

Teaching English through a bilingual learning ecosystem in the secondary vocational school of industrial technology

Nur Rahmiani¹, Marwandi²

Institute Agama Islam Negeri Pontianak¹
SMK SMTI Pontianak²

¹email: nur.rahmiani15@gmail.com

²email: marwandi@gmail.com

Abstract – This research aims to examine the issue of bilingual learning ecosystems (BLE) in industry-based technology vocational schools. This study is interesting because it becomes an academic effort in overcoming learning difficulties in vocational school students, primarily in setting English learning time and mastering the particular skills of global competitive industrial technology. Using descriptive qualitative research that includes a series of observational data collection, interviews, and documentation, the authors discover the concept of BLE based on school perspective and BLE implementation in the learning process. This study concludes that BLE can be prepared in English and non-English courses by involving school biotic and abiotic elements through collaborative teaching. BLE also supports scientific integration in vocation learning at the secondary level, which has implications for increasing study hours and increasing enrichment of English material that is specific to industry technology vocation students outside of hours that have been scheduled. It is believed that BLE can support the achievement of enhancing English skills with specific goals as well.

Keywords: bilingual learning, EFL, ESP, learning ecosystem, secondary vocational school

1. Introduction

The challenges of the current industrial revolution have changed the world of education towards a 5.0 society that emphasizes specific skills. These skills are creativity, critical thinking, communication, and collaboration. These skills need to be developed optimally, which will create a vigorous and ready-to-work personality in all job sectors (Direktorat Sekolah Dasar, 2021). All sectors, both government and private, need young generations who are able to adapt to all conditions, including the Covid-19 pandemic that has hit many countries in the last two years.

Although many people are not free to converse like before the pandemic, communication and collaboration can continue to be established through various applications using an internet connection. There are no more boundaries between one continent to another, one country to another, one city to another, making communication and collaboration skills foremost for the workforce to master. In this issue, we specialize in English language skills for students; thus, they are ready to compete in a globalize and under any condition. Many facts show that by mastering English, a person will have a significant added value in getting a job and promotion (Abdul Kadir & Wan Mohd Noor, 2015; Damayanti, 2019; Handayani, 2016; Park, 2011).

We strongly believe that English is an international language because it can easily be found in all corners of the world. Both formal situations such as in international activities that use the official language of instruction, as well as informally; news, advertisements, films, writings on food and beverages, and announcements in public places (Cheng, 2012). Statistical figures show that English is the most commonly used language on the internet based on January 2020 data (Johnson, 2022). We believe that English is a world language used by the international community in several fields, including in the world of work. The involvement of every sector of the business world economy internationally for entrepreneurs with local and international business scales is a demand today. Thus, the stipulation to communicate in English has always been a mandatory requirement for everyone who wants a better job. Due to its strength in today's world of work, it is clear that English is the world's language (Fang, 2017b, 2017a; Millot, 2017).

Capturing these challenges and opportunities, Indonesia, with a population of productive age in 2020, 70.72% or up 4.63% from 2010 (Jayani, 2021), has prepared various policies that support increasing the competitiveness of human resources. One of them is that the President issued his instructions as contained in the Presidential Instruction Number 9 of 2016 concerning the revitalization of Secondary Vocational Schools (Presiden RI, 2016). The Indonesian government is aware that the role of this education is significant for the success of national economic development, especially in the absorption of the workforce by industry and the emphasis on the number of unemployed in Indonesia. *Sekolah Menengah Kejuruan* (SMK) is formal educational institutions with the primary task and function of preparing competent human resources that link and match industry needs. Its graduates are also expected to be globally competitive by having English language skills. Those who master English are expected to be able to compete globally for job opportunities in multinational companies at home and abroad.

However, learning English at the school level faces several obstacles. From the 2016 International Test Center report data, the average TOEIC score of SMK students in Indonesia is 363. This has experienced a significant increase from 2012, only at 272. However, this is still lower than the TOEIC average. SMK students worldwide are 400 and the average to meet the demands of work in the industry is 548; pharmaceutical, IT, telecommunications, automotive, electronics, finance, hospitality, manufacturing, mining, aviation and construction. In addition, Vocational English education is currently experiencing two significant challenges: reducing face-to-face hours and changing the curriculum structure. In the 2013 curriculum, face-to-face English lessons only range from 90 minutes (2 JP) to 180 minutes (4 JP) in one week. This allocation time means that in one year, SMK students in Indonesia only get 42 hours to a maximum of 84 hours if there are 28 effective weeks in one semester. This contradicts the

Presidential Instruction Number 9 of 2016 above, which wants to increase the competitiveness of SMK graduates both at the national and international levels. The picture of SMK's English learning in Indonesia also contradicts the changes in other ASEAN member countries. Currently, ASEAN member countries have indicated to increase their English learning hours to 6 hours per week, while in Indonesia, it is only about 2 hours per week. The implementation of the latest curriculum in 2022 is still under study and has not been able to describe the ideal English learning map directly. In other words, if the education system for learning English in Indonesia does not change, then it is inevitable that SMK graduates in Indonesia will be unable to compete in terms of mastering English.

As a solution, nowadays, the Directorate of Secondary Vocational School Guidance at the Ministry of Education and Culture recommends that SMK and its internal and external elements can be creative and innovate in order to provide additional supplements to the existing English language hours, one of which is by developing the concept of Bilingual Learning Ecosystem in schools (Kementerian Pendidikan dan Kebudayaan RI, 2017). Bilingual Learning Ecosystem (BLE) is an arrangement of all elements of bilingual learning that are interconnected, influenced, and interact to impact the process. The concept of BLE is a learning environment that uses two languages both inside and outside class hours in a daily context (Kementerian Pendidikan dan Kebudayaan RI, 2017).

One of the vocational schools that are processing to apply the BLE concept is Sekolah Menengah Kejuruan Sekolah Menengah Teknologi Informasi (SMK SMTI) Pontianak, located in the province of West Kalimantan. Under the guidance of the Industrial Human Resources Development Agency of Indonesia (BPSDMI) of the Ministry of Industry of the Indonesia Republic, this school has prepared task-competent and globally competitive human resources. According to the majors offered, the word "competent" means skilled graduates, while "globally competitive" means that graduates can fill job opportunities in domestic and foreign companies.

This discussion is interesting because SMK SMTI emphasizes achieving the vision and mission of vocational programs that link and match with industry. Thus, in aligning the curriculum based on the vision and mission, the school invites local, national, and international industrial companies. From these various activities, the school received one of the industry's feedback, namely the graduate's mastery of English related to processes and terms of machine tools/parts in the workshop or the laboratory. According to two representatives from the industry, namely the HRD Manager of PT. Team Metal Indonesia Batam and PT. Philips Industries Batam, the ability to explain well about daily work in English must be transferable to their superiors, the majority of whom are expatriates, citizens of Singapore, India, Philippines, and Malaysia.

From the explanation above, we are very interested in exploring issues of learning English in vocational schools that support the industrial sector. We consider this discussion important because the industrial world strongly feels global competition. The principal and the organizer of vocational educations managers must also improve themselves and carry out learning innovations independently, directed, and measured. The English learning curriculum is not something that is binding. This can still be evaluated by adjusting the existing design to the actual needs through various kinds of feedback. For this reason, we seek to examine the BLE concept that SMK SMTI has used in learning English. We want to prove that this concept is genuinely needed by schools in optimizing teacher collaboration and students' foreign language skills.

2. Method

In this study, we used the descriptive-qualitative method through various processes. First, we conducted a preliminary study and literature study that supported the background of the research based on the formal object, namely BLE in English language learning, and the object of this research material, namely SMK SMTI Pontianak, West Kalimantan, in the context of

learning in the era of the Covid-19 pandemic. Second, we collected primary source data through collaborative learning observations in the laboratory, school interviews, and research activities' documentation. At the same time, secondary sources function to complement primary source data from books, previous research articles, and data from websites.

Data collection aims to answer the research problems related to the BLE concept in English learning, the cycle used in the teaching and learning process in the Covid-19 pandemic situation, and the challenges and solutions in implementing this English learning concept. We spent six months of data collection on the object of research material. Data retrieval is carried out offline and online by applying the Health Protocols (HP) and Work Safety Guidelines (WSG). This is based on the collaborative learning of students' English setting in a laboratory full of dangerous heavy equipment. Then, we checked the validity of the data through triangulation of sources and member-check. We need to analyze the data through data reduction activities, data display, and conclusion drawing. The final results of this research are presented in texts, pictures, and tables that support the three data analysis processes in this research.

3. Results and Discussion

3.1 Results

The results obtained from the research have to be supported by sufficient data. Before the primary data revealed in this section, we need to highlight the concept BLE itself from this figure.

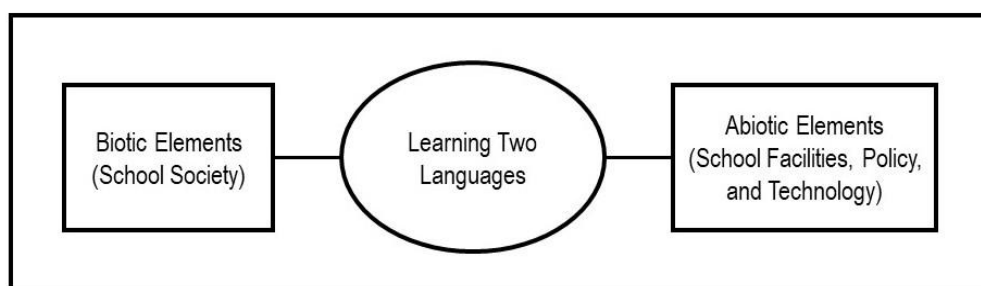


Figure 1 Bilingual Learning Ecosystem Concept
Kementerian Pendidikan dan Kebudayaan RI (2017)

BLE stands for Bilingual Learning Ecosystem, a recommended learning concept for schools to improve their English skills. This concept requires relationships, influences, and interactions with all biotic and abiotic elements so that the language learning process is sustainable and has a positive impact on improving English language skills. The word "ecosystem" in this concept refers to learning as a life aspect for all time in a place of a conducive learning environment.

In the figure, we describe the theoretical findings that there are two main elements in implementing the BLE concept. The first is the biotic element, which includes teachers, students, administrators, parents, the business community as an absorber of SMK graduates, education consultants, and the government that regulates and monitors the quality of learning in SMK. Second, abiotic elements are divided into three, namely physical facilities (buildings, laboratories, teaching materials, libraries), non-physical facilities (policies, curriculum, planning, and operational strategies), and technology (supporting learning such as information technology). The following sub-headings are the findings of the study that capture the data on the implementation of the BLE concept at SMK SMTI Pontianak.

This findings section obtained important information on implementing the BLE concept in learning English at SMK SMTI Pontianak. The image below manifests the findings involving two important elements of BLE, namely biotic and abiotic elements. The relationship

between biotic and abiotic elements in implementing BLE in ELT can be seen from the following points:

- a. English subject teachers are ready to collaborate with productive teachers. This teacher is in charge of designing the Learning Implementation Plan following the learning system in online classes using technology and in the laboratory. English learning resources are from learning modules that have been adapted to collaborative subjects. (The biotic elements are English teachers and the abiotic elements are teaching places, teaching tools, lesson plans, and teaching materials).
- b. Productive teachers are teachers who have the goal of collaborating, usually teachers who teach practical subjects in the laboratory. Productive subjects taught to relate to the use of particular machines or equipment. For this reason, productive teachers must have a Learning Implementation Plan equipped with teaching materials, namely Standard Operating Procedures (SOP), that are used to describe the learning process in the laboratory. The biotic elements are Productive Teachers and the abiotic elements are lesson plans, teaching materials, and teaching tools.
- c. The students in question are SMK SMTI students with specific learning targets. The student profile is adjusted to the Graduate Skills Competence. In this case, there are three, namely, industrial chemistry, machining engineering, and laboratory test analysis. For that, learning targets are adjusted by referring to the curriculum and learning syllabus. (The biotic element is the students, and the abiotic element is the curriculum and learning syllabus).

Then, we continue to capture the cycles of implementing BLE concept at SMK SMTI Pontianak by the following points.

- a. Co-planning
 - 1) Pro-active English teachers are looking for productive teachers to collaborate with.
 - 2) English Teachers and Productive Teachers both harmonize learning materials based on the syllabus of each subject.
 - 3) English Teachers and Productive Teachers share specific tasks.
 - 4) English Teachers and Productive Teachers prepare field notes, post-tests, and checklists for the assessment.
 - 5) English teachers and productive teachers prepare to learn online classes and laboratories/workshops.
- b. Co-Teaching
 - 1) Stage 1 learning; in online English classes. The English teacher explains the learning objectives to be studied, namely to describe a process and manuals/SOPs for using a tool or machine.
 - 2) Stage 2 learning; implementation in workshops or practical laboratories during student practice hours. Before class starts, regularly, students are given a brief briefing on Occupational Safety and Health (K3), including Health protocols during the Covid-19 Pandemic. Students are also explained about the worksheets for today. Both English teachers and productive teachers collaborate by being present together in practical classes. The briefing is delivered in two languages (Indonesian and English).
 - 3) Stage 3 learning; At this stage, one by one, students demonstrate work practices using existing tools in the laboratory/workshop. Performances are carried out alternately. Those who have had their turn to practice do the task. According to the SOP, those who have not had their turn to practice memorize the performance steps.
- c. Co-Observing
English teachers focus on students' ability to explain and describe the flow of the process during practice in English. In contrast, productive teachers focus on students' practical results based on the prepared worksheets. All learning events in the classroom and the workshop or laboratory are recorded in observation sheets and field notes made by each teacher. Questionnaire filling sheets were also given to students as feedback for teachers in the process of learning activities.

d. Co-Assessing

The instruments used during co-observing are an important part of the assessment.

Table 1 Language Assessment Aspects

Language Assessment Aspects	Amount	Percentage
Improvement opening, explaining, and closing presentations when performing Manuals/SOPs	24	85,71%
Improvement grammar mistakes	7	25%
Improvement pronunciation	5	17,85%
Improvement fluency	6	21,43%
Improvement word counts	26	92,86%

Source: Primary Data (2021)

For the aspect of performance assessment, the use of the tool is not described here because it is not the focus of the research. However, as an overview, the assessment from the productive teacher includes the correctness of the sequence/steps, accuracy of the process, and time used.

e. Co-Reflecting

In the final stage, English teachers and productive teachers who collaborate reflect on the learning activities carried out in the form of discussions. The notes and results of these discussions are used as feedback for the design and implementation of subsequent learning activities to improve continuously.

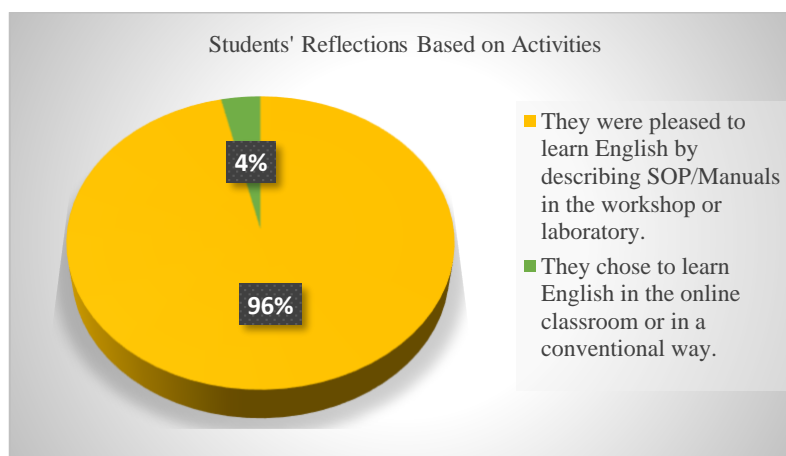


Figure 2 Students' Reflection Based on Activities

Based on the figure above, among the activities carried out by the teacher during the English learning process, most students (96.15%) preferred describing SOPs/Manuals in workshops or practical laboratories rather than learning in conventional classes (3.85%). Based on the students' responses to the questionnaire, four students (15.38%) stated that collaborative learning was complex because of the high noise level in the workshop or laboratory and poor mastery of English. While other students stated that this learning was fun (23.07%), students were easy to explain procedures because of the use of actual media (reality) in workshops or practical laboratories, useful for future work (30.76%), and fun in terms of presenting in the workshop or practical laboratory using English (30.76%). Among the activities carried out by the teacher during the English learning process, most students (96.15%) preferred describing SOPs/Manuals in workshops or practical laboratories rather than learning in conventional classes (3.85%).

Based on the results, we provide several points that can be discussed further in the following sections. Innovation in learning English is a fundamental step to adapting to the development of modern society. Modern society certainly has more complex interests and needs, including improving education and learning. The interests and needs of quality learning dynamics from different countries impact people's ways of thinking (Zhao et al., 2019). Someone who has aspirations to study or work abroad has implications for increasing efforts to master English language skills.

SMK SMTI is a vocational school with a remarkable vision and mission to encourage graduates to compete in the industrial world. Referring to global competition, schools also encourage the achievement of students' English skills. The school's concrete step is to seek feedback from partners' companies. The feedback results show that mastery of English is essential in mastering specific competencies according to the student/alumni major. English becomes very important in supporting the daily activities of alumni while working in companies after graduation, including for students when carrying out industrial work practices for several months. Knowledge in understanding and explaining SOPs (Standard Operating Procedures) and manuals on the use of specific tools in English is a top priority in communicating in multi-national companies that have expatriates (foreigners) at the supervisor level or above.

Based on this feedback, the English language learning program at SMK SMTI Pontianak is carried out through the BLE concept approach. BLE is based on bilingual learning, contributing to sociocultural studies because language can be a mediating tool and object analysis in a bilingual interaction space (Martin–Beltrán, 2010). This interaction space bridges the understanding between the interlocutor by using two different languages. The languages are one as Mother Language and one as Foreign Language. Moreover, the BLE concept used by SMK SMTI Pontianak shows the form of Co-Teaching (Collaborative Teaching). Collaboration between English teachers and productive subject teachers in workshops or laboratory practices is part of the bilingual learning ecosystem at the vocational high school level. The bilingual learning ecosystem is a movement to revitalize learning in vocational high schools using two languages (Indonesian and English) in the school ecosystem order (Kementerian Pendidikan dan Kebudayaan RI, 2017). There is a striking difference between the general concept of BLE with the BLE concept used by SMK SMTI Pontianak, namely, BLE learning in joint learning between English subjects and practical subjects. SMK SMTI uses this concept in joint learning using five stages; planning, implementation, observation, assessment, and reflection.

As a follow-up, learning English at SMK SMTI Pontianak applies a Co-Teaching (Collaborative Teaching) approach or collaborative learning between English teachers and productive teachers (Marwandi et al., 2019). According to the curriculum, the English lesson hours were brought to practical lessons to extend the learning time, which was only 90 minutes per week. During the block system practice hours with a co-teaching approach, learning English can be 270 minutes or even more, making it easier for English teachers to be creative and giving students more opportunities to hone their speaking skills. Moreover, the most important thing is that the skill in explaining the SOP/Manuals Procedure can be applied optimally as a solution to the limited hours of learning English in the curriculum that applies at school.

From the experience of teaching together, the author was able to identify support between English teachers and Productive teachers. This support is dynamic and procedural because when both teachers are in a learning setting, they identify each other and ensure that their two roles in the cycle have the potential to improve students' abilities. In this study, English teachers ensured the improvement of students' English skills, while productive teachers ensured that students' practicum skills were increased. This is reinforced that collaborative learning is an ideal learning model that directs teacher pairs to identify together from the beginning of the learning process. They need support from superior teachers and teachers who need additional support (Guise et al., 2017).

The support of the two teachers in BLE in the learning setting makes the laboratory one of the most critical abiotic elements. The author confirms that using the classroom as a bilingual ecosystem is essential for learning English. Because the class is a place to communicate in two languages, this includes providing opportunities for students to use and explore English (Miguez Gordillo, 2021).

However, the use of elements other than classes, including laboratories and workshops, is a basic need. Previously, BLE focused on classroom settings; however, the need for vocational students to practice various kinds of industrial technology tools has made laboratories or workshops more critical. It is also necessary to study based on BLE elements, namely biotic and abiotic. These two elements, including physical facilities other than learning places, non-physical facilities, and technology used by schools, have specificity. BLE that has taken place in a vocational school setting will be different from the BLE concept in other schools. For example, the learning theme in some schools can be habituation of general and simple vocabulary such as greetings, greetings, asking for news, how to ask permission, introduction, names of school equipment, rooms in school, professional fields of the school community. And so forth. However, referring to its specificity, the ESP concept must be attached to the BLE concept of vocational schools. ELT must refer to the needs of SMK students, which includes teaching materials that match student competencies (Taufan et al, 2022). Therefore, the theme of learning English for SMTI Vocational Schools must adapt to learning needs linked and matched with the industrial world.

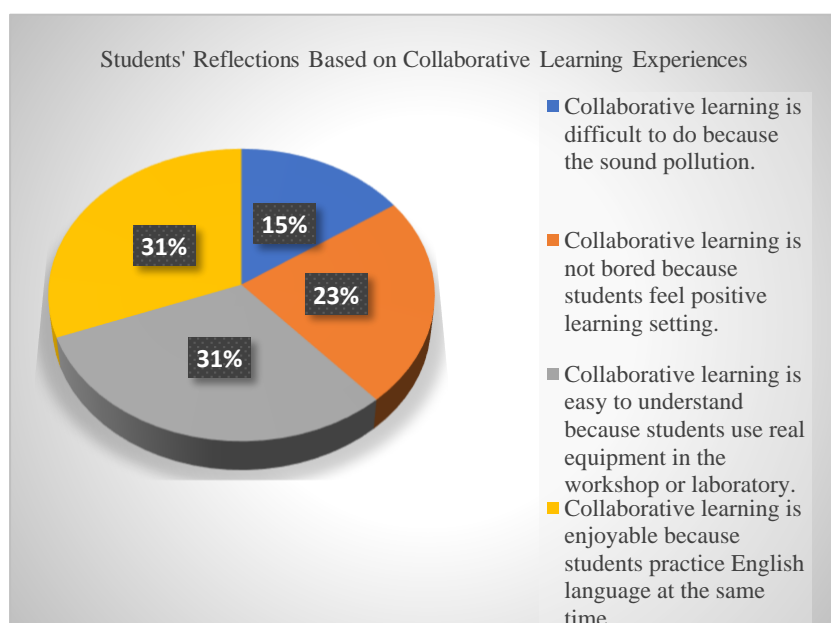


Figure 3 Students Reflections Based on Collaborative Learning Experiences

In the co-planning scheme in this study are English teachers looking for collaboration teachers who are referred to as productive teachers to become teaching partners. Each teacher controls his subject area, but each is also competent to adjust to following the goals and objectives of the collaboration. The preparations made both begin with joint planning through discussion of teaching material based on the syllabus of each subject. Mature preparation starts from a long-term plan, sets goals and objectives, then continues scheduled planning requires views and commitment to work together (Pratt et al, 2017). For this reason, all teaching equipment needs to be prepared to prepare instructions for carrying out joint learning activities. Preparation of observation sheet notes, assessment sheets, and a checklist of activities are mandatory documents to support the next learning step.

What is important here are two teachers who collaborate. If not supported by competent teachers, how strong and complete teaching equipment and equipment are, even learning success will not be achieved (Juniantari & Sri, 2017). For this reason, English teachers must be proactive in finding productive teachers who are ready to collaborate. The symbiosis of mutualism between English teachers and productive teachers needs to be built as a form of

support to complement each other's shortcomings. This is also in order to achieve learning targets and targets. Harmonization of learning materials must be planned thoroughly (Guise et al., 2017). Co-planning can be planned for two purposes, long-term and short-term. Timing can be adjusted by referring to the allocation of learning time that applies at the vocation school.

At this stage, co-teaching has a sizeable portion of the time allocation for one learning time. This is rumored that co-teaching requires several learning steps to realize the learning plan. In this study, co-teaching conducted by teachers used three steps: explanation, implementation, and demonstration. Researchers deliberately divide the co-teaching stage into three because of the goals and objectives of learning from highly complex practicum subjects. This is not in line with the stages developed by Jabeen, Afzaal, and Akhtar (2021) They carry out co-teaching only in the English context of content for college students but with the same idea that needs Collaboration instructions in collaborative teaching.

What is interesting here is co-teaching on English learning and the practicum of using industrial technology tools in laboratory settings. In this case, English teachers must equal the student practicum process with productive teachers. The content used in learning describes a process and manuals / SOPs for using a tool or machine. This is in accordance with the concept of ESP which is developed specifically for vocation schools that require correlation and support for student-specific skills (Ronaldo, 2016). The use of specific learning materials also supports the use of appropriate vocabulary and the right context for the needs and objectives of the student vocation learning program (Rahmiani et al., 2018). Using specific material teaching, the development of teaching arrangements also supports the improvement of English learning hours. The English and Indonesian portions are adjusted to the characteristics of the learners.

An important point to note in this study's empirical study is the commitment to maintain occupational safety using Occupational Safety and Health (K3) standards, including Health protocols offing the Covid-19 Pandemic. Before co-teaching begins, students have provided knowledge about using these two standards/ protocols. Students are trained to be accustomed to using work safety standards in practicum as a form of habituation preparation in the work environment. Learning activities that support OSH habituation become a real skill in building a culture of work accident prevention (Chatigny, 2022). Similarly, the Health protocol during the covid-19 pandemic, both in class and in the laboratory, increased understanding and changing student behaviour to use the Health protocol is not separated from the encouragement of habituation by the leadership in the school community (Ardillah et al, 2022).

Traditionally, observation activities in the classroom were carried out to evaluate the learning process by administrators and senior teachers in a teacher training program (Allwright, 2014; Sheal, 1989). However, as developments and needs, observation activities in the classroom can be carried out in a class action study by the teacher for his students to obtain learning feedback and achieve learning success (Banegas et al, 2013). Even observation activities can be carried out together with different teachers, with each teacher having his control tools according to the skills to be achieved.

Observation activities are inherent in learning and assessment activities, although this cycle is in a special phase. Researchers emphasize observation activities on aspects of English ability during the co-teaching process. Observation results show a linkage and legibility between biotic elements and abiotic elements. Learning events in online classes and workshops or laboratories are recorded on observation sheets and field notes conducted by each teacher. So, implementation observation must be centered on the object by involving the entire senses to collect data (Anufia & Alhamid, 2019). Observation cannot fulfill its functions as an observational control without tools, including instruments, guidelines, or guidelines.

Assessment becomes an important part of determining student learning success. The implementation of co-teaching seeks collaborative assessments automatically. In this study, researchers limited students' learning assessment of speaking skills related to using industrial technology tools with various completeness, namely SOP/Manuals. The assessment results show that five aspects are assessed and have improved, i.e., improving aspects of presentation,

grammar, pronunciation, fluency, and word accounts. Only two aspects that experienced a significant improvement were aspects of the presentation and word count. The grammar, pronunciation, and fluency aspects require long-term co-teaching. Observation results indicate a high level of enthusiasm and low level of anxiety, affecting their fluency in English. This reinforces the idea that students in this condition will easily and effectively speak in English so that their increased abilities can be categorized as significant improvements (Leong & Ahmadi, 2017). Especially in grammar assessment, this is true if being good at grammar during the speaking skill process is quite burdensome for students because learning grammar directly and learning grammar is very different indirectly (Zuhriyah, 2017). Therefore, the assessment of this aspect does not show a significant lift.

In addition, researchers found that pleasant learning by directly using English vocabulary in practical learning encouraged students' enthusiasm and motivation. When students demonstrate work practices using industrial technology tools, they are enthusiastic, even though they are required to use English. English teachers assess students' English abilities during this process, while productive teachers assess student skills.

In this discussion, researchers explore reflections of biotic and abiotic elements that are the force of implementation Co-PTOAR Cycle in English Learning Collaboration in Pandemic Situations. The results of the joint reflection of the two teachers identify weaknesses during the teaching process lie in the uneven division of tasks. One teacher dominates and has high noise levels when practicing. High noise levels when assessing collaboration, difficulty finding productive teachers as a partner to collaborate, and fair proportion sharing for each teacher are challenges that must be resolved, so collaboration learning is effective. The division of tasks between English teachers and productive teachers must be truly arranged and agreed upon by the two teachers at the planning stage to implement collaborative learning (Jabeen et al., 2021).

Like this study, productive teachers can use two languages (Indonesian-English) with appropriate portions, especially to introduce terms related to parts of tools or processes (basic technical words) during the initial briefing or practical learning process. From the start, planning must be cooked. The teacher must design the tasks well to help students overcome problems in speaking. The yellowing of the microphone and speaker for the assessment process is needed to reduce the noise level during practice hours. The use of microphones provides the benefits of making it easy to hear the voices of students and teachers, increasing the attention of all students, increasing confidence, and overcoming the fatigue of students and teachers' voices (FW et al, 2015).

However, based on the response of students who share the reflection of their learning, there is a positive response to student motivation and learning interests. They agree that the collaboration of learning between English and practicum subjects goes fun and exciting. Fun and exciting learning can be taken through learning management that is able to create a pleasant learning atmosphere as well (Dini, 2021). Mature preparation from planning to implementation must be adjusted to student conditions. This reflection study can support the next co-teaching process and can significantly realize the professionalism of the two collaborating teachers. Mutual input and mutual learning in collaborative learning are important parts of change. The emphasis here is on collaborative learning between English teachers and productive teachers that is applied to help students improve their ability to talk about describing procedures in authentic English and following their majors. An example specifically is the productive teacher understanding technical verbs but is weak in pronunciation, while the English teacher controls pronunciation but weak technical verbs. Mutual sharing increases teacher professionalism (peer teaching and mentoring) to solutions to the teaching problem.

4. Conclusion

BLE in learning English at SMK SMTI Pontianak requires teachers' collaboration with a specific domain of scientific integration. English Teachers and Productive Teachers can work together in a practical learning setting in a laboratory/workshop if both agree and jointly adjust

lesson plans for the two different subjects. This concept is abbreviated as BLE in ELT using the Co-PTOAR cycle controlled by two main actors, namely the English teacher and Productive Teacher, as biotic elements and the scope of the classroom and laboratory and other supporting equipment abiotic elements. Students also become biotic elements, but they are the target of learning. These two elements, both biotic and abiotic, can be bound well because an ecosystem supports five collaborative learning cycles: Co-planning, Co-Teaching, Co-observing, Co-Assess, and Co-Reflecting.

This finding supports improving students' English skills, which were previously limited to only 90 minutes/week of English subjects to 270 minutes/week through collaborative learning. This is an alternative for vocational schools to allocate proper time to learning English. Learning English is not rigid and can adjust the needs of students according to the profile of their graduates. This, of course, has an impact on students' English skills, which are increasing. The improvement of the English language skills of SMK SMTI students is expected to be correlated with an increase in the TOEIC score. This increase in score is a form of recognition for graduates in the form of a TOEIC certificate. This certificate can increase self-confidence and add to the student's portfolio and as a form of readiness for graduates in the world of work.

To sum up, we considered the limitation of this study. We need to convey that this research has not shown the effect of BLE in learning English in the context of quality and quantity. In addition, we have not studied the impact of collaborative learning on practical subjects (not English subjects). Comprehensive research is needed to look at the effect of BLE success at a particular time and in specific subjects that are complementary subjects other than English.

References

- Abdul Kadir, K., & Wan Mohd Noor, W. S. (2015). Students' awareness of the importance of English language proficiency with regard to future employment. *World Review of Business Research*, 5(3), 259–272.
- Allwright, D. (2014). Observation in the language classroom. *Observation in the Language Classroom*, 1–288. <https://doi.org/10.4324/9781315835907>
- Anufia, B., & Alhamid, T. (2019). *Instrumen Pengumpulan Data*.
- Ardillah, Y., Budiastuti, A., Safriantini, D., & Sabana, R. (2022). Optimization of The Application of The Covid 19 Health Protocol for Elementary School Students in Banyuasin South Sumatera. *ABDIMAS: Jurnal Pengabdian Masyarakat*, 4(2), 728–732. <https://doi.org/10.35568/abdimas.v4i2.1265>
- Banegas, D., Pavese, A., Velázquez, A., & Vélez, S. M. (2013). Teacher professional development through collaborative action research: Impact on foreign English-language teaching and learning. *Educational Action Research*, 21(2), 185–201. <https://doi.org/10.1080/09650792.2013.789717>
- Chatigny, C. (2022). Occupational health and safety in initial vocational training: Reflection on the issues of prescription and integration in teaching and learning activities. *Safety Science*, 147, 105580. <https://doi.org/https://doi.org/10.1016/j.ssci.2021.105580>
- Cheng, L. (2012). The power of English and the power of Asia: English as lingua franca and in bilingual and multilingual education. In *Journal of Multilingual and Multicultural Development* (Vol. 33, Issue 4, pp. 327–330). Taylor & Francis.
- Damayanti, L. S. (2019). Peranan Keterampilan Berbahasa Inggris Dalam Industri Pariwisata. *Journey: Journal of Tourismpreneurship, Culinary, Hospitality, Convention and Event Management*, 2(1), 71–82.
- Dini, J. (2021). Manajemen Pembelajaran untuk Menciptakan Suasana Belajar Menyenangkan di Masa New Normal. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 5(2), 1566–1576.
- Direktorat Sekolah Dasar. (2021, February 3). *Menyiapkan Pendidik Profesional Di Era Society 5.0 - Direktorat Sekolah Dasar*. <http://ditpsd.kemdikbud.go.id/artikel/detail/menyiapkan-pendidik-profesional-di-era-society-50>
- Fang, F. (Gabriel). (2017a). ENGLISH AS A LINGUA FRANCA : IMPLICATIONS FOR PEDAGOGY AND ASSESSMENT. *TEFLIN Journal*, 28(1), 57–70. <http://teflin.org/journal/index.php/journal/article/view/418/279>
- Fang, F. (Gabriel). (2017b). World Englishes or English as a Lingua Franca: Where does English in China stand?: An ideological negotiation and attitudinal debate of the use and function of English in the Chinese context. *English Today*, 33(1), 19–24. <https://doi.org/DOI: 10.1017/S0266078415000668>
- FW, F., Matsuno, H., Ogasawara, H., Noguchi, A., Hasegawa, K., & Wajima, R. (2015). Effective Lecturer-Student Microphone Use in a Lecture Room: A Useful Approach for Teaching and Learning Pharmaceutical Science English. *Journal Of Academic Society for Quality of Life*, 1(1), 21–25. http://as4qol.org/wordpress/wp-content/uploads/2015/02/mn2014003_foong_jas4qol.pdf

- Guise, M., Habib, M., Thiessen, K., & Robbins, A. (2017). Continuum of co-teaching implementation: Moving from traditional student teaching to co-teaching. *Teaching and Teacher Education*, 66, 370–382. <https://doi.org/https://doi.org/10.1016/j.tate.2017.05.002>
- Handayani, S. (2016). Pentingnya kemampuan berbahasa Inggris sebagai dalam menyongsong ASEAN Community 2015. *Jurnal Profesi Pendidik*, 3(1), 102–106.
- Jabeen, S., Afzaal, M., & Akhtar, A. (2021). Collaborative Teaching: Bringing Language Teaching to the English Content Classroom. *Int J Edu Sci*, 32(1–3), 12–23.
- Jayani, D. H. (2021). *Usia Produktif Kian Mendominasi Penduduk Indonesia | Databoks*. Databoks. <https://databoks.katadata.co.id/datapublish/2021/01/22/usia-produktif-kian-mendominasi-penduduk-indonesia>
- Johnson, J. (2022, January). • *Internet: most common languages online 2020 | Statista*. <https://www.statista.com/statistics/262946/share-of-the-most-common-languages-on-the-internet/>
- Juniantari, I., & Sri, G. A. (2017). Pentingnya peningkatan kompetensi guru dalam pencapaian hasil belajar siswa. *Jurnal Ilmu Pendidikan*, 1, 1–12. https://www.researchgate.net/profile/Igusti-Ayusrijuniantari/publication/315099985_PENTINGNYA_PENINGKATAN_KOMPETENSI_GURU_DALAM_PENCAPAIAN_HASIL_BELAJAR_SISWA/links/58ca40d3a6fdcc08b1662979/PENTINGNYA-PENINGKATAN-KOMPETENSI-GURU-DALAM-PENCAPAIAN-HASIL-BEL
- Kementerian Pendidikan dan Kebudayaan RI. (2017). *Strategi Implementasi Revitalisasi SMK melalui Bilingual Learning Ecosystem*. Jakarta: Direktorat Pembinaan SMK.
- Leong, L. M., & Ahmadi, S. M. (2017). AN ANALYSIS OF FACTORS INFLUENCING LEARNERS' ENGLISH SPEAKING SKILL. *International Journal of Research in English Education*. http://ijreeonline.com/browse.php?a_id=38&sid=1&slc_lang=en&ftxt=1
- Marwandi, M., Sutapa, Y. G., & Salam, U. (2019). Alternative Co-Teaching in Practical Lesson to Teach Speaking at SMK-SMTI Pontianak. *IJLI (International Journal Learning and Instruction)*, 1(1), 31–39. <https://jurnal.untan.ac.id/index.php/IJLI/article/view/33408/75676581508>
- Miguez Gordillo, M. Á. (2021). *The classroom as a bilingual ecosystem in english language teaching. The case of students at segundo año de bachillerato of the Unidad Educativa Juan de Velasco in the academic period september 2020-february 2021* [Riobamba, Universidad Nacional de Chimborazo]. <http://dspace.unach.edu.ec/handle/51000/8117>
- Millot, P. (2017). English for Specific Purposes Inclusivity and exclusivity in English as a Business Language: The expression of a professional voice in email communication. *English for Specific Purposes*, 46, 59–71. <https://doi.org/10.1016/j.esp.2016.12.001>
- Mujiono, M. (2018). *Pandega: Jejak Inspiratif Pendidikan Vokasi Industri*. Jakarta: Pusat Pendidikan Pelatihan Industri Kementerian Perindustrian RI.
- Park, J. S.-Y. (2011). The promise of English: Linguistic capital and the neoliberal worker in the South Korean job market. *International Journal of Bilingual Education and Bilingualism*, 14(4), 443–455.
- Pratt, S. M., Imbody, S. M., Wolf, L. D., & Patterson, A. L. (2017). Co-planning in co-teaching: A practical solution. *Intervention in School and Clinic*, 52(4), 243–249. <https://journals.sagepub.com/doi/abs/10.1177/1053451216659474>
- Presiden RI. (2016). *Instruksi Presiden RI No. 9 Tahun 2016*. Jakarta: Salinan sesuai dengan aslinya Sekretariat Kabinet RI.
- Rahmiani, N., Salam, U., & Supardi, I. (2018). Developing a Supplementary Material of Malay Tourism for Vocational Students in Pontianak West Kalimantan. *Script Journal: Journal of Linguistic and English Teaching*, 3(2), 127. <https://doi.org/10.24903/sj.v3i2.232>
- Ronaldo, O. (2016). Teaching Material for English Subject in Vocational High School. *Proceedings of the Fourth International Seminar On English Language and Teaching (ISELT-4)*, 170–179. <http://ejournal.unp.ac.id/index.php/selt/article/view/6974/5508>
- Sheal, P. (1989). Classroom observation: Training the observers. *ELT Journal*, 43(2), 92–104. <https://doi.org/10.1093/ELT/43.2.92>
- Sauramanda, A., Wajdi, M., Supardi, I. (2021). Developing HoPALM as teaching materials for secondary school students. *Journal of English Language Teaching Innovations and Materials (Jeltim)*, Vo. 3/1, p.48-60. <https://jurnal.untan.ac.id/index.php/JELTIM/article/view/41696>
- Taufan, G. T., Suharsono, D. D., & Kamal, M. (2022). ELT at Vocational High Schools in Jember. *2nd International Conference on Social Science, Humanity and Public Health (ICOSHIP 2021)*, 224–228. <https://www.atlantis-press.com/proceedings/icoship-21/125970527>
- Zhao, Y., Yuan, Y., Shen, W., Zhu, C., & Liu, D. (2019). The relationships between bilingual learning, willingness to study abroad and convergent creativity. *PeerJ*, 7, e7776. <https://doi.org/http://doi.org/10.7717/peerj.7776>
- Zuhriyah, M. (2017). Problem-Based Learning to Improve Students' Grammar Competence. *Register Journal*, 10(1), 48–61. <https://doi.org/https://doi.org/10.18326/rgt.v10i1.48-61>