UNCOVERING THE CHALLENGES OF ESP TEACHING IN REFRIGERATION AND AIR-CONDITIONING PROGRAM

THESIS

In Partial Fulfillment of the Requirement for Master's
Degree in English Language Education

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Hereby, declare that :

1. The thesis entitled: **UNCOVERING THE CHALLENGES OF ESP TEACHING IN REFRIGERATION AND AIR-CONDITIONING PROGRAM** is my original work and contains no one's scientific paper that may be proposed to achieve an academic degree at any universities. Beside, there is no other's idea or citation except those which have been quoted and mentioned at the bibliography.
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The Writer,

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MOTTO AND DEDICATIONS

MOTTO

"There is no end to education. It is not that you read a book, pass an examination, and finish with education. The whole life, from the moment you are born to the moment you die, is a learning process."

- Jiddu Krishnamurti

DEDICATION

This thesis is dedicated to:

1. My beloved mother, Ernawati, and my father, Adnan Siagian.
2. All the educators who guided me, especially my thesis advisor, Prof. Dwi Poedjiastutie, Ph.D., and Dr. Estu Widodo, who generously devoted their time to providing guidance, direction, and assistance throughout the completion of this thesis.

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UNCOVERING THE CHALLENGES OF ESP TEACHING IN REFRIGERATION AND AIR-CONDITIONING PROGRAM

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Abstract

The number of international job opportunities in refrigeration and air-conditioning (RAC) is not directly proportional to the number of competent technicians in Indonesia. It cannot be separated from the limited number of polytechnics that provide RAC programs. Unfortunately, not all existing polytechnics offer English for Specific Purposes (ESP), only one polytechnic. So, the need for ESP in this field has not been met to produce graduates who are competent in English. It creates limited ESP resources, both ESP teachers and ESP materials. This limitation is assumed to provide various challenges to ESP teaching in the RAC program. For this reason, this research tried to investigate the challenges of ESP teaching in the RAC program and how the ESP teacher dealt with these challenges. This study used observation, interview, and document to comprehensively explore challenges in ESP teaching in the RAC program from three aspects (the teacher, the students, and the institution). The findings showed the challenges were categorized into three: challenges from the teacher (lack of content knowledge and lack of proper need analysis), challenges from the students (lack of basic English skills, lack of content knowledge, low learning motivation, lack of presentation skills, and classroom misbehavior), and challenges from the institution (ESP curriculum, long learning duration, and lack of teacher training). Thus, Institutions must take part in preparing ESP courses, both teachers and materials, by facilitating teachers with sufficient ESP teacher training.

Keywords: Challenges, English for specific purpose, ESP teacher, Refrigeration and Air-conditioning

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Abstrak

Banyaknya peluang kerja internasional di bidang refrigerasi dan tata udara tidak berbanding lurus dengan jumlah teknisi yang kompeten di Indonesia. Hal ini tidak lepas dari terbatasnya jumlah politeknik yang menyelenggarakan program refrigerasi dan tata udara. Sayangnya, tidak semua politeknik yang ada tersebut menawarkan pembelajaran *English for Spesific Purposes* (ESP), hanya satu politeknik saja. Sehingga kebutuhan ESP di bidang ini belum terpenuhi untuk menghasilkan lulusan yang kompeten dalam berbahasa Inggris. Hal ini berdampak pada sumber daya ESP yang terbatas, baik guru ESP maupun materi ESP. Keterbatasan ini diasumsikan memberikan berbagai tantangan terhadap pengajaran ESP di program pendinginan dan tata udara. Oleh karena itu, penelitian ini mencoba menyelidiki tantangan pengajaran ESP dalam program pendinginan dan tata udara dan bagaimana guru ESP mengatasi tantangan tersebut. Penelitian ini menggunakan observasi, wawancara, dan dokumen untuk mengeksplorasi secara komprehensif tantangan pengajaran ESP di program pendinginan dan tata udara dari tiga aspek (guru, siswa, dan institusi). Temuan menunjukkan bahwa tantangan-tantangan tersebut dikategorikan menjadi tiga: tantangan dari guru (kurangnya pengetahuan konten dan kurangnya analisis kebutuhan yang tepat), tantangan dari siswa (kurangnya kemampuan dasar bahasa Inggris, kurangnya pengetahuan konten, rendahnya motivasi belajar, kurangnya kemampuan presentasi, dan perilaku tidak disiplin di kelas), dan tantangan dari institusi (kurikulum ESP, durasi pembelajaran yang lama, dan kurangnya pelatihan guru). Oleh karena itu, institusi harus turut serta dalam mempersiapkan mata kuliah ESP, baik guru maupun materinya, dengan memfasilitasi guru dengan pelatihan guru ESP yang memadai.

Kata Kunci: Tantangan, *English for Spesific Purposes*, guru ESP, Pendingin dan Pengkondisian Udara

CHAPTER I

INTRODUCTION

This chapter discusses six main points. They are the background of the study, the research questions, the objectives of the study, the significance of the study, the scope and limitation, and the definition of the key terms.

1.1. The Background of The Study

The growth of refrigeration and air conditioning (RAC) equipment directly impacts the need for RAC technicians. According to data from the Ministry of Environment and Forestry, Indonesia requires more than 100.000 skilled RAC technicians. However, only about 1.500 of them were registered; most still need certification. Indonesia and many other nations are affected by the significant increase in demand for technicians in this industry. Based on the data provided by the International Institute of Refrigeration (2015), from 2012 to 2022, the predicted growth in employment for mechanics and installers in the US is 21%, much faster than the average for all occupations (11%). It is the result of a significant increase in cooling unit usage. In Australia, where there are many job prospects in this profession, 173.000 people (1.5% of the total) work in more than 20,000 companies that are involved in the refrigeration industry (International Institute of Refrigeration, 2015). Therefore, there is a massive need for RAC technicians who provide excellent job opportunities.

However, there are not enough facilities like universities or polytechnics available in Indonesia to train competent technicians to meet the growing demand in this industry. Based on the data from Pddikti, only five polytechnics—Tanjungbalai Polytechnic, Sekayu Polytechnic, Indramayu State Polytechnic, Bandung State Polytechnic, and Bali State Polytechnic offer this department. The quantity is out of proportion to the scale of the goal that the ministry is trying to achieve. This limitation enables the government to hire qualified foreign workers to fill labor shortages. According to information provided by the Ministry of Manpower, there were 91.623 foreign workers in existence as of January 2022. Between January and May 2022, there was a rise in the number of foreign workers,

reaching 96.574 in May 2022. Due to the shortage of skilled Indonesian technicians, it is conceivable that this trend may continue. So, the lack of polytechnics offering RAC majors will affect the number of qualified technicians created and the level of competitiveness for positions in this industry.

The great need for skilled RAC technicians in Indonesia and around the world provides Indonesians with the opportunity to continue their careers abroad. The same opportunities also come for skilled foreign technicians working in Indonesia and fulfilling this field's needs. As a result, technicians frequently interact in English with foreign workers, and their capacity for effective communication can significantly impact how well their job turns out. Effective communication can prevent errors, increase productivity, and improve the quality of work. According to Poedjiastutie & Oliver (2017), English is seen as an essential skill that all students should be able to acquire in order to be able to respond to the challenges of the global world. Thus, these technicians must be prepared to communicate with foreign workers by equipping them with English, not only General English (GE) for daily communication but also English for Specific Purposes (ESP).

To prepare future specialists in various fields, ESP is currently taught in universities worldwide (Fălăuş, 2017). By the time they graduate, students should be able to work in a workplace and be prepared to face challenges (Poedjiastutie & Oliver, 2017). ESP is essential for technicians because they must communicate effectively in a specialized technical field, requiring specific language skills and knowledge. The use of technical language can be challenging even for native speakers, and it can be especially difficult for non-native English speakers. Therefore, educational institutions must facilitate their students with ESP courses to prepare them to enter the world of work.

In ESP teaching, the ESP teacher primarily influences the successful implementation of ESP. They play essential roles in the complexity of ESP teaching. Dudley-Evans & St. John (1998) state that the ESP teacher has five roles: Teacher, collaborator, materials provider and course designer, researcher, and evaluator. So, they need appropriate and sufficient training to understand their roles.

Training is essential to prepare qualified ESP teachers to improve their language skills and understanding of subject-specific content (Harmer, 2001; Mahendra, 2020). However, teaching ESP in tertiary institutions is still far from ideal (Iswati & Triastuti, 2021). Many ESP teachers were not qualified to teach ESP because most teachers were typically GE teachers (Pei & Milner, 2016). The same finding was revealed by Poedjiastutie (2017) in her study, which found that many graduates of the English department applied for tertiary level teaching positions at the Language Center (LC) University of Muhammadiyah Malang and when hired, they will be in charge of the ESP courses. As a result, they were unqualified to teach ESP because it requires English proficiency and knowledge of a specific field of study (Iswati & Triastuti, 2021). It was also exacerbated by the lack of ESP teacher training (Ali, 2015; Iswati & Triastuti, 2021). This limitation of ESP training has an impact on the incompetence of ESP teachers. It indicates that ESP teachers still face many challenges in ESP teaching.

The challenges with ESP teaching in Indonesian schools and universities have been the subject of several studies. For example, a study by Iswati & Triastuti (2021) examined ESP teachers' evident difficulties in non-English tertiary education programs. The findings showed that ESP teachers faced difficulties such as inadequate knowledge of students` majors, lack of training, huge classrooms, variety of students` English proficiency levels, and lack of appropriate need analysis.

Further, a study by Claria & Warmadewi (2020) investigated the problems faced in teaching tourism registers in ESP courses. The study revealed that teachers are not competent in implementing effective teaching methods and developing material based on ESP students' needs. Then, students also contributed to the ineffective tourism register in ESP courses, such as students' lack of English proficiency and vocabulary.

In addition, a study by Poedjiastutie (2017) investigated the difficulties encountered by the English program at UMM. This study revealed that the UMM ESP teachers had no adequate qualifications to manage ESP classes. The teachers

seemed unprepared for the job because they lacked ESP teaching experience and understanding. It resulted in inadequate teaching capabilities. The key components of ESP implementation, like a communication-focused approach, learner-centred, collaborative teaching, and practical and authentic materials, were mainly lacking.

However, this current study will be different from previous studies, focusing on ESP teaching challenges in very limited departments in Indonesia, namely the RAC program. The challenges in implementing ESP in the RAC program may differ from those of other programs due to the limitations of study, ESP teachers, and ESP material resources. This study will be significant for ESP teachers in the RAC department. This is due to the limited number of universities that provide this major, which directly impacts the limited number of ESP teachers and relevant ESP material sources that can be used as reference sources. It means there is a need for insights like the results of this study. Therefore, investigating the challenges of ESP teaching in this RAC program is very important.

1.2. The Research Questions

1. What challenges occur in ESP teaching in the RAC program?
2. How does the ESP teacher deal with these challenges?

1.3. The Objectives of The Study

1. To find out the challenges of ESP teaching in the RAC program
2. To find out how the ESP teacher deals with the challenges

1.4. The Significance of The Study

Theoretical aspects. Following the background of this study, the researcher expects that it can enrich the source of information related to challenges in ESP teaching in the RAC program. It will also provide insight into how ESP teachers deal with the challenges.

Practical aspects. This study will significantly impact the ESP teacher's understanding of the challenges faced in teaching ESP in the RAC program and

how to deal with those challenges. In addition, this study is also expected to benefit higher education policymakers by improving their understanding of English teachers' ability to handle ESP classes. Thus, the results of this study can increase policymakers' awareness about improving the competence of ESP teachers who teach ESP in higher education. Further, policymakers can take more concrete steps to improve the quality of ESP teachers in higher education by providing training to acquire adequate knowledge.

1.5. The Scope and Limitation

This study focuses on the challenges of ESP teaching in the RAC program from the teachers', students', and institutions' sides. However, this study was only conducted in a polytechnic called' Bali State Polytechnic'. It will not cover four other polytechnics because they do not offer ESP courses. So, the result of this study cannot be generalized to a broad context.

1.6. The Definition of The Key Terms

English for Specific Purposes (ESP): ESP is a way of teaching languages where all decisions regarding the curriculum and instructional strategy are made under the goals of the students (Hutchinson & Waters, 1987). However, this study focuses on the ESP for refrigeration and air conditioning students.

ESP Teacher: ESP teachers are general English (GE) teachers specially trained to teach specific groups of students in ESP courses (Strevens, 1988).

ESP Challenges: The difficulties faced when applying for ESP courses. However, this study focuses on the challenges of the ESP for refrigeration and air conditioning students.

Refrigeration and Air Conditioning Department: It is one of the engineering faculty's departments. It studies the cooling techniques of a room or object, including learning about airflow that can be used to regulate the temperature of a room or object.

CHAPTER II
REVIEW OF RELATED LITERATURE

This chapter discusses previous research findings and relevant theoretical backgrounds related to the current study.

2.1. English for Specific Purpose (ESP)

With the advancement of a more modern world, there is a growing demand for English. The global growth in many industries allows everyone to explore jobs anywhere. Because of this, everyone needs to be proficient in both General English (GE), which they use for ordinary conversation and English for Specific Purposes (ESP) for work purposes. The use of ESP is focused on language in a real professional context. In contrast, GE only focuses on English for daily conversation, and expressions and vocabulary are unrelated to students' specific fields. Thus, adopting ESP in Indonesian classes at schools and universities cannot be avoided (Poedjiastutie, 2017). Students from different disciplines who want to learn English are expected to receive English knowledge, such as vocabulary relevant to their discipline of study (Poedjiastutie & Syafinaz, 2021). Knowing the appropriate language and terms for students' work environments will help students feel more comfortable communicating in various circumstances, including the workplace. So, learning ESP is essential, and students are believed to be able to apply the ESP knowledge they receive when they start working.

ESP is a language learning method based on the learners' needs (Hutchinson & Waters, 1987). ESP is typically connected to teaching English for application in specific activities like business, engineering, or science (Marcu, 2020). The teaching materials and methods are based on learners' needs for using English for academic study or professional and occupational purposes (Dudley-Evans & St. John, 1998). Furthermore, ESP practitioners need to consider two ESP characteristics (absolute and variable characteristics) (Dudley-Evans & St. John, 1998). Absolute characteristics: (1) ESP is created to address the particular needs of the learner; (2) ESP utilizes the fundamental methodology and activities of the

professions it supports; (3) The focus of ESP is on the language, abilities, discourses, and genres that are appropriate for these activities. Meanwhile, variable characteristics describe that ESP is associated with particular disciplines and may employ approaches different from those used in General English. Both characteristics can be guidelines for designing ESP material, methods, and practice in teaching ESP courses.

2.2. ESP in Refrigeration and Air Conditioning Major

Refrigeration and air conditioning (RAC) can be found in almost every branch of the industry. Refrigeration is the process of removing heat, while air-conditioning is a form of air treatment whereby temperature, humidity, ventilation, and air cleanliness are all controlled within limits determined by the requirements of the air-conditioned enclosure (Trott & Welch, 2000). So, students studying RAC engineering are typically exposed to various topics. These topics are complicated when instructed using English. When the RAC graduates work with foreign workers, they must be able to communicate effectively using specific terminology. Thus, ESP in engineering is crucial in helping students develop the language skills and technical knowledge necessary to succeed in the engineering industry.

ESP in engineering involves teaching English language skills to students who are pursuing or working in the field of engineering. The focus of ESP in engineering is on developing language proficiency, technical vocabulary, and communication skills specific to the engineering industry. ESP course positively impacted the course content, participants' vocabulary and grammar, and their specific English language skills (Irudayasamy et al., 2020). A study by Rao et al., (2020) showed that English is crucial for Indian engineering students because they will likely work both inside and outside of India, where English is widely used as a form of workplace communication.

ESP courses in engineering typically cover topics such as technical reports, research papers, project proposals, and presentations, which are common forms of communication in the industry. However, each engineering faculty major will have

different language needs, including the terminology used in each field. Many studies have been done in the field of ESP in Engineering, such as mechanical, electrical, civil, and chemical engineering (Irudayasamy et al., 2020; Iswati & Triastuti, 2021; Poedjiastutie & Rifah, 2019; Poedjiastutie & Syafinaz, 2021; Rao et al., 2020). However, little or no studies have been conducted on ESP for the RAC department. It must be done because the language demands, communication skills, and technical vocabulary required in each field may differ. Therefore, ESP courses must be tailored to meet the specific needs of students in each field.

Furthermore, because of the limited sources of information about the RAC department, it is assumed that the ESP teacher will face some challenges when teaching ESP courses in this department. The challenges, such as lack of ESP pedagogy, appropriate teaching method, need analysis, and teacher training, might contribute to teaching English to the RAC students. Another challenge could arise because each engineering department is complex.

2.3. ESP Teachers' Required Competencies

Higher education institutions must employ ESP teachers who are experienced and qualified in order to ensure the quality and success of learning. ESP teachers must possess specific competencies to teach English in a specialized field effectively. There are four teacher competencies: pedagogical, professional, personal, and social.

2.3.1. ESP Pedagogical Knowledge

ESP teachers should have a strong foundation in language teaching methodology, including understanding different teaching approaches, techniques, and strategies when applying ESP courses. Poedjiastutie (2017) divides ESP pedagogy into at least four aspects: communication, learning-centred teaching, collaborative teaching, and ESP materials development.

a. Communication is Part of ESP Pedagogy

Future graduates must be prepared with sufficient English language and communication skills relevant to their areas, as this is one of the key recruitment standards at work (Mohamed et al., 2020). Effective communication can raise employability and job growth prospects (Ting et al., 2017). So, communication skills need to be prioritized, as well as responding to students' needs (Alhaj & Albahiri, 2020; Poedjiastutie, 2017). It indicates that ESP teachers must develop teaching oriented to communicative English learning or a communication-focused approach.

b. Learner-Centred Teaching

Learner-centred teaching is an approach that prioritizes the student's learning process over the Teacher's presentation of content (Stanley & Porter, 2002). It emphasizes active learning, critical thinking, collaboration, and reflection to promote deeper learning and engagement (Fink, 2013). In learner-centered teaching, the Teacher acts as a facilitator or guide to the learning process rather than as a teacher. The Teacher encourages students to ask questions, explore ideas, and make connections between new concepts and their prior knowledge. The Teacher also provides opportunities for students to apply what they have learned in real-world situations. Thus, the teachers must be competent in managing the learning orientation.

c. Collaborative Teaching

During collaborative teaching, a language teacher and a content teacher collaborate in preparing the ESP course (Poedjiastutie, 2017). Teachers collaborate to produce a curriculum, materials, and lesson plans specific to the student's needs. Collaborative teaching can involve collaboration during the planning, implementation, and assessment phases (Amina, 2021). As a result, an English teacher might teach ESP courses with less anxiety. Besides designing courses and creating teaching materials, ESP teachers need to have a deeper understanding of the collaborative process for their satisfaction, performance, and professional development (Amina, 2021). So, collaborative teaching in ESP can be particularly

effective because it allows teachers with different areas of expertise to work together to create a comprehensive and practical learning experience.

d. ESP Material Development

Developing ESP materials involves a systematic process of designing teaching materials and activities that meet the specific language learning needs of the learners in a particular field or profession. The process typically involves the following stages: Conducting a Need Analysis (NA), setting learning objectives, designing content and activities, piloting and revising, and evaluating and assessing (Belcher, 2012). The ESP teachers should have the competencies to do all the stages mentioned.

An NA is the first stage that teachers should consider. Belcher (2012) notes that ESP teachers should be able to identify the needs of their students and adapt their teaching accordingly. This can include understanding the learners' goals and expectations, their language proficiency level, and any specific challenges they may face in learning the subject matter. Students from various majors might have different English skills. For example, a study by Alsamadani (2017) showed that receptive skills like reading and listening were mainly focused on ESP classes for Saudi engineering students. Indrasari (2016) also found that physics students need reading and grammar the most. At the same time, a study by Hartina & Syahrir (2021) revealed that speaking skills have become the top priority skill that Communication and Islamic Broadcasting students need to achieve. It shows that each department has different English skills. Therefore, an NA is a vital stage.

Based on NA, setting clear and specific learning objectives that align with the student's language needs and goals is essential. Basturkmen (2010) states that ESP teachers should consider the principles when setting the learning objectives of ESP materials, such as needs-based, specific and measurable, relevant and authentic, challenging yet achievable, and aligned with assessment. This process is carried out to ensure that the ESP material provided is under the goals and needs of students. After setting the learning objectives, ESP teachers must design teaching

materials and activities relevant to the student's specific fields or professions. It involves selecting appropriate content, designing exercises and activities that are engaging and interactive, and selecting materials that are appropriate for the student's language proficiency level. Furthermore, authenticity is a key principle in designing effective ESP materials and activities, as it allows students to develop language skills and knowledge required for real-world communication (Dudley-Evans & St. John, 1998). Thus, preparing ESP materials according to the student's needs will significantly assist in effective ESP learning.

Once the materials are designed and developed, piloting them with a sample of students, evaluating their effectiveness, and revising them based on student and teacher feedback is essential. Piloting is a critical step in ESP materials development, as it allows developers to gather feedback and make revisions before implementing the materials in a larger context (Basturkmen, 2010). After the materials have been used in the classes, evaluating and assessing their effectiveness in achieving the learning objectives is essential. Evaluation can assess the suitability and sufficiency of current practices, assisting in developing innovations and modifying the educational context (Mohammadi & Abdi, 2014). So, when ESP teachers are competent to design and develop the ESP materials, they will be ready to handle the ESP classes.

2.3.2. Professional Competence in ESP

Professional competence can be defined as the teachers' capability to master their subject in-depth and the way they appropriately deliver it to the students (Syahruddin et al., 2013). So, the teachers need to have the ability to master the learning materials that are suitable to the disciples and what they are teaching comprehensively. In the ESP context, the teachers at least need to master the subject matter of the students' disciplines and be proficient in English.

a. Subject Matter Expertise

ESP teachers should have in-depth knowledge and understanding of students' subjects such as Business English, Medical English, or Legal English. It

encompasses their proficiency in a subject area, including their command of key concepts, theories, principles, and content knowledge. There is a dilemma in ESP teaching whether English teachers or Subject-matter specialists/ content teachers teach the ESP course. A study by Zoghi & Farsi (2014) entitled "Addressing the Dilemma in ESP Teaching: The English Language Teacher or the Subject-matter Specialist?″ reported debate over who is more appropriate to teach the ESP course. Some claim that English teachers do not have sufficient knowledge of the subject matter; therefore, they might be unable to exchange ideas needed to achieve the intended learning outcomes. At the same time, some scholars argue that ESP courses are part of English language teaching; therefore, English teachers are also responsible for designing and teaching ESP courses. This indicates that the ESP course is a part of English teachers' responsibility and needs to be considered.

Teachers' subject matter expertise or content knowledge plays a crucial role in providing quality education. It empowers them to inspire and engage students and facilitate meaningful learning experiences. However, many ESP teachers struggle to learn students' knowledge disciplines because it is new for them, and they have different study backgrounds (Iswati & Triastuti, 2021). They also added that ESP teachers' Inadequate knowledge of the subject matter could influence teachers' feelings, confidence, and teaching performance, directly impacting the teaching-learning atmosphere. Therefore, ESP teachers need to collaborate with content teachers. A collaborative teaching strategy would help language teachers deal with inadequate knowledge of the subject matter (Poedjiastutie, 2017).

b. English Proficiency

Institutions need to recruit qualified ESP teachers with high English proficiency. Renandya et al. (2018) state that language proficiency is crucial to a teacher's professional knowledge. Higher proficiency teachers appear to be more adept at using English to carry out classroom responsibilities and give their students the necessary language support (Richards et al., 2013). It is crucial because ESP teachers not only teach English in general, but they should also teach it in a specific area. However, ESP teachers tend to use their first language to communicate (Lie, 2007) because it is difficult to explain specific English materials to those with low

English proficiency. Therefore, English proficiency is the leading and first competency that an ESP teacher must have because it is a tool for managing classes effectively.

2.3.3. Personal Competence

Regarding personal competence, teachers must have an exemplary personality to apply leadership skills and be a source of identification, especially for students (Wachidi, 2021). These are some indicators of teacher personality competence: (1) Teachers must be happy in their roles as educators; (2) they should treat students fairly; (3) Teachers have to be calm and patient; (4) The teacher should be pleased; (5) Teachers have to be authoritative; (6) Teachers need to be kind; (7) Teachers need to work together with other educators (Hasanah & Kristiawan, 2019).

2.3.4. Social Competence

Social competence is a teacher's ability to see that social life is an integral aspect of society (Supriyoko et al., 2019). It is a sign of their social competency when a teacher can connect and communicate effectively with students, other teachers, the education staff, parents, and the community (Hakim, 2015). Therefore, these competencies will support the effectiveness of teaching and learning.

2.4. Common Challenges in Teaching ESP

The issues and challenges ESP teachers face can be attributed to various factors, including the unique nature of ESP teaching itself. Unlike GE teaching, ESP teaching focuses on teaching language skills specific to a particular field or profession. This specialized knowledge is necessary to develop effective teaching materials, design appropriate teaching activities, and provide accurate and relevant feedback to students. However, due to the complexity of teaching ESP, there are several common issues, as follows.

2.4.1. Teachers' Readiness

One of the primary issues in ESP teaching is the readiness of teachers to deliver effective teaching. ESP teachers must possess a range of skills and knowledge beyond those required for GE teaching. They must deeply understand the terminology and content knowledge of the student's field or profession. However, most ESP teachers seem unprepared to handle ESP classes (Poedjiastutie, 2017). One factor contributing to teacher under-preparedness was ESP teachers' lack of knowledge and understanding of related student disciplines (Iswati & Triastuti, 2021).

Further, Poedjiastutie (2017) revealed an apparent mismatch between the curriculum and the number of teachers with adequate skills and knowledge to teach ESP. This is because most ESP teachers are graduates of the English department (ED). Meanwhile, at ED, they are trained to become English teachers at the high school level, not ESP teachers at universities. So, there is a gap between the ESP curriculum and teacher qualifications, which can harm students' quality of instruction and learning outcomes. Therefore, teachers need to receive appropriate training and support to ensure they are well-prepared to teach in this specialized area of English language teaching.

2.4.2. Students' Readiness

Students' readiness in an ESP class can vary depending on their language proficiency, previous academic background, motivation, and specific needs. Some students may come to the class with a strong foundation in the English language and a clear understanding of their professional or academic needs. Others may struggle with basic language skills or lack clarity about their goals and needs. The European Language Framework states that high school graduates must have B1-level proficiency in foreign languages. However, less than half of them are at the B1 level, which would otherwise guarantee an easy transition to improving their ESP abilities (Marcu, 2020). Furthermore, a study by Poedjiastutie (2017) revealed that University of Muhammadiyah Malang (UMM) students were not ready to learn ESP. Two factors contribute to this lack of readiness: the first-year students' poor

English competence levels when they enter UMM and the teachers' incapacity to participate fully in ESP teaching. This low English proficiency makes it difficult for students to follow the instructions in ESP class. This is because students are expected to be familiar with and proficient in the basics of English first.

Most ESP teachers always anticipate the low English level of students by teaching GE first (Poedjiastutie, 2017). At the same time, students have various abilities in English proficiency in the classroom (Iswati & Triastuti, 2021). It makes it difficult for ESP teachers to give instructions in the ESP course, especially in this lesson, where they must use more complex and specific English terminology. It will affect the effectiveness of ESP learning itself because the specific material that should be studied is neglected. Moreover, the time allocated for the ESP course in non-English departments is limited (Iswati & Triastuti, 2021). Students learn Teaching Vocational English (TVE) - similar to ESP, in one semester or 14 meetings (Poedjiastutie & Syafinaz, 2021). So, the limited time, students' low English proficiency, ESP teachers' choice to teach GE first, and the class condition will negatively impact the ESP course effectiveness.

2.4.3. Lack of Proper Need Analysis

ESP courses are designed to meet the specific language needs of students in their professional or academic contexts. So, NA is essential in collecting and assessing relevant information about students' goals and the need to design and develop ESP courses (Hyland, 2014). Conducting an NA helps to ensure that the course content and teaching materials are relevant and appropriate for the learners' needs (Alsamadani, 2017; Hutchinson & Waters, 1987). NA is a process for determining the language skills and knowledge students need to succeed in their specific field or profession (Dudley-Evans & St. John, 1998). Besides students' views, NA must consider the stakeholders' views (Petraki & Khat, 2022). So, the information collected will be comprehensive when designing and developing the ESP curriculum.

However, some studies revealed that the lack of proper NA became a significant problem in applying ESP courses (Iswati & Triastuti, 2021; Kareem,

2020; Septiana, 2018). Without a proper NA, ESP teachers may be unable to provide relevant, effective, and engaging instruction for their students. They may not address the language skills and knowledge that are most important for their success (Basturkmen, 2010). Park (2021) also states that the lack of need analysis hinders the development and improvement of English language education in ESP. Therefore, conducting a need analysis is necessary before applying for ESP courses.

2.4.4. Lack of Proper ESP Teacher Training

ESP teachers need to attend ESP training programs to improve their competencies in ESP teaching. By following specific training, teachers will be more capable of comprehending students' needs, which is crucial for ESP courses because ESP teachers may provide students with the necessary knowledge based on what they need, which would benefit them. However, the lack of ESP training has still become a significant problem. Previous studies revealed that the lack of training contributes to ESP teachers' knowledge and competence (Alsharif & Shukri, 2018; Iswati & Triastuti, 2021; Poedjiastutie & Syafinaz, 2021). The lack of ESP training for teachers can negatively impact students' learning outcomes. ESP teachers who lack training face challenges such as a lack of knowledge of students' fields of study and a lack of proper NA, which can affect the quality of teaching. Therefore, ESP teachers must receive proper training to ensure they have the skills and knowledge to teach their students effectively.

CHAPTER III

RESEARCH METHOD

This chapter discusses five main points. They are research design, setting and participants, data collection, data analysis, and trustworthiness.

3.1. Research Design

This study used a case study design. A case study made it easier to examine a phenomenon in its context by employing a variety of data sources (Baxter & Jack, 2015) and data collection (Ary et al., 2010). So, it provided a detailed and holistic description.

3.2. Research Setting and Research Participants

This study was conducted at PNB due to the limited higher education institutions that offer RAC programs. There were just five polytechnics that offered this program in Indonesia, and four of them did not offer ESP courses. So, the only research setting that could be done was in PNB. Then, the participant in this study was the ESP teacher in the RAC program at PNB. Due to the limitation of the ESP teacher in the RAC program at PNB (there was only one ESP teacher), the researcher took him as a participant.

Table 1. Data of Participant (ESP teacher)

Participant	University	Department	Qualification	Years of Teaching
WRIMJ	Bali State Polytechnic (PNB)	Refrigeration and Air-Conditioning (RAC) Program	Doctorate	More than 21 years

Further, two students were also interviewed to get their opinions on ESP learning in their class and confirm the ESP teacher's interview results. The

researcher did not continue interviewing the other RAC students because no new information was obtained.

Table 2. Data of Participants (Students)

Participant	University	Department	Semester
GAPIP	Bali State Polytechnic (PNB)	Refrigeration and Air-Conditioning (RAC)	Semester 2
AKSI	Bali State Polytechnic (PNB)	Refrigeration and Air-Conditioning (RAC)	Semester 2

3.3.Data Collection

3.3.1. Research Technique and Instrument

a. Interview

The interviews were used to collect information on the challenges of ESP teaching in the RAC program and how to deal with these challenges. The purpose of the interview was to provide the researcher with an in-depth comprehension of the decisions and actions (Ary et al., 2010). The interview participant was an ESP teacher of the RAC program at PNB. The interview was conducted twice. The first interview was conducted on Sunday, 29th April 2024, after conducting the first observation. Before conducting the interview, the researcher asked for permission to record the interview process using a mobile phone. Because this study employed semi-structured interviews, the researcher started the interview by asking, "How is the development of ESP teaching in the RAC program at PNB?" Furthermore, "What challenges have you faced in teaching ESP to RAC program?" From the answer of the ESP teacher, the researcher explored another question that aligns with the topic under study. To get clear information, the researcher used Bahasa Indonesia during the Interview. The duration of the first interview was 1 hour 31 minutes 54 seconds. The second interview was conducted on Sunday, 6th May 2024, after conducting the second observation. The duration of the second interview was 24 minutes 44 seconds. The researcher stopped the interview with the ESP teacher

in the second interview because the data was saturated.

As additional information to confirm the data from the ESP teacher's interview and the observation, the researcher interviewed the two RAC students. They were interviewed simultaneously. Before conducting the interview, the researcher asked for permission to record the interview process using a mobile phone. The researcher also told them that the interview was conducted in Bahasa Indonesia. The interviews with students were conducted once on Sunday, 6th May 2024. The duration of this interview was 29 minutes and 58 seconds. The researcher asked, "How much do you enjoy learning English and the reason?" and "How important is ESP for your future career?". Then, the researcher explored other questions from students' answers that aligned with the study topic. The researcher did not continue the interview with the students because the researcher could not find new information from the students.

b. Observation

This current study used observation to investigate the challenges of ESP teaching in the RAC program and how he dealt with the challenges in the actual practice (teaching-learning process) inside and outside the classroom. Observation was conducted to thoroughly understand the situation (Fraenkel et al., 2012). When observing, the researcher placed himself in the study's context (Creswell, 2012). The researcher also prepared observation field notes to assist the researcher in getting information.

The researcher observed three RAC classrooms at PNB. The researcher observed semester two students. Each classroom was observed three times. In the first and third observations in each classroom, the ESP teacher divided the learning activities into three phases: in the classroom for preparation and initial introduction, in the engineering workshop for observing the RAC objects, and outside the classroom (students were free to choose the comfortable places for them) to discuss and prepare their reports. However, the observations were not carried out entirely for 4 hours for the first and third observations. Observations were only conducted in the classroom and when visiting engineering workshops. So, the total

observation time for each observation is around 3 hours. With the remaining one hour, students could find the places they felt comfortable discussing and making reports. So, it was difficult for researchers to observe students who were spread out. Meanwhile, the second observation was conducted entirely for almost 4 hours because all activities were in the classroom for the presentation performance.

The first classroom was observed on 29th April 2024, 6th May 2024, and 13th May 2024. Meanwhile, the second and third classrooms were observed simultaneously because they had the same schedule. So, to observe both classrooms, the researcher observed directly in the second classroom while recording the activities in the third classroom. Then, the recording in the third classroom was watched and analyzed. Both observations were conducted on 30th April 2024, 7th May 2024, and 14th May 2024. The observations were stopped in the third observation because the learning activities and the treatment were almost the same as in the previous observation. The difference was just on the topic of learning. So, the researcher thought the data was saturated. Further, the observations were recorded by mobile phone and made available for multiple viewings to prevent erroneous information.

c. Document

The documents that were collected aimed to enrich this study's results in the ESP material category. The researcher collected the documents from the ESP teacher, such as the ESP book and task handout, as additional materials. The researcher tried to see the content of the documents and how they were relevant to the RAC program. The researcher also described pictures of learning activities from the beginning until the end of the meeting.

3.3.2. Data Collection Procedure

The procedures that were followed by the researcher when gathering data were explained as follows:

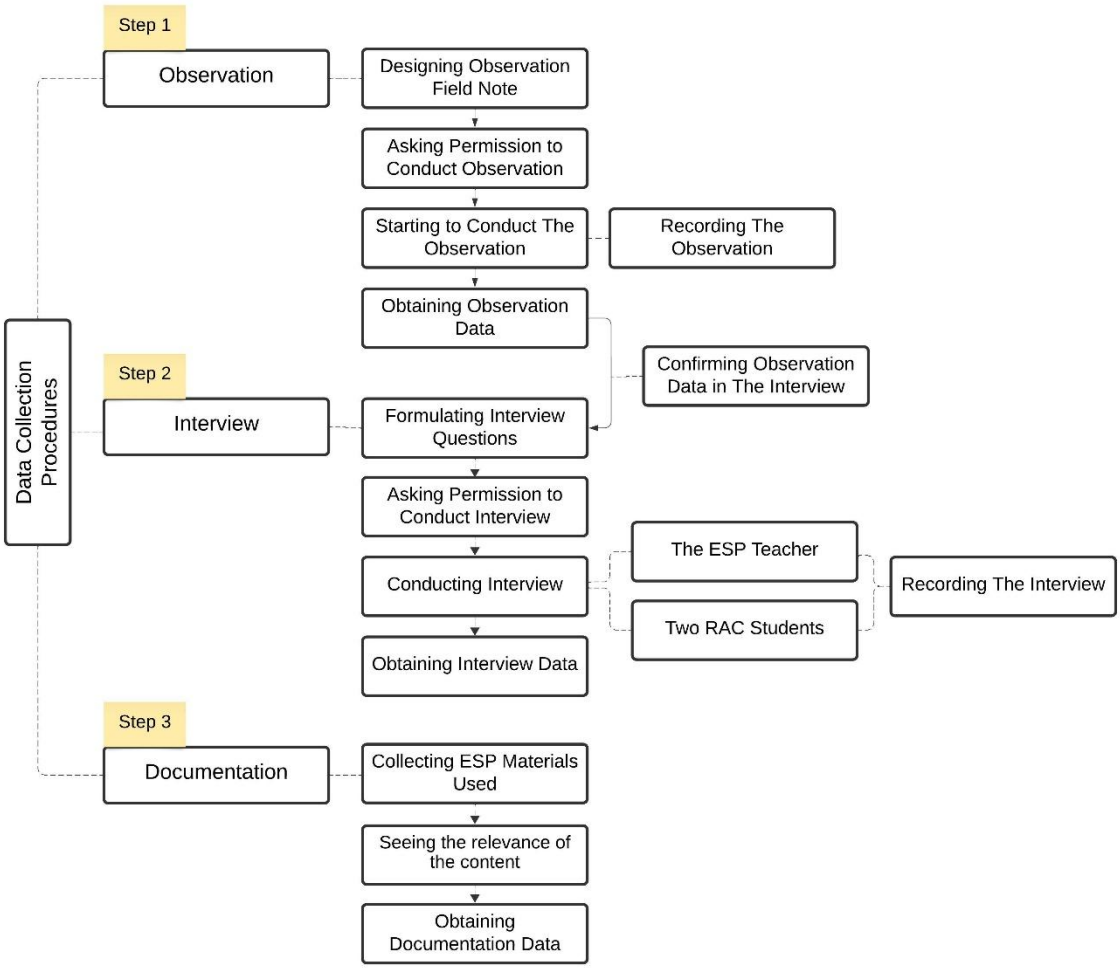

Figure 1. Data Collection Procedure

There were three steps for data collection in this current study. In step 1, the researcher conducted the observations. Before conducting observations, the researcher designed observation field notes. Then, the researcher asked permission to conduct the observation. The observations were conducted. Data from these observations were then obtained to raise questions to confirm and clarify findings with the ESP teacher at the interview stage. In step 2, the researcher interviewed the ESP teacher and students. Before conducting the interview, the researcher formulated appropriate questions to answer the research questions and asked

permission to conduct an interview. Then, interviews were conducted, and information was obtained from the ESP teacher's and students' perspectives. The processes in steps 1 and 2 were recorded using a mobile phone. In step 3, the researcher collected ESP materials designed by the ESP teacher. Then, these documents were checked for conformity with the RAC contents. This data was collected and used to complete data related to the material ESP category in the findings.

3.4.Data Analysis

The data was analyzed by using thematic analysis. It is used to identify themes or patterns in data researchers obtain (Braun & Clarke, 2006). The determined themes reflected the answers to the research questions. Braun & Clarke (2006) divided the thematic analysis into six steps, as follows:

a. Became familiar with data: the researcher selected the appropriate data to answer the research questions. The researcher eliminated unnecessary data. The raw data from observation was reduced by sorting the necessary observation data. At the same time, the interview data was transcribed into text, the appropriate utterances were selected to answer the research questions, and the unnecessary data was reduced. The document was also checked to get the data for ESP material as a source. Next, the researcher read it repeatedly to comprehend it well.
b. Generated initial code: the data was analyzed and coded. However, the researcher did not have pre-set codes but developed and modified the codes while working through the coding process.
c. Searched for themes: codes (sub-themes) generated from the previous step were grouped into themes.
d. Reviewed themes: The researcher reviewed, modified, and developed the themes chosen in stage three. Then, the researcher identified all data and whether each was relevant to each theme.
e. Defined themes: the researcher determined the final themes and sub-themes.
f. Writing-up: The researcher reported the findings and discussed them.

3.5.Trustworthiness

The researcher used trustworthiness in this study to avoid bias and subjectivity. The researcher used credibility. Credibility refers to the accuracy of the investigation's findings (Ary et al., 2010). Data collection triangulation represented this study's credibility. The study used triangulation of methods (observation, interviews, and documents) and triangulation of data sources (data from students and teachers).

CHAPTER IV
FINDINGS AND DISCUSSION

This chapter will present findings and discussion. The findings consist of data on the ESP teaching challenges in the RAC program, and the discussion consists of an analysis of the findings.

4.1. Findings

a. The Challenges from The Teacher

The challenges of ESP teaching in the RAC program are classified into three categories. The challenges come from the teacher, the students, and the institution. First, the unreadiness of the ESP teacher falls into two categories: the teacher's lack of content knowledge and the lack of proper need analysis.

Teacher's Lack of Content Knowledge

The researcher observed that the ESP teacher started learning by teaching GE and did not focus on discussing topics related to students' disciplines in detail (Ethic Perspective). When discussing details foreign to him, he invited students to search through their gadgets and continue discussing them. Based on the researcher's perspective, involving students in exploring content knowledge was the ESP teacher's teaching technique to deal with his lack of content knowledge. The ESP teacher also confirmed that he had no comprehensive understanding of RAC topics (Emic Perspective). The following excerpt is the ESP teacher's comment:

> *I have mastered linguistic knowledge, but I have not mastered content knowledge yet. I will judge the linguistic aspects. Then, the content knowledge may be consulted with the RAC teacher to determine whether it is correct or not (Interview/Teacher/01/Appx.1).*

It is aligned with student 1's comment. He said the ESP teacher did not explain the RAC topics comprehensively (Emic Perspective). The following excerpt is the student's comment:

> *Usually, he (the ESP teacher) explains the main points in explaining the topic (Interview/Student 1/02/Appx.1).*

To address the lack of content knowledge, the ESP teacher offered collaboration with the content teacher (Emic Perspective). However, the collaboration was in consultation, not the collaborative teaching stage. The following excerpt is the ESP teacher's statement:

> *I often communicate with the RAC content teacher to understand RAC's content (Interview/Teacher/03/Appx.1).*

He also collaborated with students in the classroom. The researcher observed that the ESP teacher involved students in exploring the content knowledge (Ethic Perspective). The ESP teacher also confirmed that he was open to getting information related to content knowledge from students (Emic Perspective). The following excerpt is the ESP teacher's confirmation:

> *We learn from each other, including learning the content from the students. I tell the students that I must teach and improve their English skills. When it comes to content, they can dig in more (Interview/Teacher/04/Appx.1).*

Unfortunately, institutions cannot provide solutions for teachers' lack of content knowledge.

Lack of Proper Need Analysis

The researcher found that the ESP teacher used the ESP materials he had designed in the classroom (Ethic Perspective). From the document analysis, the researcher also found that the ESP materials focused on grammatical aspects. For example, chapters 1 and 2 offered General English (GE) materials. From Chapter 3 to Chapter 7, there was still GE, but the vocabulary, examples, and tasks refer to specialist language related to RAC. Further, supplementary materials were also designed as a mini-project to observe and present objects in the engineering workshop. However, based on the researcher's perspective, the domination of GE in the ESP materials did not represent the ESP content. Further, because the NA process was absent, we could not ensure that the materials, tasks, and activities accommodated students' workplace skill needs.

The ESP teacher also confirmed this mismatch between the ESP material and the student's needs. According to him, he developed the ESP materials without conducting NA directly in the field of targeted workplaces (Emic Perspective). In addition, problems related to the time spent doing NA became his concern. The following excerpts are the ESP teacher's concerns:

> *I have not done NA optimally. Due to various responsibilities, I cannot continuously develop teaching materials due to limited focus time (Interview/Teacher/05/Appx.1).*

When student 1 was asked about ESP material, he said it was difficult to understand (Emic Perspective). For example:

> *(It is) not bad, but I am still confused about the lesson because sometimes it is hard to understand. (Interview/Student 1/06/Appx.1).*

In order to address the lack of proper need analysis, the ESP teacher also offered collaboration to replace the role of NA. According to him, involving the content teacher in exploring the ESP materials is needed to minimize the effect of the absence of NA (Emic Perspective). The following excerpts are the ESP teacher's statements:

> *The considerations are based on learning outcomes outlined by the curriculum. Then, I consulted a RAC teacher to explore the RAC topic and material needed (Interview/Teacher/07/Appx.1).*

However, institutions did not offer solutions to help teachers design ESP materials that suit students' needs by providing sufficient ESP teacher training and funding.

b. The Challenges from The Students

There are five challenges due to ESP student unreadiness: Lack of basic English, lack of content knowledge, low learning motivation, lack of presentation skills, and students' classroom misbehavior.

Students' Lack of Basic English

The researcher observed that students were confused when the ESP teacher asked questions in English, but when he returned to Bahasa Indonesia, they directly responded to his questions (Ethic Perspective). So, based on the researcher's perspective, students' low understanding of basic English when they enter the tertiary institution makes it difficult for them to follow the more complex instructions on ESP courses. It was relevant to the ESP teacher's comment. According to him, students did not seem ready to accept the material offered in the ESP course (Emic Perspective). The following excerpt is the ESP teacher's comment:

> *Low student intake in English because their general English is not yet fluent; They already have to learn ESP (Interview/Teacher/08/Appx.1).*

Regarding the student's low basic English skills, student 2 responded to his English proficiency. For example:

> *I feel that I lack English skills (Interview/Student 2/09/Appx.1).*

To address the students' lack of basic English skills, the researcher saw the ESP teacher return to teach GE and return to students' L1 (Bahasa Indonesia) (Ethic Perspective). Based on the researcher's perspective, returning to GE and Bahasa Indonesia were the ESP teacher's ways to avoid miscommunication and fill lexical gaps to ensure smooth communication in learning activities. At the same time, the ESP teacher also shared the same perspective. He said returning to Bahasa Indonesia and GE was intended to ensure students' understanding of his directions. The following excerpts are the ESP teacher's statements:

> *I often return to speaking Bahasa Indonesia and doing code-switching and code-mixing. So, they can understand my directions and explanations. Then, I started with GE to restore their language awareness (Interview/Teachers/10/Appx.1).*

Further, the institution did not offer special treatment, such as English courses, to equip their students with basic English skills.

Students' Lack of Content Knowledge

Based on the observation, the researcher saw that many students were silent when the ESP teacher tried to ensure students' prior knowledge of their content knowledge (Ethic Perspective). So, based on the researcher's assumption, this condition indicates that they were also still limited in their content knowledge. Further, the ESP teacher explained why students struggled with content knowledge (Emic Perspective). The following excerpt is the ESP teacher's statement.

> *I gave them a project to explain one object in the workshop. However, students said we had never attended the workshop (Interview/Teacher/11/Appx.1).*

It aligned with what students said, where they had not received content subjects related to RAC topics in semesters one and two (Emic Perspective). For example:

> *I have not learned the content subject yet. It is in semester three (Interview/Student 1/12/Appx.1).*

To help the students with this difficulty, the researcher observed that the ESP teacher involved students in exploring their content knowledge by allowing them to use their gadgets (Ethic Perspective). Then, he asked students individually (not all) to give examples of AC filter features such as color, material, shape, function, and other features. Based on the researcher's perspective, involving students in exploring content knowledge makes them feel responsible for their learning. From the ESP teacher's perspective, allowing students to use their gadgets enables them to dig the knowledge more independently (Emic Perspective). The following excerpt is the comment of the ESP teacher:

> *I allow them to use their phones for suggestive things. For example, they explore the topics, check the translation of particular words, and use ChatGPT (Interview/Teacher/13/Appx.1).*

So, involving students and using gadgets in learning activities allows students to develop their content knowledge independently.

Students' Lack of Learning Motivation

Students learning motivation influenced students' behavior in learning ESP. The observation found that the students carried out activities outside of learning needs, such as playing on their phones, talking to their friends, not focusing when studying, and coming late (Ethic Perspective). Based on the researcher's perspective, these behaviors occurred because they could not follow the lesson, which caused boredom and unenthusiastic learning. On the contrary, according to the ESP teacher, students' low learning motivation emerged because of their thinking paradigm (Emic Perspective). For example:

> *Maybe RAC students think ESP is unimportant because they have the paradigm that it is enough to master skills in the RAC field, such as servicing, installing AC, and replacing Freon (Interview/Teacher/14/Appx.1).*

In contrast to the ESP teacher's statement, students shared different perspectives (Emic Perspective). For example:

> *ESP is very important in the future because we also work in the tourism sector. Now, foreigners own the majority of villas, particularly in Bali. I also have dreams of working abroad (Interview/Student 1/15/Appx.1).*

To motivate students to learn ESP, the researcher saw the ESP teacher inviting students to observe the actual object in the engineering workshop as an authentic activity (Ethic Perspective). For example, for the first project, they had to complete a project related to the description of AC filters (type, function, location, parts connected to the object, how to clean it, and how to repair it). Further, the result of the project was in the form of a simple product (report in their handout paper), and the students presented it in front of the classroom. Based on the researcher's perspective, this activity attracted students' enthusiasm for learning ESP because they were positioned as a learning centre. The ESP teacher also considered this activity meaningful learning (Emic Perspective). The following excerpt is the ESP teacher's statement:

I make mini-projects in groups or pairs. Students will learn authentically by being taken to the workshop and observing authentic objects. It can be meaningful learning (Interview/Teacher/16/Appx.1).

At the same time, students positively responded to visiting the workshop activity (Emic Perspective). For example:

Visiting a workshop is a good activity because we can understand by looking at the object directly (Interview/Student 2/17/Appx.1).

To sum up, creating meaningful learning, such as visiting an engineering workshop to observe the actual RAC objects, can minimize the students' low learning motivation.

Students' Lack of Presentation Skills

From the observation, the researcher found the students' unpreparedness performance, such as their voice intonation sounded like they were reading, their eyes looked upward, there was no body language in their presentation performance, many grammatical and pronunciation errors, and the limited details of their content (Ethic Perspective). Based on the researcher's perspective, the students lacked presentation skills because they presented without understanding what they were saying. On the other hand, according to the ESP teacher, students' unreadiness in presentation was because of their lack of English proficiency. The following excerpt is the ESP teacher's comment:

Students are afraid, pretend to be afraid, or are not ready. They made errors in their presentation, such as difficulty in pronouncing, constructing correct sentences, and the quality of the content (Interview/Teacher/18/Appx.1).

In addition, students 1 and 2 also shared different perspectives on presentation activities. The following excerpts are the comments of students:

I was unhappy during the presentation because I was nervous speaking in English. It is hard to explain (Interview/Student 1/19/Appx.1).

This presentation assignment is very good because we are trained to speak English (Interview/Student 2/20/Appx.1).

In order to address students' lack of presentation skills, the researcher saw the ESP teacher quarantine the students to present their tasks in different classrooms (Ethic Perspective). So, the presentations were made separately from their classmates. Meanwhile, observation in classrooms 2 and 3 did not conduct quarantine techniques. So, they presented their tasks in front of their friends. Based on the researcher's perspective, there were no significant differences in students' presentation performance between quarantined and non-quarantined students. It is also difficult to find studies that measure the impact of the quarantine technique on developing students' confidence in presentations. According to the ESP teacher, this quarantine process boosted students' confidence (Emic Perspective). The following excerpt is the ESP teacher's opinion:

> *I am considering quarantine to give students a hidden force in different classes. They will feel confident. They present without any intervention or help from friends (Interview/Teacher/21/Appx.1).*

However, students 1 and 2 also shared different perspectives toward quarantine for the presentation task. The following excerpts are the statements of the students:

> *Quarantine is good, but presenting in front of classmates is better. It can train our confidence in speaking (Interview/Student 1/22/Appx.1).*
>
> *I am nervous when I present in front of my friends. When it is separated, it can reduce nervousness (Interview/Student 2/23/Appx.1).*

To sum up, one of the efforts to help students with their difficulty in presentation is the quarantine technique. Also, more studies are needed to investigate the impact of the quarantine technique on boosting students' confidence in presentations.

Students' Classroom Misbehavior

The researcher observed that many students joked and talked to their friends, played on their phones, and were sleepy during the learning (Ethic Perspective). According to the ESP teacher, students' misbehaviors during learning were affected by single-gender class effects (Emic Perspective). Indeed, there were

only male students in the RAC program at PNB. The following excerpt is the ESP teacher's opinions:

> *Students often use this homogeneity (all-male students) to do other things, such as joking and disturbing their friends' concentration. If male and female students are in a class, the female student becomes the controller. The controller means that male students often withdraw to make noise when there are female students (Interview/Teacher/24/Appx.1)*

However, based on the researcher's perspective, all-male students in the classroom were not why students displayed these behaviors. It aligns with students' reasons for this misbehavior (Emic Perspective). For example:

> *It is normal because all my classmates have been males since vocational school. If it is noisy, it is usually because the teacher is not strict enough (Interview/Student 1/25/Appx.1).*
>
> *I feel normal if all my classmates are males. I usually play on my phone because I am bored (Interview/Student 2/26/Appx.1).*

In controlling these misbehaviors, the research saw that the teacher implemented positive reinforcement and consequences (Ethic Perspective). Students would get a score if they finished their tasks, and they would not get a score if they did not complete the task. Based on the researcher's perspective, this technique suppresses students who neglect learning. Meanwhile, according to the ESP teacher, giving scores and consequences could enforce students' discipline. The following excerpt is the statement of the ESP teacher:

> *I often teach students firmly. For example, time them out with learning duration. Then, I often tie them up by scoring. It ensures they are not reluctant and remain concentrated in these stages (Interview/Teacher/27/Appx.1).*

Further, from the student's perspective, they liked being appreciated by getting scores (Emic Perspective). For example:

> *I am happy to get a score by finishing the tasks (Interview/Student 1/28/Appx.1).*

To sum up, the ESP teacher used positive reinforcement and consequences to control the students' classroom misbehavior.

c. The Challenges from The Institution

There are three challenges due to the institution's factors: curriculum (the deletion of two English subjects), learning duration, and limited ESP teacher and ESP teacher training in the RAC Program.

Curriculum (The Deletion of Two ESP-Based Subjects)

According to the ESP teacher, several changes have occurred to the English curriculum in the RAC Program of PNB (Emic Perspective). The following excerpt is the ESP teacher's statement:

> *English language teaching at RAC is carried out in 4 semesters. Semester 1: GE; Semester 2: English for description; Semester 3: English for report; and Semester 4: English for presentation. However, after 2022, the policy regarding the curriculum changes again. English is given for two semesters. GE for Semester 1 and English for Description for Semester 2 (Interview/Teacher/29/Appx.1).*

Based on the researcher's perspective, the issue is not about deleting or adding courses but how well the courses offered match the students' needs. For this reason, discussions, trials, and evaluations must be carried out to present an effective ESP curriculum. However, the ESP teacher felt the impact of deleting these two ESP-based subjects. He said elimination was challenging in producing competent English graduates (Emic Perspective). The following excerpt is the ESP teacher's comment on the deletion:

> *The elimination of these two courses significantly impacts our target of producing graduates who are competent in English. I have difficulty accommodating the eliminated subjects into English for description. (Interview/Teacher/30/Appx.1).*

In dealing with this challenge, the ESP teacher accommodated communication needs by conducting presentation activities (Emic Perspective). For example:

> *We try to prioritize communication by giving a presentation or conversation activity. Then, in between, there is vocabulary enrichment, an introduction to language function, and language form (Interview/Teacher/31/Appx.1).*

Students also confirmed using presentation activities at the end of the learning experience (Emic Perspective). For example:

Most of the activities are presentations (Interview/Student 2/32/Appx.1)

To sum up, the ESP teacher accommodated communication needs by presenting tasks to deal with the challenge of eliminating two English subjects.

Long Learning Duration

The researcher observed that several students were sleepy, and some played on their phones during the first two hours of learning (Ethic Perspective). From the researcher's perspective, long learning duration also influences the learning atmosphere, apart from learning motivation. Students' concentration would be drained if forced to study for 4 hours. The ESP teacher is also concerned about the long duration. He considered the challenges of managing the class for a long duration (Emic Perspective). The following excerpt is the ESP teacher's concern:

> *It is not easy. Students can get stressed because it is long. Then, if we as teachers continue monitoring, they will get bored (Interview/Teacher/33/Appx.1).*

It was in line with what students felt with a duration of 4 hours for one meeting (Emic Perspective). For example:

> *I feel bored because it makes me sleepy. It is better to study for 2 or 3 hours (Interview/Student 1/34/Appx.1).*

To anticipate the stress and the boredom of the students due to the long learning duration, the researcher saw that the ESP teacher divided the activities into three phases: initial introduction and preparation in the classroom, observing in the engineering workshop, and discussing wherever students felt comfortable (Ethic Perspective). The ESP teacher also divided one topic into two meetings (the first meeting was for working on the project, and the second was for a presentation activity). Based on the researcher's view, the ESP teacher's activities can reduce students' boredom in learning ESP because students are involved in every learning process. It was in line with the ESP teacher's statement. According to him, studying

for a long duration would reduce students' learning concentration (Emic Perspective). For this reason, he gives suggestions. The following excerpt is the ESP teacher's suggestions:

> *Children's concentration for 4 hours is chaotic. There should be more teachers, and the strategies may be more solidified (Interview/Teacher/35/Appx.1).*

To sum up, the boredom of long learning duration can be anticipated by managing learning activities into several phases in different places.

Limited ESP Teacher and ESP Teacher Training in The RAC Program

According to the ESP teacher, the limited number of English teachers in the RAC program (just one ESP teacher) and insufficient ESP teacher training were challenging (Emic Perspective). The following excerpt is the ESP teacher's statement:

> *The campus has not provided ESP training. However, campuses often regularly receive grants. We were allowed to go abroad to study TESOL (Interview/Teacher/036/Appx.1).*

He added that the institution allowed him to develop himself in the TESOL training program, but he was not explicitly trained in his ability to ESP teaching (Emic Perspective). Based on the researcher's perspective, it should be noted that the general training does not adequately prepare them to teach ESP and equip them with knowledge and methodology in ESP teaching of particular disciplines.

Therefore, he developed himself personally to adapt to ESP teaching (Emic Perspective). The following excerpt is the ESP teacher's statement:

> *I think in a self-directed way. I enrich my knowledge by participating in training programs, workshops, seminars, or research. If possible, the campus should be able to provide it more routinely and intensively (Interview/Teacher/37/Appx.1).*

In summary, the ESP teacher did self-directed learning to respond to the limited ESP teachers in the RAC program and the lack of proper ESP training.

Table 3. Summary of The Main Findings

Source	Challenges	Solutions
Teacher	Teacher's lack of content knowledge	Collaboration with content teacher and students
	Lack of proper needs analysis	Replacing the NA with consultation with the content teacher
Students	Students' lack of basic English	Returning to GE and students' L1
	Students' lack of content knowledge	Involving students and using gadgets to explore content knowledge
	Students' lack of learning motivation	Visiting workshops as authentic activities to motivate students
	Students' lack of presentation skills	Using quarantine techniques
	Students' classroom misbehaviors	Implementing positive reinforcement and consequences
Institution	Curriculum (the deletion of two ESP-based subjects)	Accommodating the communication skills in English for description
	Long learning duration	Creating meaningful learning to avoid stressful learning conditions by dividing the learning into three phases
	Limited ESP teacher and ESP teacher training in the RAC program	Self-directed learning as a way to improve ESP teacher's competencies

4.2. Discussion

ESP learning in the RAC program is still far from ideal. Several issues need to be highlighted because they are essential parts of ESP teaching, such as teacher readiness, student readiness, and suitability of the ESP curriculum. First, the ESP teacher's continued lack of content knowledge was the catalyst for it. This lack of content knowledge could make teachers uncomfortable, eventually affecting the teaching-learning environment (Cheraghi & Motaharinejad, 2023). This finding was not surprising because several previous studies had revealed the same findings (Fitria, 2023a; Iswati & Triastuti, 2021; Lenard & Lenard, 2018; Pei & Milner,

2016; Poedjiastutie, 2017). It was because the English Department (ED) prepared its graduates to teach GE at high school, not ESP at a tertiary level (Poedjiastutie, 2017). The mismatch between teachers' study backgrounds and teaching responsibilities makes learning a new study area challenging. To avoid this situation, teachers must adequately understand the content in the relevant field.

Issues related to lack of content knowledge become a dilemma, where, on the one hand, understanding related content knowledge is fundamental in ESP teaching. On the other hand, teachers with their limitations are forced to master areas of knowledge that are foreign to them. Therefore, educational institutions should prepare ESP teachers before teaching ESP courses (Ibrahim, 2019). This preparation is intended to strengthen teachers' understanding of content knowledge and enrich teachers with teaching techniques that enable students to learn independently. It is essential to consider that not all RAC program graduates will work in the same industry. By facilitating students with independent learning, they can try to master ESP according to their future type of work. Independent learning is intensified to encourage students to be more independent, creative, and responsible for their learning (Pondalos et al., 2022). It contributes to their personal development and aids in students' achievement of lifelong learning, which is education's ultimate goal (Ahmadi, 2013).

This study showed that the teacher implemented student learning activities as the independent learning axis. First, the teacher collaborated with students by inviting them to explore their content knowledge through mobile phones independently. Then, the teacher and students discussed specific topics related to their discipline. It is one of the strategies to promote independent learning in the classroom, which involves trusting students and treating them with respect to explore their knowledge (Ahmadi, 2013). Second, the teacher involved students in the project by observing, making reports, and presenting the results of observations. Students positively responded to this project activity. The project improved their vocabulary with many practical terms and trained them to be independent (Kovacikova & Kralova, 2021; Puspa & Syahrial, 2017). In addition, integrating

modern technology in ESP projects impacts students' enthusiasm for learning (Maulida et al., 2023). For example, using video projects as a medium can help students learn how to initiate, monitor, and evaluate processes independently (Khotimah et al., 2019).

Moreover, ESP teachers will be inspired and motivated to learn new subjects outside of their discipline if they are aware of their limited understanding of the subject (Iswati & Triastuti, 2021). Collaborating with content teachers is an alternative solution to increase teachers' understanding of content knowledge. It is essential to help cover teachers' content knowledge gaps (Cheraghi & Motaharinejad, 2023). However, this study found that the ESP teacher just had a consultation. The ideal collaboration is usually in collaborative teaching in the classroom (Pei & Milner, 2016). However, Amina's (2021) study showed several difficulties in implementing collaborative teaching, such as a lack of time to collaborate, different experiences and teaching styles, and the absence of mutual agreement and trust. Therefore, collaboration requires maturity and self-confidence; otherwise, it can cause teachers to feel insecure (Poedjiastutie, 2017). So, implementing solutions such as collaboration with the content teacher is exciting but challenging.

This heavy burden on ESP teachers should be a concern for institutions. Teachers are expected to do more than just in the classroom; they also need to create a syllabus, supply resources, work with the content teacher, conduct research, and assess the material being taught and the students (Rasyimah et al., 2017). Therefore, proper ESP teacher training must be mandatory to develop ESP teacher competency in teaching ESP courses. However, the findings also demonstrated that the ESP teacher lacked adequate training. Regular ESP training is still an absolute right to prepare ESP teachers to meet the needs of students (Benabed, 2022). For example, to carry out their role as course designers and material developers, teachers must carry out NA to find out the actual needs of the students. In fact, there is a mismatch between teachers' materials and students' needs in real-work situations due to the absence of the NA. For example, in the current study, the ESP teacher prioritized

speaking skills in ESP learning for RAC students. Unfortunately, the studies conducted by Aswirawan & Lawi (2022) and Gözüyeşil (2014) found that reading skills were the skills that engineering students needed most because they needed to read for specific information. Having no prior knowledge and training in teaching English to Engineering students, the teacher utilized common sense when creating the syllabus and instructional materials (Iswati & Triastuti, 2021).

Furthermore, challenges associated with student factors, such as poor basic English skills, a lack of content knowledge, and low learning motivation, must be considered. Teaching ESP was difficult since students did not comprehend basic English (Cheraghi & Motaharinejad, 2023). Students' little prior knowledge of English made it difficult for the teachers to move from general to specific English without first preparing the students in general English (Diana, 2023). One factor contributing to engineering students' lack of basic English was poor educational backgrounds (Guduru & Bommanaboina, 2021). It made the students not ready for the level of instruction incumbent in the ESP program (Poedjiastutie, 2017). The lack of basic English skills was not the only problem associated with students. The students' insufficient knowledge regarding their discipline also became a problem. This is because introducing ESP at the beginning of the semester might shock them greatly (Poedjiastutie, 2017).

Both students' lack of basic English and content knowledge probably created another problem for students' low learning motivation. Findings related to students' low learning motivation in ESP classrooms support previous studies conducted by Enesi et al. (2021) and Marwan (2009). This caused students to have less than sufficient performance to complete the tasks and performances in the class (Waloyo, 2019). Since studying English was not their primary goal, the students' low learning motivation made it difficult for the teacher to convey knowledge to them (Marwan, 2009). This has turned into a significant problem since students' learning motivation impacts the effectiveness of ESP learning besides cognitive ability (Kubanyiova, 2006).

Regarding challenges from the students' factors, the ESP teacher tried to adjust the learning activities and materials. The first way to anticipate students' basic English problems was by returning to Bahasa Indonesia. Using instruction in their first language (L1) ensures that the teacher and the students can understand each other (Cheraghi & Motaharinejad, 2023). However, this becomes a dilemma where the aim of teaching ESP is to familiarize students with using English according to their discipline, which is so specific. Using L1 will make students only memorize technical material in English, and then they switch to their L1 when participating in class discussions (Cheraghi & Motaharinejad, 2023). Therefore, if the student returns to Bahasa Indonesia, the student's opportunity to practice English will be reduced. However, teaching English as a medium of instruction in a country where English is taught as a foreign language (EFL) is very difficult. Teachers used Bahasa Indonesia with reasons to clarify and emphasize the meaning of the material and make it easier for students to understand the material being taught (Pratiwi et al., 2022). So, as long as it is not overused or becomes habitual, using Bahasa Indonesia in the English classroom can help with teaching and learning (Fitria, 2023b).

Furthermore, The ESP teacher also returned to GE initially to restore students' English awareness before entering ESP material. However, returning to GE does not ensure that students with low English proficiency will quickly understand the ESP (Poedjiastutie, 2017). Making practical use of English for the student is the main objective of ESP teaching. ESP focuses on selecting terms and their meanings in various texts besides identifying specific sentence structures or word combinations (Kitkauskienė, 2006). Therefore, returning to GE will not be ideal for ESP classrooms. On the other hand, teaching ESP directly to students with low English proficiency will also become a problem. So, the institution must realize that it is an urgent problem that needs to be fixed and accommodated in the ESP curriculum.

The issue of the ESP curriculum is not about deleting or adding ESP-based courses but how well the courses offered match the students' needs. For this reason,

discussions, trials, and evaluations must be carried out to present an effective ESP curriculum (Kusni, 2013). Several aspects should also be considered in designing the ESP curriculum, such as the readiness of the students (their readiness on English proficiency level and their prior knowledge of content-specific discipline), the duration of ESP teaching, and the discussion and trial of solutions offered by the teacher. First, the ESP course's goal that the institution sets should be within students' competency range. Marwan (2009) gave an analogy: "How can a five-year-old student be taught to do academic writing if he still does not know how to write simple correct sentences?". However, he also believes that the curriculum cannot be deemed wrong because it cannot be made like an elementary school curriculum.

Second, the duration of the ESP course itself must be considered and whether an extended duration will be effective. This study found that obstacles such as boredom hit students when studying ESP for 4 hours in one meeting. Lamba (2014) tried to test the effect of teaching time (2 hours) on the attention and concentration of students aged 18–22 years. They concluded that most students lose attention and concentration during learning activities. Third, the teacher's ideas, such as visiting workshop activities, should be discussed and tested to see their effectiveness as part of the ESP curriculum. For example, he divided activities into four phases (in two meetings): preparation (in the classroom), observation (in the engineering workshop), discussion (outside the classroom), and oral presentation (in the isolation classroom by using the quarantine technique). This project assignment is also part of independent learning that is appropriately guided and will improve the ability to think, collaborate, communicate, and interpret an event (Pondalos et al., 2022). Therefore, the idea must be discussed, tested, and evaluated so that, in the end, they produce an ESP curriculum that can accommodate student needs. Whenever possible, every detail should be discussed with all relevant stakeholders, including students' representatives.

Overall, the results of this study are consistent with previous studies conducted by Poedjiastutie (2017) and Iswati & Triastuti (2021), such as teacher

readiness and student readiness in ESP courses. However, several new findings have emerged, such as the anticipated long learning duration using three learning phases and quarantine techniques in helping students with presentation skills.

CHAPTER V
CONCLUSION AND RECOMMENDATION

This chapter presents a conclusion and recommendation. The conclusion will conclude the research findings, and the recommendation is offered to several parties.

5.1. Conclusion

This current study investigated the challenges of ESP teaching in the RAC program. Based on the findings of this study, teaching ESP in the RAC program presents a multifaceted set of challenges. ESP teachers are required to complete various demanding tasks that pose serious challenges. From analyzing student needs to adapting existing materials or creating new materials, ESP teachers face serious problems, especially when they do not receive initial and ongoing training. The challenges of ESP teaching in the RAC program were categorized into three sources: the teacher, the students, and the institution. To deal with these challenges, the ESP teacher offered solutions. The emergence of these solutions cannot be separated from the teacher, who is enthusiastic and creative about trying new ideas and adjusting to every change he encounters.

However, several solutions were not easy to implement and needed more concern. For example, the difficulties in implementing collaborative teaching because it needs the maturity between the English teacher and the content teacher, the dilemma of using Bahasa Indonesia in ESP teaching because sometimes it is overused, the portion of GE material always dominates in ESP teaching materials, and issues of effective ESP curriculum. Therefore, besides having the responsibility to plan and prepare the ESP curriculum that suits students' needs, the institution must take its role to help ESP teachers with their limitations. Teachers cannot be burdened with extra work without extra funding. Institutions also cannot allow teachers to find their own resources, additional training, and ways of designing their courses without any support.

5.2.Recommendation

Based on the study's results, the researcher offered several recommendations for some parties: the institution, teaching, and further research.

Recommendation for Institution

Institutions must provide proper training to increase ESP teachers' comprehensive understanding of ESP teaching. Further, the institution must consider whether the ESP curriculum meets students' needs in their future workplace. The curriculum is also recommended to consider the students' readiness based on their English proficiency level and prior knowledge of their content knowledge, appropriate learning duration, and accommodating independent learning.

Recommendation for Teaching

Several solutions offered by the teacher have not been optimal in utilizing educational technologies. This study recommends integrating technology in ESP classrooms' learning activities, such as integrating the YouTube platform into students' project products. It can be an independent learning activity. In the ESP class, independent learning needs to be emphasized. The teacher can act as a facilitator so students can explore themselves independently. So, even if they graduate from RAC but do not work in that field, they can independently use independent learning to learn about their new work area. In addition, solutions such as collaborative teaching in the classroom need maturity and trust between the English teacher and the content teacher. So, it requires long-term adjustments.

Recommendation for Future Research

This study found the use of quarantine techniques to improve students' presentation skills. For this reason, future research is recommended to use quantitative research to examine the effect of this technique in improving students' presentation skills. Furthermore, this study also found that the teacher used the student-collaboration model in the ESP course. So, future research can explore

variations in ESP teacher techniques in implementing student-collaboration models in ESP learning.

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Appendix 1

INTERVIEW TRANSCRIPT

Research Question	Categories	Sub-Categories	Questions	Code	Participants	
					The ESP Teacher	Students
What challenges do ESP teachers face in teaching English to refrigeration and air conditioning students? How does the ESP teacher deal with these challenges?	Challenges from the teacher	Teacher's lack of content knowledge	What challenges do you face when teaching ESP to RAC students?	01	I have mastered linguistic knowledge, but I have not mastered content knowledge yet. I will judge the linguistic aspects. Then, the content knowledge may be consulted with the RAC teacher to determine whether it is correct or not.	-
			How does your teacher explain the material related to your disciplines?	02	-	Usually, he (the ESP teacher) just explains the main points in explaining the topic (Interview/Student 1).
			How do you overcome challenges related to your lack of content knowledge?	03	I often communicate with the content teacher who teaches RAC to understand RAC's content.	-
			From the observation, I found you involve students in exploring content knowledge. Is it a student collaboration model?	04	We learn from each other, including the content from the students. I tell the students that I must teach and improve their English skills. When it comes to	-

					content, they can dig in more.	
		Lack of proper need analysis	Do you do NA in designing ESP materials? What obstacles do you face?	05	I have not done NA optimally. Due to various responsibilities, I cannot continuously develop teaching materials because of limited time to focus.	-
			What do you think about the material you got in the ESP course?	06	-	(It is) not bad, but I am still confused about the lesson because sometimes it is hard to understand. (Interview/Student 1)
			How did you overcome the challenges related to NA's absence?	07	The considerations are based on learning outcomes outlined by the curriculum. Then, I consulted a RAC teacher to explore the RAC topic and material needed	-
	Challenges from students	Students' lack of basic English	Why do you think students find it difficult to learn ESP?	08	Low student intake in English because their general English is not yet fluent; They already have to learn ESP.	-
			How much do you enjoy learning English?	09	-	I feel that I lack English skills (Interview/Student 2).

			How do you deal with challenges related to students' lack of basic English skills?	10	I often return to speaking Bahasa Indonesia and doing code-switching and code-mixing. So, they can understand my directions and explanations. Then, I started with GE to restore their language awareness.	-
		Students' lack of content knowledge	Does students' content knowledge influence ESP teaching? what's the challenges?	11	I gave them a project about explaining one object in the workshop. However, students said we had never attended the workshop.	-
			Have you studied the content subject?	12	-	I have not learned the content subject yet. It looks like in semester three (Interview/Student 1)
			How do you help students explore their content knowledge?	13	I allow them to use their phones for suggestive things. For example, they explore the topics, check the translation of particular words, and use ChatGPT.	-
		Students' lack of learning motivation	What causes many students not to study seriously in class (such as playing with phones, talking to friends, or being sleepy)?	14	Maybe RAC students think ESP is unimportant because they have the paradigm that it is enough to master skills in the RAC field, such as	-

					servicing, installing AC, and replacing Freon.	
			How important is ESP for your future career?	15	-	ESP is very important in the future because we also work in the tourism sector. Now, foreigners own the majority of villas, particularly in Bali. I also have dreams of working abroad (Interview/Student 1)
			How do you overcome students' low learning motivation?	16	I make mini-projects in groups or pairs. Students will learn authentically by being taken to the workshop and observing authentic objects. It can be meaningful learning.	-
			What do you think about visiting an engineering workshop?	17	-	Visiting a workshop is a good activity because we can understand by looking at the object directly (Interview/Student 2)
		Students' lack of presentation skills	How do you view students' presentation skills?	18	Students are afraid, pretend to be afraid, or are not ready. They made errors in their presentation, such as difficulty in pronouncing, constructing correct	-

					sentences, and the quality of the content.	
			What do you think about presentation assignments?	19	-	I was unhappy during the presentation because I was nervous speaking in English. It is hard to explain (Interview/Student 1)
			What do you think about presentation assignments?	20	-	This presentation assignment is very good because we are trained to speak English (Interview/Student 2)
			I see you isolating students during presentations. What is your reason for doing this?	21	I am considering quarantine to give students a hidden force in different classes. They will feel confident. They present without any intervention or help from friends.	-
			What do you think about quarantine on presentation assignments?	22	-	Quarantine is good, but presenting in front of classmates is better. It can train our confidence in speaking (Interview/Student 1)
			What do you think about quarantine on presentation assignments?	23	-	I am nervous when I present in front of my friends. When it is separated, it can reduce

						nervousness (Interview/Student 2)
		Students' Classroom Misbehavior	I saw that all the students in the class were boys. Are there any challenges you face in this situation?	24	Students often use this homogeneity (all-male students) to do other things, such as joking and disturbing their friends' concentration. If male and female students are in a class, the female student becomes the controller. The controller means that male students often withdraw to make noise when there are female students.	-
			What do you think about all your male classmates? Are you fighting because all your friends are men?	25	-	It is normal because all my classmates have been males since vocational school. If it is noisy, it is usually because the teacher is not strict enough (Interview/Student 1)
			What do you think about all your male classmates? Are you fighting because all your friends are men?	26	-	I feel normal if all my classmates are males. I usually play on my phone because I am bored (Interview/Student 2)
			How do you overcome challenges related to students' misbehavior?	27	I often teach students firmly. For example, time them out with learning	-

					duration. Then, I often tie them up by scoring. It ensures they are not reluctant and remain concentrated in these stages.	
			What would you think if given a score when completing an assignment?	28	-	I am happy to get a score by finishing the tasks (Interview/Student 1)
	Challenges from the institution?	Curriculum (The Deletion of Two English Subjects)	How is the development of ESP teaching in the RAC program at PNB?	29	English language teaching at RAC is carried out in 4 semesters. Semester 1: GE; Semester 2: English for description; Semester 3: English for report; and Semester 4: English for presentation. However, after 2022, the policy regarding the curriculum changes again. English is given for two semesters. GE for Semester 1 and English for Description for Semester 2.	-
			What challenges did you face when these two courses were removed?	30	The elimination of these two courses greatly impacts our target of producing graduates who are competent in English. I	-

					have difficulty accommodating the eliminated subjects into English for description.	
			How do you solve the challenges related to eliminating these courses?	31	We try to prioritize communication by giving a presentation or conversation activity. Then, in between, there is vocabulary enrichment, an introduction to language function, and language form.	-
			What assignments do you often do in ESP class?	32	-	Most of the activities are presentations (Interview/Student 2)
		Learning Duration	The duration of learning ESP is 4 hours. What do you think about that?	33	It is not easy. Students can get stressed because it is long. Then, if we as teachers continue monitoring, they will get bored.	-
			The duration of learning ESP is 4 hours. What do you think about that?	34	-	I feel bored because it makes me sleepy. It is better to study for 2 or 3 hours (Interview/Student 1)
			What are your suggestions for anticipating student stress during this long study duration?	35	Children's concentration for 4 hours is chaotic. There should be more teachers, and the strategies may be more solidified.	-

		Limited ESP teacher and ESP teacher training in the RAC program	Does the campus provide you with ESP training?	36	The campus has not provided ESP training. However, campuses often regularly receive grants. We were allowed to go abroad to study TESOL.	-
			How do you improve your ESP competency in the absence of ESP training?	37	I think in a self-directed way. I enrich my knowledge by participating in training programs, workshops, seminars, or research. If possible, the campus should be able to provide it more routinely and intensively	-

Appendix 2

OBSERVATION FIELD NOTE

Observation 1

Date : Monday, April 29th, 2024

The ESP teacher : WRIMJ

ESP Course/Class : TPTU C (Class 1)

Procedure :

1. The researcher asked the ESP teacher's permission to conduct an observation in his class.
2. The researcher and the ESP teacher came to the class simultaneously.
3. The researcher observed the class by sitting at the back.
4. The researcher observed the class until the end of the session (the observation was recorded).

In this first observation, many students were late coming to class. All male students filled the class. When the learning began, he explained the purpose of the learning activities. The topic of this meeting was about AC filters. So, he explained that the students needed to observe the workshop's AC filter and make a presentation report (02). The medium of instruction used in the classroom was a mix of Bahasa Indonesia and English. At some point, he spoke in English and then translated it into Bahasa Indonesia. Before the workshop, he tried explaining General English (GE) to students, including adjectives, nouns, and verbs to describe objects (1). After explaining the GE material, he tried to involve students by relating the material discussed in GE to the vocabulary of refrigeration and air conditioning. The teacher asked the students about AC filter details. However, many students were silence when they were asked by the teacher. There were only a few students that were connected to the content knowledge (01). So, he allowed students to use their gadgets to explore the topics related to the AC filter and its details or use Google Translate. Then, he asked students individually (not all) to give examples of AC filter features such as color, material, shape, function, etc. (04). When he asked the students to use full English, they showed confused responses. They did not answer it. When he returned to Bahasa Indonesia, they directly responded to his questions. It also happened when he asked the students to speak English. They found it difficult to do that.

However, the students, during the learning, tended not to focus on paying attention to learning. They joked and talked to their friend, played on their phone, and were sleepy. They also had less participation in the class. Then, the teacher asks them to make a group of two students. Before going to the workshop, they were asked to discuss the AC filter and its features with their pairs. In the process of

discussion, he lets them noisy. When discussing, they tended to use Balinese and Bahasa Indonesia. Then, the teacher gave them handouts as guidance for the task. This handout instruction was in Bahasa Indonesia (02). The step was continued to the workshop to observe the authentic objects (AC filter) provided there. In the workshop, the teacher invited a content teacher who worked there to explain RAC to the students. The students observed the object and paid attention to the explanation. However, because the display of the AC filter was only one, and many students wanted to see it simultaneously, many students could not see the object. Then, most of them ignored the observation step. After observation, the teacher asked students to discuss and prepare their presentation report in a place they thought comfortable. In the end, the teacher collected their presentation report.

OBSERVATION FIELD NOTE

Observation 2

Date : Monday, May 6th, 2024

The ESP teacher : WRIMJ

ESP Course/Class : TPTU C (Class 1)

Procedure :

1. The researcher asked the ESP teacher's permission to conduct an observation in his class.
2. The researcher and the ESP teacher came to the class simultaneously.
3. The researcher observed the class by sitting at the back.
4. The researcher observed the class until the end of the session (the observation was recorded).

In this second observation, there were still many students who came late. At 8.24, there were only 9 students in the class. When the teacher explained, they came to the class one by one. It disturbed the teacher's explanation. Moreover, many students still played on their phones when the teacher came to the class. This meeting focused on a presentation activity on the same topic (AC filter). The teacher initially refreshed students' knowledge from the previous meeting and connected it to this meeting activity. Then, the teacher gave back the students' presentation reports. The teacher asked students to prepare their presentation performance. He gave them 30-45 minutes to prepare it. In this step, he also explained the aspects of scoring and assessment. While students were preparing their presentations, he controlled and checked each group to see their progress. After 45 minutes, the teacher asked the students to present, but no one wanted to. They said they were not ready. So, the teacher gave them additional time to prepare their presentation. After the additional time was over, the presentation was started. However, they were not ready. There were only several groups that wanted to present. The presenters were located in separate places. Students presented their tasks, and the teacher listened to them. During the presentation, they looked nervous. They presented their tasks while looking up. It seemed they memorized the presentation report without understanding the content. Also, there were grammatical and pronunciation errors. After they finished, the teacher gave them feedback and scores.

OBSERVATION FIELD NOTE

Observation 3

Date : Monday, May 13th, 2024

The ESP teacher : WRIMJ

ESP Course/Class : TPTU C (Class 1)

Procedure :

1. The researcher asked the ESP teacher's permission to conduct an observation in his class.
2. The researcher and the ESP teacher came to the class simultaneously.
3. The researcher observed the class by sitting at the back.
4. The researcher observed the class until the end of the session (the observation was recorded).

This meeting was almost the same as the first observation. The learning activities were almost the same. The difference was in the complexity of the task. In this meeting, the teacher did not teach GE as much as in the first observation, but still make GE initial introduction (01). After conducting the initial introduction of the materials, the teacher gave the next handout to the students. Different from the first handout, this handout provided with mix language between Bahasa Indonesia and English (02). Then, in this meeting, students chose their own objects on AC, not limited by specific objects. From the description on the handout, the teacher invited students to discuss. They discussed the content knowledge, followed by linguistics (04). When the teacher asked them to answer the question using English, they answered it with stammering. After discussing this, they formed a group of two and continued to visit the RAC workshop. In the workshop, they observed and took photos of their chosen objects with guidance from the handout. In this meeting, there was also an improvement in the displays. There were more than three displays. After observing, the students discussed and prepared their presentation report in the place where they thought it was convenient. In the end, they submitted their tasks. Furthermore, it still happened regarding the students' misbehavior in the class. They were still late, talked and joked with friends during the learning, and played phones in non-studied situations.

OBSERVATION FIELD NOTE

Observation 1

Date : Tuesday, April 30th, 2024

The ESP teacher : WRIMJ

ESP Course/Class : TPTU A (Class 2)

Procedure :

1. The researcher asked the ESP teacher's permission to conduct an observation in his class.
2. The researcher and the ESP teacher came to the class simultaneously.
3. The researcher observed the class by sitting at the back.
4. The researcher observed the class until the end of the session (the observation was recorded).

In this observation, the class was conducted at noon. Most students came on time, just a few students came late. The conditions in this observation differed from those in class 1 in the previous observation. It was because the teacher handled 2 classes simultaneously. So, he took turns going into each class to teach. For example, after teaching class 2, he had to move to class 3 to explain. It made the teacher look busy and tired. It made the teacher not focus on teaching. When the teacher moved to class 3, the students in class 2 talked and made noise. Just a few of them study seriously. In this condition, the teacher adjusted the different procedures from class 1. First, he gave the handout (02). Then, in this meeting, he did not explain the GE comprehensively (01). He just explained a little and continued to explain the project stages.

The topic for this meeting was describing the AC filter. After explaining, the teacher moved to class 3. When he came back, he asked students to visit the workshop. In the workshop, class 2 and class 3 observed the object alternately. He explained the procedure in the workshop by demonstrating it in front of the object. He explained the object's color, location, function, etc. He used Bahasa Indonesia to explain. After observing the RAC workshop, the teacher asked the students to find comfortable places to discuss and prepare their presentation reports. In the end, the students submitted the task.

OBSERVATION FIELD NOTE

Observation 2

Date : Tuesday, May 7th, 2024

The ESP teacher : WRIMJ

ESP Course/Class : TPTU A (Class 2)

Procedure :

1. The researcher asked the ESP teacher's permission to conduct an observation in his class.
2. The researcher and the ESP teacher came to the class simultaneously.
3. The researcher observed the class by sitting at the back.
4. The researcher observed the class until the end of the session (the observation was recorded).

Most students also came on time for this meeting, but a few still came late. This meeting was a continuation of the previous meeting. So, the topic was still the same. This meeting was full of presentation activities. The teacher returned the students' report. Then, he explained the presentation procedure, such as the opening/ greeting, the content, and the closing. He also asked students to understand the content before they present it. He explained that the scoring was based on their report and performance in the presentation. He gave 30-45 minutes to prepare the presentation. When the time was over, he asked the students to present. Several groups wanted to present, but the majority of groups said that they were not ready. But the number of students presented in front of the class was more than in class 1. During the presentation, the teacher listened to them. Then, after they finished, the teacher gave feedback and explained it in front of the class. All students could listen and see the explanation. However, the presentation in class 2 was done in the same class. There was no quarantine. It was because there was no empty class available at the moment. When the teacher moved to the other class, the students did not focus on their responsibilities. They talked and played phones.

OBSERVATION FIELD NOTE

Observation 1

Date : Tuesday, April 30th, 2024

The ESP teacher : WRIMJ

ESP Course/Class : TPTU B (Class 3)

Procedure :

1. The researcher asked the ESP teacher's permission to conduct an observation in his class.
2. The researcher and the ESP teacher came to the class simultaneously.
3. The researcher observed the class by sitting at the back.
4. The researcher observed the class until the end of the session (the observation was recorded).

In this meeting, just a few students came late. The class was scheduled for noon. This meeting was ineffective because the teacher divided his focus to teach two classes simultaneously. He moved after explaining the material and returned to continue the learning. The teacher explained the material bravely and moved. He explained the procedure of conducting a mini-project describing the AC filter. After explaining, he asked the students to visit the RAC workshop to observe the real object. During the workshop, he explained the location of the objects being discussed, including color, location, function, how they work, and others. After observing, the teacher asked the students to discuss and prepare their presentation reports in convenient places. In the end, the students submitted their tasks collectively.

OBSERVATION FIELD NOTE

Observation 2

Date : Tuesday, May 7th, 2024

The ESP teacher : WRIMJ

ESP Course/Class : TPTU B (Class 3)

Procedure :

1. The researcher asked the ESP teacher's permission to conduct an observation in his class.
2. The researcher and the ESP teacher came to the class simultaneously.
3. The researcher observed the class by sitting at the back.
4. The researcher observed the class until the end of the session (the observation was recorded).

All the students came on time to this meeting. This meeting focused on presentation activity. The teacher explained the presentation preparation, including opening, description, and closing. He also asked students to understand their description task before presenting it. After explaining, the teacher gave them 30-45 minutes to prepare their presentation. Then, the teacher left the room and went to the other room. When the teacher leaves the room, the students are noisy. When the teacher said that not all students could be present in this meeting, it made students focus more on paying attention and being serious in preparing their presentations. When the time was over, several groups wanted to present. The presentation was conducted in their class. It was not conducted in an isolated place. So, there was no quarantine technique because no empty classes were available. After presenting, the teacher gave feedback on both the linguistics aspect (grammar and pronunciation) and the details of the presentation content.

OBSERVATION FIELD NOTE

Observation 3

Date : Tuesday, May 14th, 2024

The ESP teacher : WRIMJ

ESP Course/Class : TPTU A (Class 2) and TPTU B (Class 3)

Procedure :

1. The researcher asked the ESP teacher's permission to conduct an observation in his class.
2. The researcher and the ESP teacher came to the class simultaneously.
3. The researcher observed the class by sitting at the back.
4. The researcher observed the class until the end of the session (the observation was recorded).

In the third observation, class 2 and Class 3 were combined. There was no classroom activities in this meeting. The teacher asked the students to visit RAC workshop. He gathered the students and gave the direction to conduct the mini-project. The teacher asked the students to observed any AC objects. But before they observed, the teacher split Students could choose an object on AC that they want to observe and present. The teacher asks students to observe in turns by dividing all students into 2 parts. After observing, the teacher asked students to prepare their presentation reports in the comfortable places for them. In the end, the students submitted the presentation report.

Appendix 3

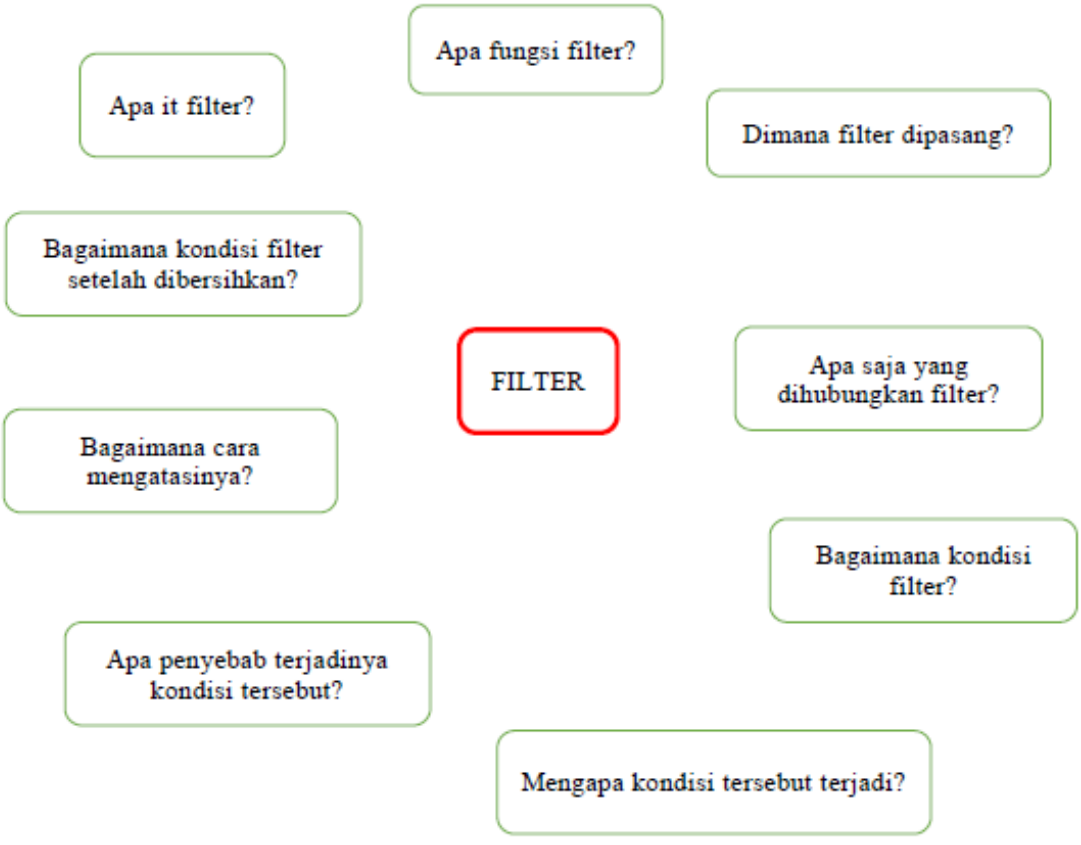
DOCUMENTATION (ESP HANDOUT 1)

Project Design "Describing a Part of AC"

1. Terjemahkan dan pahami pertanyaan-pertanyaan berikut ini!

Apa itu filter?
Apa fungsi filter?
Dimana filter dipasang?
Apa yang dihubungkan filter?
Bagaimana kondisi filter?
Mengapa kondisi filter seperti itu?
Apa penyebab kondisi tersebut?
Bagaimana cara mengatasinya?
Bagaimana kondisi filter setelah dibersihkan?

2. Lihat dan jawablah petanyaan-pertanyaan tentang filter berikut.



3. Terjemahkan kalimat-kalimat berikut kemudian lengkapi dengan jawabannya.

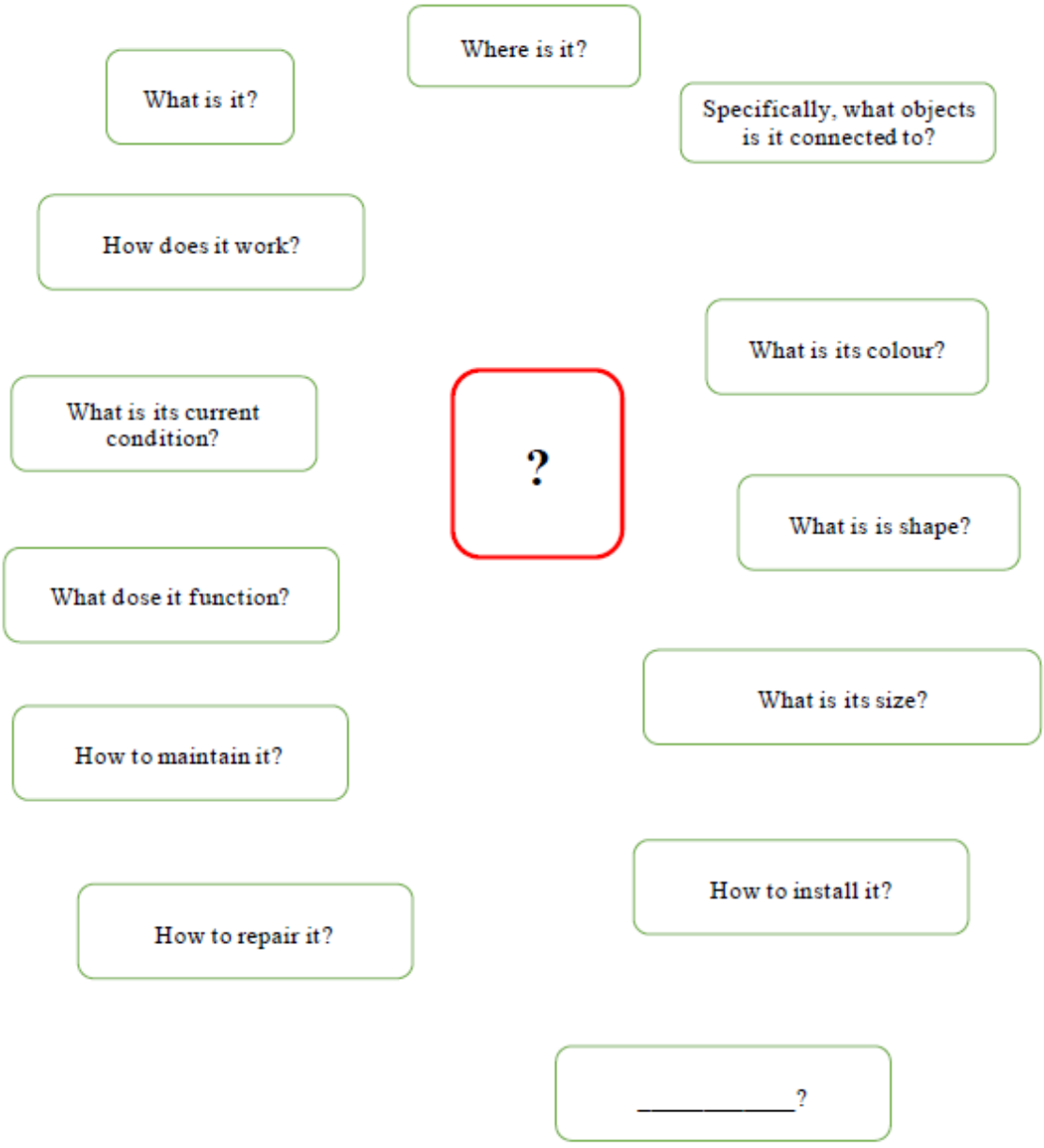
1. Filter merupakan _____
2. Filter berfungsi untuk _____
3. Filter menghubungkan _____dan _____
4. Filter dipasnag pada _____
5. Filter ini _____(kondisi)
6. Filter ini mungkin_____
7. Filter ini kotor disebabkan oleh _____
8. Filter ini dapat di _____
9. Filter ini harus di_____
10. Filter ini akan _____setelah di_____

4. Jelaskan filter tersebut dalam bahasa Inggris dalam satu paragraf mengguakan informasi di atas.

DOCUMENTATION (ESP HANDOUT 2)

Project Design : **Describing a Part of AC 1**
Topic : **Choose one of the object at workshop**
Group : **1 group of 2 students**

1. Lihat dan jawablah petanyaan-pertanyaan tentang filter berikut.



2 Jelaskan filter tersebut dalam bahasa Inggris dalam satu paragraf mengguakan informasi di atas.

DOCUMENTATION (SAMPLE OF ESP BOOK)

Bab 1

Describing Places 1

Kompetensi Dasar
1. Menjelaskan keadaaan suatu tempat secara umum
2. Mengidetifikasi bagian-bagian tempat
3. Menjelaskan keadaan setiap bagian-bagian tempat secara khusus
4. Menggambarkan benda-benda dengan menggunakan To Be, Adjektiva dan Adverbia dengan tepat

Indikator
Mahasiswa mampu:
1. Menjelaskan keadaan suatu temat secara umum
2. Menyebutkan bagian-bagianatau benda-benda di suatu tempat
3. Menjelaskan setiap bagian-bagian atau benda-benda di suatu tempat secara spesifik
4. Menggambarkan keadaan, benda-benda di suatu tempat dengan menggunakan To Be, Adjektiva dan Adverbia dengan tepat

I. Rencana Belajar Mahasiswa

No	Jenis Kegiatan	Tanggal	Waktu	Tempat Belajar	Paraf
1	Mentioning parts of things			Outside class room	
2	Mentioning parts of thing more detailed			At workshop	
3	Explaining some expressions used for describing things			In classroom	
4	Making narration or description			In class room	
5	Presentation and assessment			In classroom	
6	Explaining some more detail expression (using verbs), practicing			In classroom	
7	Observing a place outside class and describe function of devices			Outside classroom	

II. Kegiatan Belajar

Kegiatan Belajar 1: Describing a Place in General

1.1 PENDAHULUAN:

Description is drawing or informing things. It can include information we normally see. **Describing a place** for instance, may include any information related to the place, such as *name of things, colours, shapes, functions of each thing, specific parts, activities related to the things, position, number of things,* and other related information.

Describing requires you to use special tense i.e. **Present Tense** (although other tenses may be conditionally accepted) as the things being described are constant or exist all the time. The task will

1.3 RANGKUMAN

In this case, there are some expressions used to make a description about a thing or some things. The expressions use the word class of Noun (N), Adjective (Adj.), and Adverb (Adv). Each word has its own sentence structure as follows:

a. There is a…. / There are some … (ada beberapa)
There is - N (Noun)
There are – Ns (Nouns)
There are some Ns

b. The N is / The Ns are….
The N is – colour
The N is – shape
The N is – Size

c. The N is – Location (berada di…)
The N is near…
The N is next to…
The N is beside…
The Ns are above….
The Ns are behind ……

d. The N is ….Adjective (colour, size, shape)
There The N is …..
The N is…….
The Ns are…….
The Ns are…….

1.4 TUGAS

Indicate in which groups the words below belong to. Take note and make some written expressions using the incomplete sentences.

Tree, stone, way, water, view, on, big, high, near, at, around, air, weather, temperature, beautiful, great, green, bright, fantastic, expensive, villas, fresh, roads, tourists, tall, small, houses, cars in the parking.

Describing Places 2

Kompetensi Dasar
1. Menyebutkan bagian-bagian benda
2. Menjelaskan keadaaan-keadaanatau karakteristik benda
3. Menjelaskan fungsi-fungsi suatu benda dengan berbagai macam pola kalimat
4. Menjelaskan bahan-bahan suatu alat

Indikator
Mahasiswa mampu:
1. Menyebutkan bagian-bagian benda di suatu tempat
2. Menjelaskan keadaan suatu benda secara umum
3. Menjelaskan karakteristik suatu benda secara lebih spesifik
4. Menjelaskan fungsi-fungsi suatu benda dengan lebih dari satu pola kalimat
5. Menjelaskan bahan-bahan suatu alat

I. Rencana Belajar Mahasiswa

No	Jenis Kegiatan	Tanggal	Waktu	Tempat Belajar	Paraf
1	Mentioning parts of a device			Outside class room	
2	Explaining characteristic of each thing			Outside class room	
3	Menjelaskan fungsi-fungsi alat			In classroom	
4	Menjelaskan bahan-bahan alat			In class room	
5	Mendemonstrasikan			In class room	

II. Kegiatan Belajar

Kegiatan Belajar: Describing things in a place

2.1 PENDAHULUAN

Things in a place are an aspect to describe when we tend to describe a place. There will be many things we can see when are to explain a place. Describing a thing can be done by explaining it from some dimension, such as its SHAPE, COLOUR, SIZE, MATERIAL, as well as its FUNCTION. We will be dealing with *Simple Present Tense* when we tend to describe IT. However, other tenses or sentence structures may also be needed to do so.