Edu, 9(1).

Iftakhar, S. (2016). Google classroom: What Works and How. Journal of Education and Social Sciences, 3(1), 12-18.

Islam, M. S. (2019). Bangladeshi University Students' Perception about Using Google Classroom for Teaching English. Psycho-Educational Research Reviews, 57-65.

Kharisma, S. I. (2019). The Students' Obstacles in Identify Narrative and Descriptive Text (Doctoral dissertation, UIN Ar-Raniry Banda Aceh).

Larasati, D. (2019). An Analysis of Difficulties in Comprehending English Reading Text at the Eleventh Grade Students of MA LAB UIN-SU Medan (Doctoral dissertation, Universitas Islam Negeri Sumatera Utara).

Lincoln, Yvonna S & Egon G. Guba. (1985). Naturalistic Inquiry. California: Sage.

J. Moleong, Lexy. (2014). Metode Penelitian Kualitatif. PT Remaja Rosdalarya, Bandung.

Miles, Matthew B and Huberman, A Michael. (1994). Qualitative Data Analysis, California: SAGE Publication.

Muslimah, A. (2018). A Survey on the Use of Google Classroom in English Language Education Department of Islamic University of Indonesia.

Ntreke, B.B., & Ramokora, B. T. (2017). Reading competency of first-year undergraduate students at University of Botswana: A case study. Reading & Writing. 8(1), 1-11.

Nuttal, C. (1982). Teaching Reading Skill in A Foreign Language. London: British Library Cataloguing in Publication Data.

Pang, E. S., Muaka, A., Bernhardt, E. B., & Kamil, M. L. (2003). Teaching reading (Vol. 12). Brussels, Belgium: International Academy of Education.

Raco, J. R. (2010). Metode penelitian kualitatif. Gramedia Widiasarana Indonesia.

Saiful, S., Jabu, B., & Atmowardoyo, H. (2019). The Effects of the PORPE Method on Students' Reading Comprehension and Metacognitive Aware- ness. Journal of Language Teaching and Research, 10(3), 569-582.

Schuemann, K. B. (2014). A Phenomenological Study Into How Students Experience and Understand the University Presidency.

Setyawan, H. (2019). Blended Method: Online-Offline Teaching And Learning, On Students' Reading Achievement. English Education: Jurnal Tadris Baha- sa Inggris, 12(1), 22-33.

Siburian, T . A. (2013). Improving Students' Achievement on Writing Descriptive Text through Think Pair Share. International Journal of Language Learning and Applied Linguistics World (IJLLALW), (3), 3, 33-35

Snow, C. (2002). Reading for understanding: Toward an R&D program in reading comprehension. Rand Corporation.

Sekarini, A. (2017). An Analysis of Students' Reading Comprehension Contraints at the First Year Students of SMAN 1 Bandar Lampung.

Zidat, S., & Djoudi, M. Effect of an Online Learning on EFL University Students' English Reading Comprehension.