The Ups and Downs of Learning and Using English: Aviation Students' Voices

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ABSTRACT

Proficiency in English has become the standard language in the international aviation industry. To avoid accidents, all aviation personnel needs to communicate in English. The communication skills of aviation personnel should be developed during their studies. Therefore, this study aimed to investigate aviation students' successes and challenges in learning and using English. Six aircraft maintenance students from three different aviation schools in Malaysia participated in the study. Using a qualitative research design, the study collected information from open-ended interviews and document analysis gathered from online postings. The data were analyzed thematically and managed using ATLAS. ti software. Overall, the results showed that students experienced more successes than challenges in learning English. There were three themes categorized under successes and challenges: opportunities, feelings, and progress. The results could help course module developers and language teachers create modules that meet the needs of aviation students.

Introduction

Effective communication is critical in aviation to ensure timely flight operations and safe takeoff and landing (Torquato, 2004). This includes the aircraft maintenance field, which requires effective English communication to ensure no accidents occur (White, 2018). Miscommunication or misunderstanding in communication can result in the loss of life. Many aviation maintenance tasks frequently include substantial use of English, and maintenance personnel must be fluent in English to ensure that the tasks are completed accurately and smoothly (Shukri et al., 2021). As a result, aviation personnel's communication abilities should be cultivated and formed from the start of their undergraduate studies.

According to Dalkilic (2017), as reported by Shukri et al. (2021), the average percentage of aircraft incidents related to maintenance issues was around 10% between 2009 and 2013. Even

though the percentage of commercial aviation events caused by maintenance problems is very modest, accidents are frequently fatal (Cacciabue et al., 2003). This explains why maintenance operations are critical to an aircraft's continued safety and economic costs. Human factors and human error have a substantial relationship. Maintenance errors can be caused by a variety of circumstances, including poor communication and misunderstandings (Padil et al., 2018; Shukri et al., 2021).

The nature of language and the way a person interprets it can lead to misunderstandings; even an aircraft maintenance engineer can write a report and speak English well. Aircraft maintenance engineers should constantly avoid language misunderstandings when writing a field report, communicating, or responding to critical communication. Therefore, building communication skills in English must begin at the undergraduate level.

The primary goal of teaching English in Malaysian higher education institutions is to prepare students for workplace communication. However, it is considered troublesome when graduates are unable to find work because they cannot communicate effectively in English. Despite improvements in the education system, industries continue to express their dissatisfaction (Ismail, 2012). According to the National Economy Action Board (MTEN), one of the criteria that industries highlighted as a problem among fresh graduates is a lack of communication skills, particularly in English. This is supported by some previous studies that have been conducted in the past that future graduates are still unable to communicate effectively because they lack confidence and have a poor command of the English language. (Devira, 2017; Ramakrishnan & Yasin, 2012; Ting et al., 2017). Engineering students must be fluent in written and spoken English, or they may struggle to grasp what others are saying. Hence, the development of communication skills in English must begin at the beginning of their studies. It is crucial to determine what students currently know and practice and what they still need to learn in order to have strong communication skills. Therefore, this study examined students' experiences learning English while studying aircraft maintenance in order to prepare them better for the next phase of their careers.

Literature review

As a worldwide industry, aviation uses a variety of languages. On the other hand, the International Civil Aviation Organization (ICAO) has designated English as the official language of aviation. Aviation English differs from general English. Aviation English is a subset of English for Specific Purposes (ESP), along with English for Specific and Technology (EST), English for Business and Economy (EBE), and English for Social Science (ESS) in Hutchinson and Waters' tree (Lin et al., 2014).

Learning ESP, including Aviation English, usually presents greater difficulties than learning general English. To build a combination of vocational skills and specific job-related tasks, greater emphasis is placed on learner requirements and the language used in the environment. ESP is a language teaching method that works directly with curriculum, methods, and activities (Hutchinson, 1987). It is designed to meet the specific needs of learners related in content to particular disciplines, occupations, and activities. In the ESP model, the three (3) components

of necessities, lacks, and wants were emphasized (Hutchinson, 1987). Hutchinson and Waters claim that the "necessities" refer to the types of needs defined by the requirements of the target situations, such as in this case, what students need to know in the target environment. Meanwhile, "lacks" refers to the discrepancies between what students know and the necessities they lack. Finally, the term "wants" refers to the types of needs that students want to learn. The results of these needs can be used to guide classroom resources and activities and raise the standard of ESP learning and teaching.

The English used in the aviation sector is specific to work performed in each division. Aircraft maintenance is one of the aviation industry's divisions. The English requirements for aircraft maintenance differ from those for pilots, Air Traffic Controllers (ATC), and flight attendants and are regulated by the task performed. The primary responsibility of aviation maintenance is to assure the continued airworthiness of an aircraft or aircraft parts. These responsibilities should serve as the beginning point for aviation schools' teaching and learning processes. Therefore, the students are aware of their area of expertise and are capable of carrying out their responsibilities once they graduate. However, training future aviation professionals focuses on developing technical knowledge while paying less attention to communication ability and soft skills (Vieira & Santos, 2010). Ineffective communication may increase the probability of a human error occurring.

Wu et al. (2019) noted that the use of official language in such a large industry as aviation could help avoid misunderstanding and misinterpretation. However, since the majority of aviation groups consist of non-native speakers who use English as a second or foreign language, misunderstandings may still occur. Although English proficiency is obviously a necessary skill, the language abilities of non-native speakers vary significantly (Barbieri, 2014; Fleckenstein et al., 2016). As a result, misunderstandings may occur, jeopardizing airline safety (Tetiana, 2015).

A thorough study of students' experiences in studying English is crucial because English is the only subject that involves communication skills. Therefore, it is critical to understand what students are saying as they learn and develop their communication skills. As mentioned in the previous sections, the development of communication skills in English must start at the beginning of the study.

Based on the previous study, the students complained about the teacher's readiness to use the general English syllabus, which did not fulfill their needs (Daulay & Prabowo, 2015). Rasyimah et al. (2017) stated that challenges are unavoidable when teachers develop an ESP course. According to the findings of the study, English teachers do not completely execute the ESP course in the English classroom because they employ a course that combines general English with limited ESP content. One of the issues raised in the earlier study was that English teachers lacked language fluency and expertise (Rasyimah et al., 2017). In addition, the students' motivation to use English in communication also is another obstacle in the previous study (Daulay & Prabowo, 2015). Meanwhile, according to a study conducted by Karimi and Sanavi (2014), students admitted that they have a high need for English language skills for their future careers in aviation, but the existing course falls short of their expectations. When it comes to skills, more emphasis should be placed on practicing the skills. The content of the books as well as the activities in class, should be carefully tailored to the essential needs of the students.

However, the two studies were conducted in different settings, Indonesia and Iran. Moreover, the studies focused only on the challenges students faced and did not offer an explanation for students' success in learning English as an overall experience.

According to Rahmah et al., (2011), as referenced by Sanmugam & Kadir (2019), one of the variables that contribute to the unemployment problem among Malaysian graduates is the quality of graduates. It could be related to a lack of communication skills and a lack of linguistic ability. In the Malaysian context, graduates who are unable to seek employment due to a lack of effective English communication abilities are regarded as troublesome (Sanmugam & Kadir, 2019). Aircraft maintenance students still lack specific oral and written communication abilities and oral presentation skills (Sanmugam & Kadir, 2019). These findings seem to align with recent studies that indicate that a lack of communication skills and a lack of understanding when using technical documents are the two challenges students face during their industrial education in Malaysia (Sasila & Mahmood, 2017). However, the aforementioned previous studies referred to aircraft maintenance students doing their industrial internship and not to students' experiences in learning and using English as a whole.

In addition, unfamiliarity with accents and jargon, confusion in using grammar, and pronunciation difficulties are some of the obstacles faced by new employees in applying English communication skills in the workplace (Tengku Abdul Jalal, 2016). However, this study did not focus on aircraft maintenance students from different industries; the participants were those who had graduated. The study might have been more convincing if the author had considered the qualitative approach to explore the listed obstacles more.

There is extant literature in ESP research that highlights many issues such as ESP teachers' needs (Basturkmen, 2019), teachers' responsibilities (Ghafournia & Sabet, 2014), students' need analysis (Daulay &Prabowo, 2015; Embryany &Ratmanida, 2019), or particular linguistic elements of Aviation English such as rhythm and intonation (Aiguo, 2007; Trippe & Baese-Berk, 2019). Despite the essential contributions of multiple academics, there is currently a scarcity of studies on aviation students' experiences learning and using English, particularly aircraft maintenance students.

Therefore, this paper examined the experiences of aviation maintenance students in learning and using English, focusing on both the successes and challenges. The purpose of this study is as follows.

Research Questions

To fulfill the purpose of the study, the interview and document analysis conducted was seeking to answer the following research questions:

What are the successes and challenges of aircraft maintenance students in learning and using English in aviation schools in Malaysia?

Methods

Pedagogical Setting & Participants

To fully represent the current phenomenon, this study uses a qualitative technique and a small number of participants (Bloomberg & Volpe 2008; Creswell 2012). Qualitative research approaches often aim for a thorough understanding of the phenomenon or emphasis on meaning (and heterogeneity of meaning) - typically the how and why of a particular problem, process, method and cause, environment, subculture, setting, or group of social interactions (Dworkin, 2012). Although generalizability was not the study's intended goal, the transferability issue was critical.

Six (6) aircraft maintenance students were chosen using purposive sampling for this study. They were all studying aircraft maintenance and finishing their English courses at three different Malaysian aviation colleges. The names of the institutions were kept confidential. The majority of them were between the ages of 21 and 22. Institutional A gave participants pseudonyms such as Naz and Qobi to protect their identities. A pseudonym is a fictional identity that the researcher or writer frequently uses to protect the participants' confidentiality (Allen & Wiles, 2015). They were both in semester 5; Naz was an engaged student with a position in a Student Representative Community (SRC), while his friend, Qobi, was an active student in basketball. Meanwhile, Haziq and Syafiq were from Institution B, a Sepang-based aviation school. Haziq was a student with violin talent, and Syafiq was the SRC. Meanwhile, Amirul and Luqman were from Institution C, which was the only institution in this study that offered general English courses, whereas Institutions A and B provided students with Aviation English courses. The participants were all male students.

Design of the Study

This study used the semi-structured interview, which is commonly used in qualitative research. It is one of the most prevalent qualitative data sources to gather information on students' successes and challenges in learning and using English as aircraft maintenance students. It provides a good narrative of major events as well as participant perspectives. Furthermore, the document analysis was made up of the participants' online postings on Google forms as their reflections on their learning and usage of English. The data from the students' semi-structured interviews were triangulated with the information from the online postings.

Data collection & analysis

As part of the data collection process, all participants were interviewed one-on-one. Each interview lasted around 40-60 minutes, and questions were asked about the participants' successes and challenges in learning and using English as aircraft maintenance students. Then, they were asked to reflect on their thoughts regarding their successes and challenges in learning English through the online posting that they shared that semester.

After the interview was conducted, it was transcribed verbatim and then sent to the participants to allow them to edit, refine, add to, or revise the interview as needed. Data analysis was conducted using the six-step thematic analysis (Braun & Clarke, 2006), and ATLAS.ti was used to support data management and presentation.

Results/Findings

The qualitative research results revealed several successes and challenges that were categorized into three main themes: Opportunities, Feelings, and Progress. Success can be defined as the achievement of all desirable outcomes that participants desired or hoped for. This study has three (3) sub-themes of success: seizing opportunities to practice English and master tasks, positive feelings, and making good progress in using and learning English. Conversely, a challenge is a new or difficult activity that tests participants' skills and knowledge. These include missed opportunities to practice English, negative feelings, and slow progress for specific reasons. Figure 1 shows the three sub-themes for each success and challenge used as keywords in the study question.

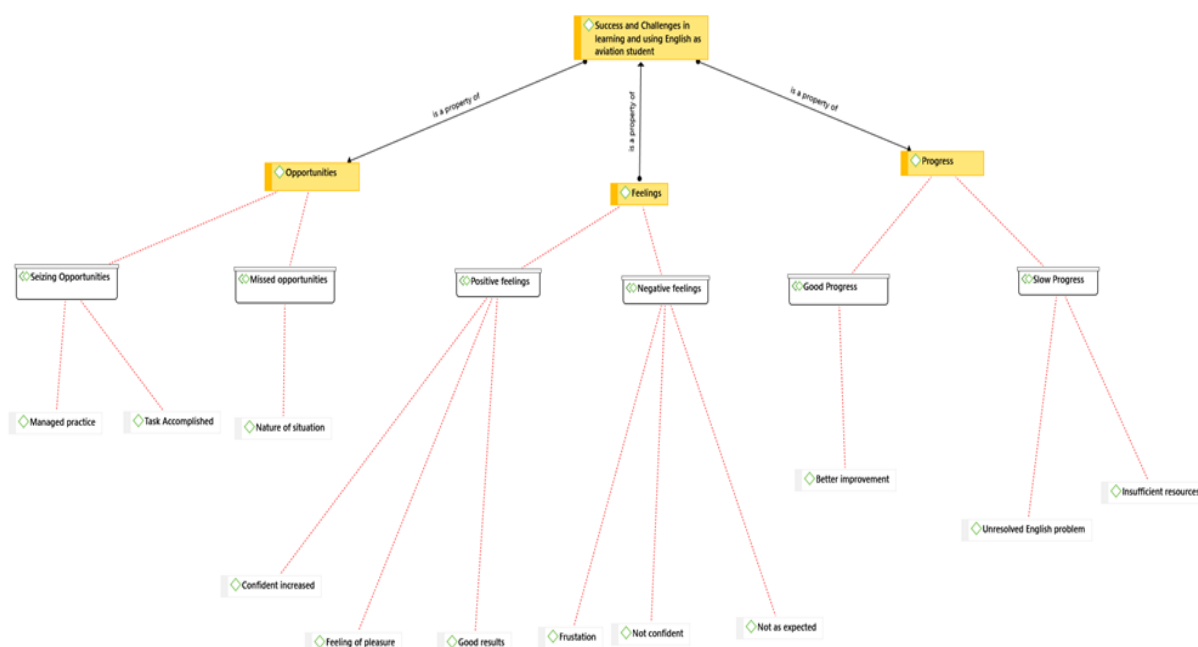**Figure 1**. A Network View of the Findings

Figure 1 shows a network view generated by ATLAS. There were three sub-themes for successes and three sub-themes for challenges in learning and using English. The details of the sub-themes are seen below. The themes are supported by excerpts taken from the data. They show that the excerpts are from Naz (pseudonym), which are from the interview (int) or online posting(op). The source of the data is indicated; for example, by (Naz_int) or (Naz_op).

Students' successes in learning and using English

As previously stated, three sub-themes of students' successes in learning and using English are seizing opportunities, positive feelings, and good progress. Seizing opportunities refer to the actions in practicing using English, task accomplishment, and the second sub-theme, positive feelings, whereas pleasant feelings refer to feelings of confidence, pleasure, and obtaining good

results. Finally, good progress refers to the students making good progress in learning and using English. The details of the successes are below.

Success-seizing opportunities

Participants were able to practice using English and complete assignments linked to academic and co-curricular activities. Participants in this study said that they took advantage of opportunities to practice using English in the classroom with their friends, whether local or international students. They also reported being able to practice speaking English outside of the classroom. Naz, one of the participants, noted that he tried to speak English with his Chinese and Indian friends and practiced speaking English when he went shopping at the mall. He said,

> *I tried to speak English with my friends, especially Chinese and Indian. Even though I will use English when I buy stuff at any store with them.* (Naz_int).

Moreover, the participants were able to use the opportunities they had to find answers that required them to use English, such as directly asking the teachers, using technology to find out the words they didn't understand, such as Google, and writing emails in English. Furthermore, the participants felt successful when they were able to take opportunities to complete co-curricular activities. One of the participants mentioned that he became an event moderator at his university and he moderated the event entirely in English. He said,

> *Last year, I became a host for a program from 12 campuses, which is University Foreign Language Festival 2021." I was hired as a host, and that program had plenty of openings. Slots with Russian lecturers, Dr. K's slot, the Pre-Russian Program, the Closing Ceremony, and the Opening Ceremony This one is entirely in English.* (Naz_int)

In summary, they took the opportunity to speak English with friends, international students, and teachers. They also tried to improve their English skills by watching English movies, using English translation techniques, listening to English songs, participating in and moderating English events, writing emails in English, asking teachers to review their assignments, and many others.

Success-positive feeling

The participants in this study had a positive feeling when they indicated that they felt confident speaking English, even when they made mistakes. One of the participants stated that he just kept speaking in English even when he made mistakes because he believed that the exercise would help him improve his English skills. He mentioned,

> *When I became the host for any program, during an event, I used the wrong vocab and inappropriate terms, but I will just be confident and proceed with the event. Some people might downgrade this person, no need to use English; you were talking nonsense. Some of them will appreciate whatever you did. It is okay. At least you use English."* (Naz_int)

In addition, they expressed their delight with using and studying English by using terms like "fun," "enjoy," "easy," and "happy" in the interview. One of the participants said that he liked the English classes because the other technical subject already gave him a lot of work. He wrote in his self-reflection.

> *Yes. I enjoyed. Because it is a subject for me to release tension since the other technical subject is already heavy and burdens me. So, I expect something relaxing.* (Syafiq_op)

Furthermore, they also reported feeling happy about their success in English class, as seen by their high grades and achievements.

To sum up, they experienced positive feelings when they felt confident and pleasant and obtained good results.

Success-good progress

Many participants stated that learning and using English as an aviation student progressed well. One of the participants claimed that he could tell that his English skills had improved. He described,

> *To be honest, yes, enjoy. Enjoy the process. Day after day, I can see some differences and improvements. I can see my development since I was small, during school until now. But I am not 100% fluent, but I can see the improvement.* (Luqman_int)

Overall, the participants had made progress in their study of the English language as aviation students. They had passed the prior English subject as a prerequisite for passing the present English course.

Students' challenges in learning and using English

As indicated earlier, there are three sub-themes for students' learning and using English challenges. These include missed opportunities due to the nature of the circumstances that did not require them to speak English and inadequate use of English in their daily communication. Negative feelings such as frustration towards others, lack of self-confidence, and not meeting expectations were other challenges experienced by the students. Finally, slow progress is due to an unresolved English problem, the nature of learning ESP, and a lack of resources.

Challenge- Missing opportunities

On the other hand, the participants believed they faced difficulties when they missed opportunities to practice using English. Due to the nature of the settings that they were in, they acknowledged that they missed the possibility of speaking English. One of the participants said that he communicates with his family and Malay friends in his mother tongue, which is the Malay language. In the meantime, he converses with his friends and technical instructors in both English and Malay. He explained that,

> *BM at home, with a Kelantan accent. Chinese and Indian, English Malay friends, some of whom use English. Lecturer, sometimes I use English, and sometimes they ask a question in English, so I will answer in English.* (Naz_int)

He also mentioned that his technical instructors used both languages to ensure that all of the students understood what he was saying, particularly the meaning of specific phrases. He added in his self-reflection,

> *Most of my lecturers use a mix of English and Malay because when the lecturers teach the students, some do not understand the terms in English. So, some lecturers will speak*

both Bahasa and English to ensure the students understand the term. (Naz_op)

To summarise, the participants were confronted with an environment that did not emphasize the use of English, and they opted to utilize their mother tongue as a preferred language to assure communication comprehension.

Challenge- Negative feelings

Participants reported a range of feelings due to factors such as frustration with others, lack of confidence in their skills and knowledge, and unmet expectations. First of all, Qobi felt uncomfortable with the attitude of the people he was dealing with, especially his classmates. He said,

> *They teased me and said that I spoke with a certain English accent. No. It is not because of the accent, it is because unable to pronounce the R letter.* (Qobi_int)

In addition, participants indicated that they were dissatisfied with the content of the English subject as it did not meet their expectations. Luqman expressed his dissatisfaction by saying that the English subjects offered at his aviation school are the same as the general English subjects he learned before. He said,

> *English 2 and 3 do not really meet my needs as I required. There are several things that I have to achieve because I want to go into the aviation industry. English in aviation is not the same as the English that we use in our daily life. So, the English that I learned is like daily life communication, not specific to aviation. Like the terms used.* (Luqman_int).

Additionally, the participants indicated anxiety about their ability to complete specific activities provided by their English teacher. Qobi also described his experience of feeling unconfident about completing the online assignment and mock interview assigned by his English teacher. He mentioned,

> We completed an online activity and an interview session for the intermediate subject. I felt a bit stressed at the moment because I was afraid I couldn't provide the right answers. (Qobi_int)

In addition, Syafiq confessed in his self-reflection that he was not confident in his English speaking and was dissatisfied with his performance in the presentation. He wrote,

> *Yes, I had been in that situation because I have lack of confidence in speaking English. It is because my speaking is not fluent, and I cannot present the presentation as expected.* (Syafiq_opt)

In summary, when participants were frustrated, they had very negative feelings. Their frustration stemmed not only from their interactions with classmates but also from their disappointment in themselves when they did not achieve the desired level and from their nervousness when completing English assignments.

Challenge- Slow progress

Although good progress, such as improvement, has been described previously, participants have also acknowledged that they have encountered slow progress. They saw it as a challenge when they didn't show much progress because they still had issues with specific areas of the language. According to Luqman, the most challenging aspect of learning and using English is writing due

to grammar difficulty. He said,

> *Writing is the most difficult for me because my grammar is not good, and sometimes, I get confused about my writing. I understand what I am going to write, but when I try to reread it, I don't get it.* (Luqman_int)

In addition, the participants pointed out that one of the reasons for the slow progress was a lack of resources. Luqman noted that no single textbook could be used as a reference for them. He said,

> *We have to find the right terms to construct the sentence to describe something. But there is no specific textbook. Just a softcopy of a few pages, just like the slides used in the class.* (Luqman_int)

In addition, Syafiq further stated that he found it difficult to revise because no textbook was presented in their English session. They relied on the notes provided by their English teachers

> *I think is a bit difficult because hard for us to have revision for the following week's class."* (Syafiq_int)

In summary, the participants experienced slow progress when they felt that they did not advance much in their English language learning. This might also be due to the nature of the English language itself.

Discussion

As mentioned earlier, participants encountered both successes and challenges in learning and using English. They felt successful when they took opportunities to practice English and complete tasks had positive feelings and believed they were making progress. On the other hand, it became a challenge for them when they missed opportunities to use English, had negative feelings, and felt they were too slow in learning and using English. Specifically, the data extracts show that the participants were able to speak English with foreigners, shop at the mall, do an English program, and attend English events. All of this is possible because English is a second language for many Malaysians and is not a foreign language to them. In contrast, some of their difficulties could be attributed to Malaysians' inability to interact effectively in English, as indicated under the sub-themes of missed opportunities and negative feelings.

In terms of the success of students learning and using English, the participants were aware of the significance of English in their preparation to be future aviation professionals. The findings are consistent with a previous study conducted by Daulay and Prabowo (2015), who indicated that students realized that English is important for their future; thus, they need to learn English more and acquire good grades. It is reasonable to conclude that the participants were motivated to practice English, completed tasks, made good progress, and had a positive feeling toward learning and using English. Motivational variables and experiences have the potential to alter students' attitudes and anxiety levels toward English language acquisition (Shams, 2008). As a result, students must increase their motivation to improve their English.

Meanwhile, research findings from this study also revealed several challenges that were

categorized under three sub-themes: missing opportunities, negative feelings, and slow progress. As discussed in other research studies (Arnaiz & Guillén, 2013, 2012; Liu, 2006), the findings can be connected to anxiety in learning English. A large majority of ESP students appear to suffer average-to-high levels of anxiety in the English language classroom (Pizzaro, 2018). This research implies that anxiety may hurt English language development. Among the several types of performance anxiety, communication apprehension appears to be the largest source of students' anxiety, particularly speaking anxiety. As a result, participants admit to feeling confused, uncomfortable, and self-conscious when using English in and out of the classroom. All this is related to the student's linguistic competence and skills. They need to master a large vocabulary and understand the basics of grammar, and good pronunciation is also required for confident speaking (Vo, 2022).

Besides that, the participants also admitted that they encountered insufficient textbooks as references, which influenced their progress in learning English. The lack of resources, textbooks, and materials for teaching ESP, including Aviation English, is still a matter of contention. It can be related to a study conducted on teachers' challenges in developing content-based materials for ESP students (Meristo & Aria, 2020; Syamsinar & Jabu, 2015).

In this study, the participants experienced more successes than challenges in practicing and using English as aircraft maintenance students. Some of them agreed that the curricula taught at their aviation school used the Aviation English curriculum. These findings are in line with Rahmat and Al As'ary (2017), who believe that aviation employees, regardless of their role, should be trained to communicate effectively using the language of aviation.

The participants need to understand that learning English is usually a lifelong effort to succeed as a future aviation professional. It is an "ongoing, voluntary, and self-motivated" pursuit of learning for personal and professional improvement.

Conclusion

The study helped identify aviation maintenance students' successes and challenges in using and learning aviation English. By identifying the types of successes and challenges faced by students, it can help stakeholders, especially teachers and curriculum developers, improve English courses in the institution in the future. They can think deeply about which parts should be retained and which parts should be improved or removed. Language training modules that enable aircraft maintenance students to obtain functional skills will assist them in meeting occupational requirements.

Despite the limited sample size of participants, many case studies allowed for a detailed description and hearing from individuals. Multiple case studies can be used to predict the comparative outcomes of the expected reasons or comparable outcomes given in this study (Yin, 2003). This method allows the research to show whether the results are valuable or not (Eisenhardt, 1991). Evidence from multiple case studies is considered meaningful and credible, which is an all-encompassing reality (Baxter & Jack, 2008).

According to Vo (2022), education is a collaborative activity, and teamwork is necessary for us

to learn. To meet industry expectations, all stakeholders, including teachers, technical educators, legislators, higher education institutions, and industry participants, need to exchange ideas, take appropriate action, and share best practices.

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