How do the Polytechnic Students Cope with the Difficulties in Composing Abstracts for Their Final Projects?

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How do the Polytechnic Students Cope with the Difficulties in Composing Abstracts for Their Final Projects?

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Abstract. This research aims to uncover the fact about engineering students in dealing with composing abstracts for their final projects. The research applies a descriptive qualitativequantitative design. The data were collected through questioners involving 104 engineering students, including the alumni at Politeknik Kota Malang, Indonesia. Furthermore, interviews were carried out to explain the details where necessary to support the primary data. It is found that the common problems faced by engineering students include 1) combining words into sentences, 2) identifying the most appropriate technical terms in engineering, and 3) applying grammar in context. To cope with those difficulties they demanded translation application machines, supported by peer-proofreaders. In addition, they considerably engaged personal tutoring with the lectures more than three times.

1. Introduction

English proficiency of Indonesian tends to be credited to low level in general. Empirical studies which were carried out by Indonesian scholars revealed that the higher education outcomes were still poor [1] [2]. Moreover, English Testing Service (ETS) reported that the average of test takers of Indonesian ranked the lowest out of 50 countries [3]. Meanwhile, English First (EF) has listed that Indonesia ranked the 32nd of 72 countries all over the world and marked 52.94 in English Proficiency Index Ranking (EPI) [4]. Statistically, test takers performance by IELTS partners reported that the general band score of Indonesia was 6.3 out of 9, but the writing was likely to be lower than six [5].

Those phenomena seemed to have a significant impact to the scarcity of the number of Indonesian scientific publication in the worldwide. However, international publication has been conquered by the English language for the last decades [6].

As a matter of fact, the preliminary research on 100 abstracts written by engineering students of Politeknik Kota Malang found that only 80% containing of aims and 88% of them provided the methods. However, the students seemed to overlook the result of their research because it was only 43%. In addition, more than half of those selected abstracts on purpose (67%) were found 582 errors. The errors were ranging from admission type (6.54%), omission (11.51%), misordering (12.71%), misinformation (22.16%), and miscellaneous (47.08%).

Therefore, this paper purposes to quote the verity of how college students cope with the difficulties in composing academic writing, particularly in writing abstracts of their final projects. It is expected that their final projects will globally recognized since their abstracts are written in grammatically correct sentences. This could also increase the quantity and quality of Indonesian scholars'
publication, as well as the researchers’ publication in the international level. This will open a wide partnership in conducting the projects as well.

To disclose the engineering students’ experience in writing abstract particularly their ways to cope with the difficulties, these questions are broken down as follows:
1) What are the engineering students’ major problems in composing their abstracts?
2) How do the engineering students cope with their difficulties in composing the abstracts?

2. Literature Review
To pursue a certain academic degree, students must submit their scientific report known as a thesis or dissertation or the like referring to final project. Without it, one may fail to achieve his study. It is one of the requirements to pursue the Diploma 3 program at Politeknik Kota Malang (Here after refers to POLTEKOM) which is generally given at the last semester. For some reasons, some departments offer it at the fifth semester. The final project covers three aspects of assessments: engineering products, book of report commonly known as final project, and oral examination to defend their product and report. The engineering products could be in the form of designing tools, creating machines, applying engineering formula or software application, etc. In addition, these products must be well-written into a book of final assignment. It contains five chapters; introduction, review of literature, research method, findings and discussion, and conclusion. These will be presented orally in front of the examiners. Each of the students is obliged to submit the first two requirements. If the individual fails to complete one of those, he fails. It does not matter how good it is. However, if he fails in presentation, he still gets one more chance to do so.

Abstract is a concise short synopsis of scientific works covering the main parts of it, i.e. background, method, result, and conclusion. A Poor abstract neglects the authors’ crucial message and usually provides the ambiguity [7]. On the other hand, it must convey the prominent information representing the whole picture of papers.

The abstract is the main part of the paper which is the main target for the general readers before thoroughly reading all information that they need. It is constantly submitted to publication before the whole papers.

Generally, publication requires a certain format such as word count, font type and size, indents and spacing, single paragraph or more, bilingual, etc. The abstract of the final assignment at POLTEKOM must be written in both languages, Indonesian and English. The word count should be not more than 300 words, the fonts and spaces are typed in smaller size than other parts of papers, and the paragraph is indented.

Apart of abstract, the whole paper should be well written, grammatically correct, and show the clear idea. As a matter of fact, the most common problem of rejected paper is the problems with the writing. In other words, writing is the major issue of academic writing and is claimed to be the tremendously discouraging skill. Some research findings showed that many ESL students had got difficulties and stress on their academic writing [8]. The difficulties were identified to several problems with; among of them are; differing between spoken and written language, composing grammatically correct sentences, diction, and so forth. Other Asian ESLs had struggled on academic writing and information synthetizing [18]. They claimed some issues underlying those problems are English proficiency, learning experience, etc.

Despite the various difficulties and the reason, it calls for the appropriate strategies to cope with.

Self-monitoring strategies in academic writing is predominant factor to cope the difficulty. At this point, students who acknowledged the additional self-monitoring strategy intervention were better in terms of acquisition of academic writing skills and the quality of their texts than those who did not do so [9]. Another empirical study highlighted that evolving writing practice conceivably benefited to deal with the writing problems [14]. In addition, planning self-study supporting by applying one to one course and getting to know how to study at college would impact on students’ achievement in writing [15]. Individuals should be encouraged to harness the critical reading to their own compositions. Hence, this strategy could make them intensively correct and improve what they wrote about. It was
contended to have a considerable changes in personal revision [16]. A particular treatment such as self-regulated strategy development (SRSD) instruction for the POW (pick my idea--pay attention to the prompt, organize, write and say more) + TREE (topic sentence, reasons, explanations, ending) + COPS (capitalize, organize, punctuate, sense) strategies could be applied to overcome the difficulties on writing. Those treatments made significant improvement on students’ writing achievement [17].

3. Research Method

This research employed the descriptive quantitative qualitative research design. The quantitative aspect is related to the students’ responses about how they deal with the difficulties in writing abstract presented in the form of percentage. The qualitative aspect supports the data in meaningful words to make them easier to be understood. Therefore, the research will acquire the description about the fact of the students on how to cope their difficulties in composing the abstract.

The population of this study is diploma engineering students at POLTEKOM majoring Mechatronics, Telecommunication, and Informatics. Whereas, the sample of this study is those engineering students who had finished writing the abstract as a part of their final assignment. There were 104 students who involved in this study. 64.08% of them were alumni, whereas 35.92% of them were the students who were at the last semester of the program and finish writing the abstract for their final assignment. All of the respondents write abstract in their submitted final assignments.

The data were collected through questioner and interview. The questionnaire contained open and closed question type. However, it still gives the option other assuming that they have their own answer instead of given options. The former attempts to gain the details of certain cases. While the latter was subjected to obtain the short answer. See the sample of the questions in Table 1.

Table 1. Sample of the Questions

| No. | Questions                                                                 |
|-----|---------------------------------------------------------------------------|
| 1.  | Did you consult it to your supervisor when you are writing abstract?      |
| 2.  | What was his feedback?                                                   |
| 3.  | How many time did you consult it to him?                                 |
| 4.  | Actually, how many time to did you need it to make it a good abstract?   |
| 5.  | What made you difficult to write it?                                     |
| 6.  | Did you proofread it?                                                    |
| 7.  | If the error had been found on your abstract, what might you think the most reasonable cause? |
| 8.  | Did you need other assistance to write it instead of the supervisors? Explain briefly. |

The collected data had been analyzed using a descriptive statistics. It simply obtains the general picture of students’ way to cope with the difficulties in writing abstracts together with the major...
problems when writing abstract. It identifies the quantitative analysis presented in percentage on maximum as well as minimum. Furthermore, this study required a qualitative analysis process. It manages the collection data from the interview session involving organizing, describing, classifying, and categorizing them. Subsequently, it connects and interrelates within those data and the data from the questionnaire. At the final stage, it interprets to attempt the explanation by providing meaning to be easily understood.

4. Results and Discussion
The findings of this research determines that the main problem faced by the students in this study is combining words into sentences (70%), identifying the most appropriate technical terms in engineering (15.7%), and applying grammar in context (14.3%).

Other findings reveal how they cope with those difficulties. The majority of them looked up dictionary (87%) including printed-dictionary as well as the online dictionary. They also consulted their works to lectures (85.9%) more than three times (56.1%). Some of them asked their peers to be proofreaders (14.1%) and few of them attempted to do by themselves.

In spite of having proofreading and revision more than three times (87.6%), suppose there are errors found they said that the errors occurred because of they did writing abstract carelessly (74.2%), missed typed (12.4%), and some of them did not proof read it (13.4%).

The data analysis showed that the majority of respondents experienced the difficulties in composing the abstract for some reasons. The first reason is that they were struggle to combine word by word into sentences. Indeed, word order is a part of challenging problems of language learners [10]. As they are EFL students, they are resistant to face the difficulty in writing skills [11] and they are non-English department students as well, i.e. engineering students [12]. To overcome this problem, most of the students utilized the application of online translation, such as translate.google.com (55.9%), Bing.com/translator (2.6%), sederet.com/translate (5.2%), and the rest had easily installed some various translation application provided by the Play Store in their gadgets without naming what kind of it. They preferred to have the former translation application since it is trustable, worldwide application, and free of charge, they asserted. A few of them had to pay sum of money for asking the translation agent for translation service.

The second problem was they were hard to opt the particular technical terms in engineering context that are related to their topic. To deal with it, again students tent to utilize the application of translations. Eventually they needed to discuss with the lectures and their classmates and friends whom they thought they were good at English. Few of them look up printed-dictionary and the digital one, including engineering dictionary. However, they preferred the Indonesian-English or English-Indonesian or English-English dictionaries since the former is easier to understand.

The following problem was that applying the grammar in context. They felt afraid of making mistakes in grammar. As a matter of fact, grammatical matters has been major issue among EFL context for ages [13][14]. To solve this, they directly looked into translation application mentioned above. Simply, they only typed the sentences in native language then consider the displayed complete sentences in target language as the result of translation machines. A few of the students intended to check their works comparing to application whether theirs were right or not. However, they still needed the intensively personal tutoring with their lectures especially English lectures. Unfortunately, most of the students were reluctant to look up the dictionary, though this strategy is useful for ESL students and teachers to achieve better result in grammar.

5. Conclusion
This research underlines the findings that the major problems of the engineering students covers combining words into sentences, identifying technical terms in engineering, and applying grammar in context. To tackle those problems, they endeavored some strategies 1) utilizing digital application, 2) having personal tutoring with lectures, 3) having peer-proofreading, 4) looking up the dictionaries, 4) giving a try their best efforts but still looking into digital application at the end.
The technology advances may support students to learn in general. They are useful for students to tackle the writing problems [22]. In the same line, they keep reinforcing the writing process for writers [20][21].

Future research could be focused on the impact using digital applications towards academic writing comparing before and after giving the technology tools. It also compares the control group and experimental one as well to discover the significant of using digital technology advances.

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