

## **CHAPTER IV**

### **RESEARCH FINDING AND DISCUSSION**

This chapter presents the research findings and discussion of the study on **An Analysis of Student's Problems in Using English Resources in Writing Scientific Papers**. This chapter presents findings to answer the research question. The data were obtained from the observation in the location of the research in the Department of English Education, Faculty of Tarbiyah and Teacher Training, Universitas Islam Negeri Sumatera Utara Medan, as well interviews and Focused Group Discussion with PBI students in the 8th semester. The data were analyzed in this chapter are written in order of research questions from this study.

#### **1.1 Problems students of eight semester face in using English resources in writing scientific papers at the Department of English Education of Tarbiyah Faculty, Universitas Islam Negeri Sumatera Utara Medan**

The purpose of this study is to explore common problems students often find in their English writing works and to find out students' strategy to solve these problems. This chapter discusses the results of research based on data obtained from document analysis, observation, FGD (Focus Group Discussion) and interviews.

This study was conducted at the Department of English Education (TBI), the Faculty of Tarbiyah and Teacher Training, UIN Sumatera Utara. Data were collected from the active students of TBI who are in the state of writing thesis as their final requirement of study. Seven students consisting of male (4) and female (3) were participated in this study and interviewed collectively in the Focused Group Discussion session followed by personal depth interview to confirm the findings.

To obtain deep understanding of the research finding, the researcher will first of all explain about the Department of English Education and the curriculum offered in this department. By exploring about these details, we can easily identify why students encounter difficulty in using English resources during writing academic papers.

Having analyzed the data collected from the interview and FGD, the researcher found that there are several difficulties that most students have in using English resources. According to the informants, their major problems can be divided into several cases as the following.

First, the big problem students have in writing scientific article is using English resources as references. According to the informants, the English used in the scientific articles is not easy to comprehend. There are many technical terms in English that make informants difficult to understand the content. To help understand English articles, informant use Google Translate application. However, the result of the translation into Indonesian language from the English version is not adequate. The informants maintain that the result of Google translate is different in meaning from the English version. In addition, the structure of the Indonesian sentences is grammatically incorrect so that make the understanding more complicated. According to HAD, the difficulty in understanding English is due to bad use of mother tongue or Indonesian (L1). If one has good skills in using Indonesian, he or she will be good at translating and understanding English. However, if one has bad use of Indonesian grammar, she or he will not be able to understand English.

In addition, this difficulty is increased by inability of paraphrasing the text to avoid similarity when they cite from the article. According to the informants they had never been taught how to practice paraphrasing from an article during their study. They argue that although paraphrasing from text is an important skill in writing scientific papers, students of English Department have never received a special course or training in practicing the skill. Therefore,

when they write their thesis, paraphrasing is still a barrier in converting the idea from the source to their papers. As such, many students choose a shortcut way of copy and paste method to hasten the process of writing. As a consequence, when checked using Turnitin application the similarity of their writing with the source of reference cannot be avoided and show high percentage. However, for some students, paraphrasing text from the source can be aided by Quillbot application. They learn independently how to use Quillbot from YouTube.

The second barrier students face in writing scientific papers is lack of skills including searching for references to support their ideas, writing, and using technology. SH argues that his inability to find scientific articles and books are due to his barely use of those academic information sources. In addition, he confirms that he rarely practices writing scientific papers during his study. Therefore, he and some other students have no idea where they can find scientific articles and what sources are available, especially on the Internet. The only source they are using is Google. Google has been their primary source of information searching. Using a concept word that they have in mind relevant to their topic, they type in the keyword into the searching box in Google. Some students follow their lecturer's recommendation to use electronic journals and e-books available on the Internet. Their lecturers also encourage them to use Mendeley, Google Scholar, ResearchGate, and Z-Library. The students are advised to learn from YouTube, Instagram, and TikTok. The lack of writing skills for academic purposes begins with inability to find idea or topic to write. Finding the idea or topic is the first thing to do in writing. However, not many students can easily find a topic to write, especially in writing a thesis. Some students even do not know where to start. TP, one of the informants, maintains that the most difficult part of writing a scientific works is defining the topic. Furthermore, informants argue that they make many mistakes in writing bibliography. Ignorance of writing style standards is the cause of this problem. This case is raised by FH. Although he is aware that writing bibliography mistakenly, or forgetting to mention the source of information in the

writing, will lead to ethical breaching in research, he ignores the rules due to his lack of knowledge about it. He maintains that he never been taught the rule of thumb of the writing references. The problem of writing is not merely emphasized on the structuring words into sentence and into paragraph, but also technical barriers of using Word Processing software. Although students have been familiar with the Microsoft Words, they still face technical difficulties in maximizing the functions when it comes to writing formal report of research. This fact is acknowledged by HAD and FH who argue that they must learn from YouTube to utilize the functions.

The third challenge students have is psychological pressure. HAS acknowledges that she lacks of self-confidence if she could be successful in finishing her thesis. The same experience is also agreed by RK in which he felt full of burden to write a thesis. Time constraint to finish thesis has created stress because they keep thinking of their thesis all the time. This situation added to their lack of ability to use appropriate tools to find out references and skills in scientific writing. They are aware that lack of references will hamper them to write good scientific thesis. They understand that thesis as a kind of research paper must be based upon other research articles to be called scientific. Other pressures that students face is the obligation to follow standards in writing. Students lack of writing skills, unfamiliar of using references in writing, avoiding unethical conduct of research, are other factors that add students' burden in writing.

The fourth challenge of today's academic requirement is the obligation to publish article in academic journals from the thesis. Despite cost factor in publishing article, students argue that they have no idea how to write article for publication. Furthermore, students have never been exposed with technical procedure of how to publish in electronic journals. This challenge is raised by FH and TP who feel nervous and stressful with current regulation of the

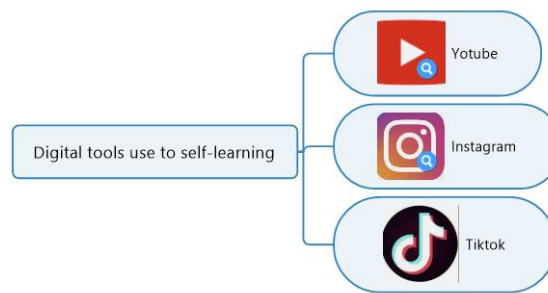
university. To their knowledge, publishing article in accredited journals will cost much money that they are afraid of burdening their parents.

The fifth challenge in conducting research and using English resources is inadequate facilities to support writing that is provided by the university. TP argues that during her thesis writing, she faced many obstacles one of which is the limitation of Internet spots in campus. If there is Internet identification, the connection is very limited or low that she could not download articles from the Internet. She expects that university provide a strong and speed Internet connection.

#### **4.2 Strategy used by students of eight semester to solve the problems in using English resources in writing scientific papers at the Department of English Education of Tarbiyah Faculty, Universitas Islam Negeri Sumatera Utara Medan**

As described earlier that students of the Department of English Education of Faculty of Tarbiyah and Teacher Training still face some barriers in using English resources to write scientific papers. This section will explain the findings of the strategy they develop and tools they utilize in helping them working with academic writing assignments.

Students' barriers in searching English resources to support their ideas begin with learning from several media about how and where they can find the resources. In this case, SH and HUS argue that YouTube, Instagram, and TikTok are the most often used media to learn. Meanwhile, SA confirms that she uses Youtube more often than any other media to learn how to search for information on the Internet as well as asks to her colleagues who is more experienced. To summarize, Figure 4.1 below illustrates the media commonly used by students to help them overcome their difficulties in using English resources during their writing thesis.



**Figure 4. 1 Tools Used to Self-Learning Strategy**

During the interview process, I learned that students use some tools to help them understanding English resources that they found on the Internet. As mentioned by RK that he uses several tools to help him writing thesis. When he finds English articles, he would use Google translate to translate the article to understand the content. Once he understands the content, he uses Quillbot to paraphrase the texts he wants to quote before actually writing it down on his paper.

After learning from media about how to search for scientific information, students use some other electronic tools to conduct actual search, understand the sources, manage, and use the sources into their writings. Several digital utilities are employed during writing, they are: Google Scholar, ResearchGate, Google translate, Quillbot, and Mendeley. Students use Google scholar and ResearchGate to search for articles published on the Internet. After finding the articles, they use Google translate to translate English into Indonesian to understand the content of the information. Once they think the article is relevant to their topic, they use Quillbot to paraphrase text that they want to cite. Finally, the actual citation in their paper is using Mendeley, a reference manager tool for citation. To provide a clear illustration, Figure 4.2 below presents tools that are used by students in managing information resources.

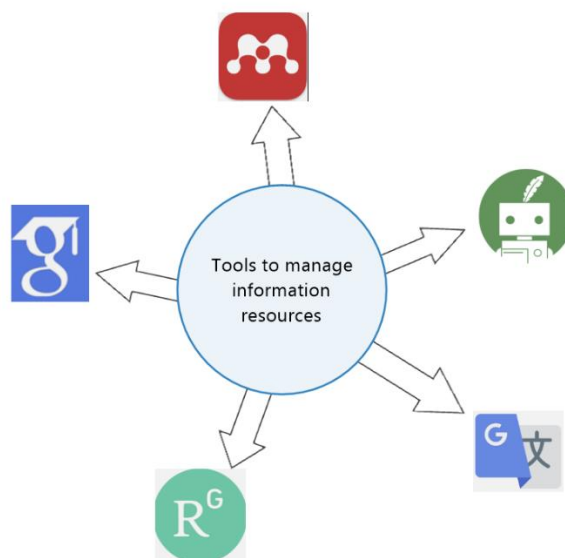


Figure 4. 2 Tools to manage information resources

This finding suggests that students use available tools to help them managing information during their process of writing. Various strategy in using the tools they learn from electronic media.

### 4.3 Discussion

From the findings above, it is obvious that students of the Department of English Education at the Faculty of Tarbiyah and Teacher Training have difficulties in using English resources while writing scientific paper. Although these students study English as their major, it does not guarantee that they can find and use English resources easily. In this section, I will discuss the findings above from the theoretical perspectives.

English is the language dominantly used in scientific articles. Most scientific articles are written in English. For non-English speakers, English is considered as a foreign language and remains a challenge to understand the content. Regarding the finding of students' difficulty in understanding English in scientific texts, this shows that there is a need for students to practice reading and comprehension more often. Although some courses relevant

to reading skills are given in the curriculum as presented in Table 4.2 above, including Intensive Reading, Critical Reading, and Extensive Reading with a total of 6 credits, students still have barriers in understanding scientific English texts. This means that there is still a need for remodifying the curriculum of reading courses taught in the classroom by integrating science into the teaching process.

Integrating science into language learning will familiarize students with English resources and eventually will eliminate students' problems in understanding English texts in scientific articles. Lee and Buxton (2013) offer instructional strategies to integrate science and English proficiency in five areas: literacy strategy, language support strategy, discourse strategy, home language support, and home culture connection. Language barriers must be overcome to maximize the access of English resources in writing. Research shows that language barriers can be an obstruction of knowledge processing and impairs sensemaking of the scientific contents (Tenzer et al., 2021). Using available translation and paraphrasing tools such as Google Translate and Quillbot may become solutions, however, they are not always adequate. Although research suggests that machine translation enters numerable learning and multilanguage communication in today's world, and as such empowering academia to extend knowledge (Kelly & Hou, 2021), research also shows that there will always be a gap between the translated and original texts (Flowerdew & Li, 2009). Despite its most popularity as a translation tool, Google Translate is not always adequate to meet the etic and emic of the language being translated (Musk, 2022). Most often, students reject the result due to its incorrect translation. Therefore, training for skills in understanding scientific English resources remains necessary for university students to improve self-confidence and self-efficacy in understanding scientific articles written in English.

Students' obstacles in searching for English resources indicates that they lack of information literacy strategy. According to Ekman & Quandt (1999, p. 177) there are five



strategies students can develop when it comes to searching for resources. First, students can search from library catalog. Second, another source of information are journal articles which are media of communication amongst scientists. Third, students can use indexes and specialty publications. Fourth, students absolutely can go to the library in person and browse the shelves for available sources, such as books. Finally, students may seek for advice from colleagues or advisors.

Since university students are expected to conduct research as part of their learning process, writing research requires students to maintain research integrity which connotes honesty, trust, fairness, respect, responsibility, and determination (*Peraturan Menteri Pendidikan, Kebudayaan, Riset Dan Teknologi Republik Indonesia Nomor 39 Tahun 2021 Tentang Integritas Akademik Dalam Menghasilkan Karya Ilmiah, 2021*). This ethics must be maintained to ensure acceptable practice of academic research. The breaching of these ethics may risk the annulment of diploma for students. Therefore, students are required to have skills in information literacy that covers the skills of searching for information from many sources available and use of information to support their research. Information literacy skills is the ability of gathering, using, managing, synthesizing and creating information and data in ethical manner (SCONUL, 2011). Information literacy skills is necessary for students because in today's world, information is growing so massively that might create confusion for people and complicate the retrieval (Septiyantono, 2016, p. 1.17). Since these skills is important, there is a need for teaching information literacy skills for university students (Wegener, 2018). Teachers' must integrate teaching information literacy skills in their classroom. As such, information literacy is integrated into the curriculum (Hammons, 2020). Research proved that developing information literacy skills in the curriculum is effective for life-long learning (Wallace et al., 2000). Faculty can develop a collaboration with library professionals to team-teach the skills, or involve librarians to teach. Studies show that engaging librarians to teach

information literacy skills is effective to improve research skills of the students (Elmborg, 2006; Lange et al., 2011). However, the most important skill of information literacy is critical thinking (Elmborg, 2006; Goodsett, 2020). Critical thinking is considered the basis of research because the whole process of research will involve rigorous thinking, including searching for references. In searching for digital information on electronic platform, there are two options that students can follow: a simple search and advanced search (Ulum & Suwondo, 2022). The simple search is conducted when students type in keywords in the available box. However, this will result in general findings. The advanced search option is a more complicated search strategy where a combination of some concept words is applied using Boolean operators: AND, OR, and NOT. Most students use the simple search strategy due to their lack of knowledge about the advanced search.

The use of technology tools in favor of their research activities, either to overcome the difficulties or part of the writing process, indicates that students have digital literacy skills. As part of Z generation community who were born digital, students are already exposed to digital devices in their daily lives and learn new software or application rapidly. Students' efforts to learn independently from YouTube and some other media about tools used in writing scientific papers denotes their creative and innovative strategy. However, having digital literacy skills does not necessarily mean that students are literate in accessing and using information, since the two are considerably different. Digital literacy entails the use of skills required for "navigating with networked technologies and interpreting the meaning of digital messages (Ala-Mutka, 2011). It also means the raising of awareness on the digital technology as an efficient tool of communication. Meanwhile, digital literacy involves searching activities on the Web, critically analyzing the content and using "media materials" or the computer for specific purpose (CILIP, 2012).

Since the information literacy skills are important for higher education students to support their research activities, they must be included into the curriculum. The initiatives of integrating the Information Literacy into the curriculum has been implemented in many universities in the United States, Canada, Scandinavia, Australia, New Zealand and the Netherlands (Hepworth, 2009, p. 26). In Indonesia, however, information literacy remains the domain of librarian's expertise which is apart from learning curriculum.

The actual scientific writing does not only involve activities of structuring words into sentence and into paragraph, but also engages time, energy, and intellectual to dedicatedly serve to articulate the ideas on papers. The finding of this study found that students experience difficulty how to start writing. Research says that getting started is the first hurdle. Most first researchers are overwhelmed with the complexity of writing process (Collins & Cook, 2017). Therefore, it is suggested that students must start from the smaller efforts. The next pitfall is to allocate the time to write. This is true especially in conducting research. Time constraints in writing a research project such as thesis can cause students' frustration and idea block. It is not unusual that students may face idea blocking when writing when they just do not know what to write, or, do not know how to write the idea. The idea blocking or writing block may happen when daily routine activities distract students' focus. Therefore, a research suggests authors need to spend some time in isolation when writing research papers (Tremblay-Wragg et al., 2021). In this study, Tremblay-Wragg (2021) proposes *Thesez-vous*, a non-profit organization that offers over three-day period for graduate students working on their thesis to retreat from their daily routine to focus more on their research. In line with this idea, Boice (1983) suggests that writing is best-done on regular schedule, regardless of mood; the creative inspiration is more likely to follow, than, precede, productivity in writing.

The demand for converting research into an article for publication becomes evident nowadays. Students who have completed their researches are encouraged to publish the

findings in the scientific journals. This is a form of communicating research with wider community. The full research becomes an extensive and complete piece of new research which could result in several study designs to publish in journals including lab experiment report, interventional studies, literature review, or a cost-effectiveness paper (Modesitt et al., 2022). The demand for publishing article, unfortunately, is not equipped with providing training or instruction for students on how to write articles and publish in journals. Students are left with their struggle to find out their ways in construction manuscript from their thesis. This situation creates confusion and anxiety for students which becomes psychological pressures in writing. Research shows that students who are in the state of writing thesis to graduate are experiencing frustration. The research measures five dimensions including; Tension- Anxiety, Depression- Dejection, Anger-Hostility, Vigor, Fatigue, and Confusion. It suggests that a short period of time prior to the submission of the thesis is the most stressful time for the students, and the episodic stress associated with writing a graduation thesis might affect the post-awakening cortisol secretion (Izawa et al., 2007). Although this condition is commonly known, there remains no efforts to help eliminate students' stress in writing thesis. Students strive themselves to overcome their psychological pressures to succeed in their study.

Regarding students' strategy to use machine translation such as Google Translate in helping them write scientific papers, there are three principles that need to consider. First, machine translation should be utilized as a legitimate tool for support as it provides students with a means for scholarly communication and essential survival needs to participate in learning interactions. Second, intermediate and advanced multilingual learners should be empowered to engage with machine translation. Finally, teachers should work with students to co-construct principles for its responsible use in writing (Kelly & Hou, 2021).

To conclude, this study shows that literacy still lags behind the course curriculum of the Department of English Education. Furthermore, students need for more proactive and

innovative teaching and practices targeting reading and comprehension of English articles, and writing skills.

Finally, this study implies that students need for in-service professional development through trainings in scientific writing and information literacy skills, including searching for resources for reference as well as using the English texts in their writing. Study shows that intensive writing practices will enhance writing skills, perception about writing, and knowledge when to pursue writing assistance (Mckenna & Kyser, 2021). The Department of English Education must revisit or remodify their curriculum and syllabi of Scientific Writing course to include such skills as organizing academic writing, standards involved in academic writing, writing styles, as well as ethics. It is recommended that information literacy be integrated into the curriculum of the Department of English education to familiarize students with searching, evaluating, as well as using information in English before they actual use in their writings.

As with any research studies, the limitation of this study is that the population is restricted to students of Department of English Education of Tarbiyah Faculty. Therefore, a wider population must be covered in future research. So that the results are also better than before. if the population is more than other majors, we also know more about how to write scientific paper.

