

Project-Based Learning in Developing English Language Skills and 21st Century Skills: Students' Voices in Academic Writing Course

Panggih Rahardi^{1*}, Reyhan Hernanda², Ega Bagus Panuntun³, Lilia Indriani⁴, Atsani Wulansari⁵
Universitas Tidar

Jl. Kapten Suparman No.39, Potrobangsari, Kec. Magelang Utara, Kota Magelang, Jawa Tengah 561161, Indonesia

panggih.rahardi@students.untidar.ac.id^{1*};
reyhan.hernanda@students.untidar.ac.id²;
ega.bagus.panuntun@students.untidar.ac.id³;
indriani@untidar.ac.id⁴;
atsani_wulansari@untidar.ac.id⁵

* corresponding author

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Abstract

Project-based learning (PBL) is one of the teaching strategies that has become significant in the twenty-first century. English has also become an important language that needs to be mastered nowadays. Therefore, this research was done to find out how the students felt about the use of project-based learning in academic writing course in developing their English language skills and 21st century skills. The issues experienced by students in project-based learning implementation are also revealed in this study. By employing a qualitative research approach, this study invited 40 English-major undergraduate students from a state university in Central Java, Indonesia, who are currently taking their academic writing course. Students in this course must work collaboratively to complete their research projects and produce scientific papers that will eventually be published. This study's findings successfully demonstrated the students' voices that they believe project-based learning has improved their English and 21st century skills. Writing, problem-solving, and critical thinking are the three skills with the highest proportion in this study. Additionally, the issues with the implementation of project-based learning in academic writing course include student motivation, time management, teaching-learning process, and students' teamwork.

Keywords: PBL, English language, 21 century skills, Academic writing

Introduction

Concerning the existence of globalization in today's life, all aspects of human life in the world are required to be literate about the development of technology and be able to accommodate skills that are in accordance with the current century, the 21st century. Education is one of the most significant aspects and must adjust to high-



speed development. Students who study in the current century are often known as generation z. Unlike generations in the previous century, this generation had an interest in and closeness to technology (Palacios, 2019). Therefore, the traditional teaching system, like teacher-centered learning, seems unsuitable to be applied to generation z, also called a digital native. To guide the students to have sufficient skills to adapt and survive in the rapid development of the world in this 21st century, teachers must adapt their methods of instruction to reflect the skills required in the twenty-first century. Project-based learning (PBL) is a well-known and frequently used teaching strategy in today's classrooms. It is because research has indicated that the teacher implementing project-based learning in their class is believed to significantly help students in getting 21st century skills (Anafiza & Djukri, 2017).

A project usually refers to work that can be done, whether by individuals or groups, where they must produce something within a particular time, and this is done to reach the desired goal. Usually, the project on a particular course is a relevant task to the purpose of the course and must be completed before the course is complete. Project-based learning is described by several experts in the field. Project-based learning, according to Blumenfeld et al. (1991), is a teaching strategy that encourages students to carry out research to address particular problems and to produce work as well. On the other hand, project-based learning is defined by Midouser and Beter (2003) as a meaningful class of classification that is linked to the real world both inside and outside of the classroom. Students learn theory in the classroom, then they put it to use in the real world. Project-based learning is therefore student-centered and stresses "learning by doing" (Markham et al., 2003). Students are encouraged to understand how to use technology to its fullest potential and to be conscious of their day-to-day evolution into more sophisticated individuals in the project-based learning application. As a result, project-based learning is crucial for students to improve their technology skill (Krauss & Boss, 2013). In conclusion, project-based learning helps achieve the 21st century's goals.

The benefits of project-based learning in the classroom have been shown in numerous research, including Allen (2004), who found that utilizing this strategy can enhance students' problem-solving skill and nurture high-order critical thinking skill. These skills are essential for students both when they first enroll in school and after they graduate and enter the working world. The development of important skills, long-term retention, and the enjoyment of both students' and teachers' education are all benefits of project-based learning (Strobel & Van Barneved, 2009). As a result, it should come as no surprise that project-based learning is essential in the modern classroom to help students develop the skills they need for the 21st century. As mentioned above, many courses/schools apply project-based learning for those positive reasons, where students usually complete the project related to the course they studied. However, Li et al. (2015) stress that it's crucial to remember that there are no set standards for what constitutes a project that is assigned to students as being appropriate for project-based learning. However, well-planned and well-thought-out projects will assist students not only learn or develop new knowledge but also practice a variety of skills like critical thinking, communication, and teamwork. It is this that has the current researchers' interest as they look into the phenomena of project-based learning being used in academic writing courses in higher education. Students in this course receive daily



collaborative instruction so that they can complete and even publish a research article by the conclusion of the term.

There are some prior studies that are relevant to the current study, such as Bell (2010)'s study showing how project-based learning can assist students develop 21st-century skills. This research indicated that students could be more engaged, collaborate, and, most importantly, produce projects that represent their knowledge. Not only that, but students also get important skills in technology, ways of communication, and ways to solve problems. Project-based learning, according to other earlier research, benefits both students and teachers who use it. Research from Ravitz et al. (2012) shows that the project implementing project-based learning, which integrates it by teaching and assessing 21st century skills, is getting extensive professional development. Additionally, study by Fatmawati (2018) revealed how project-based learning is used to support students' development of 21st century skills. The study's conclusions showed that the development of 21st century skills is not significantly impacted by project-based learning. It's because project-based learning only obliquely seeks to help students build 21st-century skills through the lecturer's unconscious implementation. This is also the rationale behind why researchers want to assess how well the project assigned in academic writing class aligns with the development of 21st century skills. However, because this course is offered by the English Department, which places a strong emphasis on teaching and mastering the four language skills, this study also looks at how PBL is utilized to help students improve their English language skills.

There has been many previous research on this subject matter. Nevertheless, there has not been any research done on how students perceive project-based learning in academic writing courses to impact the development of their English language skills and 21st-century skills. As a result, the researcher of the current study is particularly interested in the opinions of English department students on the implementation of project-based learning activities in an academic writing course at one of Central Java's state universities beginning in the fall of 2023. This study will look into how project-based learning activities help students develop their English language and 21st century skills. This study also determines how students perceive using project-based activities in academic writing class. This kind of study needs to be conducted since teachers can use this knowledge to motivate their students to learn more about 21st century skills and English language skills. Also, the teachers can modify the class activities with appropriate strategies or more suitable projects to help the students develop important skills. It is because important for teachers to provide effective teaching and learning techniques to enhance students' skills (Wahyuni et al., 2020). The study is intended to inform future research and shed light on how students feel about the use of project-based learning in developing English language skills and 21st century skills, particularly in the academic writing course.

Method

This study used a qualitative research approach to investigate how the students felt project-based learning developed their English language skills and 21st century skills. This research design was chosen since qualitative research aims to understand what the research subjects experience, such as their perception of



something (Moeloeng, 2013). In collecting the data, an adapted questionnaire from Fatmawati (2018) and Puangpuni (2021) were used as the instrument of this research. The questionnaire tool used in the present study was an online survey made available by Google Forms. This questionnaire was divided into three sections. First, students were asked several questions related to PBL implementation in academic writing course in developing their English skills. Second, students were asked some questions related to implementation of PBL in academic writing course in developing their 21st century skills. Lastly, students were asked for their perceptions on the implementation of Project Based Learning in their academic writing course. However, because this questionnaire already provides sufficient close-ended and open-ended questions to reveal students' perceptions, this study did not provide interviews as a follow-up. Instead, all the data collected need to be analyzed comprehensively by connecting it with previous literature to provide an in-depth understanding of the findings.

According to Thompson (2014), people who attract researchers' attention to generalize their research results are the research population. Therefore, 40 undergraduate students from the English department's academic writing course at one of Central Java's top state universities served as the study's research subjects. In determining the sample with this number, the researchers in this study used simple random sampling. This type of probability sampling is used when all the populations included in the sample are equal or known (Engel & Schutt, 2016). After the data were collected using questionnaire, the data were then subjected to statistical analysis using Microsoft Excel to find the percentages. Next, students' perceptions are then sorted using a table based on their categories. Then, as has been touched upon, the data were presented and interpreted using thorough descriptive analysis as the final step. Meanwhile, to observe the situation and conditions, an observation can be used in research (Sugiyono, 2018). As a result, the researchers also conducted a direct observation to learn more about the actual circumstance and to complement the data analysis.

Findings and Discussions

The tables below show the students' opinions about project-based learning in terms of developing their 21st-century skills and English language skills after the researchers collected and organized the data:

Table 1. Students' voices of the implementation of PBL in developing their English language skills and 21st century skills

No	Question	Answer	
		Yes	No
1	Do you think the project-based learning implementation in the academic writing course has developed your English language skills?	97.5 %	2.5 %



2	Do you think the project-based learning implementation in the academic writing course has developed your 21st century skills?	100 %	0 %
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It is crucial for teachers who use PBL to build strategies for students to acquire the knowledge and skills they require while also evaluating those students (O'Neill, 2015). As a result, the two questions listed in table 1 are posed to the students by the study's researchers. The data shows that 97.5% of all students believe their English language skills have improved as a result of the project-based learning that is used in their academic writing course. All of the students who took part in this study concurred that the use of PBL to their academic writing course has also helped them to advance their 21st-century skills. Thus, it is possible to draw the conclusion that the integration of PBL into the academic writing course of the English education study program at this specific university has assisted students in strengthening their English language skills. Additionally, the use of PBL has helped students develop crucial skills necessary for survival in the twenty-first century. However, as evidenced by the following tables, not all of the sub-skills appear to have been developed:

Table 2. The developed English language skills from the project-based learning implementation in academic writing course

English language skills	No. of students (N = 40)	Percentage
Writing	39	97.5 %
Reading	26	65 %
Speaking	6	15 %
Listening	0	0 %

It is undeniable that English is an international language. This is because English is used in every part of life and is one of the most widely spoken languages in the world. Since English is widely used, learning and mastering English skills are necessary, especially for students. Based on Arian (2015), learning English gives learners the chance to interact with numerous people from many backgrounds and nations. However, learning English is quite difficult for most people in Indonesia. The curriculum from the government has been structured in such a way as to make teaching English more effective. Nevertheless, one of the most common problems teachers encounter, especially in higher education, is the need for adequate language background to complete assignments while learning English (Chayanuvat, 2007). Therefore, lecturers are forced to continuously review basic knowledge of English, such as the use of grammar, before inviting students to use English for the real world or academic life. Regarding this matter, learning English is not required to focus on using proper grammar or syntax. Inviting students to learn to use English in real life is what teachers should consider. Therefore, to



overcome this problem, teachers must apply the right approach in teaching and learning English activities that emphasize real-life communication rather than grammatical rules as in traditional teaching methods. Additionally, it is important to underline that learning success involves more than just knowledge acquisition and includes the development of life, communication, and language skills. It certainly follows what is emphasized by project-based learning, where students learn real-world situations in their learning environment. According to Simpson (2011), students can develop their communication skill by applying their language skills in real-world circumstances in a class that uses PBL. So, students are not only taught what structure and vocabulary in English are. In line with Simpson, Kavlu (2017) also said that PBL makes the class more enthusiastic and improves students' English skills in real-life contexts. Directly, students are also prepared to face problems in the real world (Solomon, 2003; Nguyen, 2011). This exemplifies how project-based learning benefits both language education and language use.

In the data collection stage, the researchers in this study gave the students' opportunity to choose one or more points related to the particular English language skills and 21st century skills that they feel have developed during the PBL implementation. It was done in order to get a specific percentage of each skill from the total population sample. Consequently, the table 1 indicated that PBL implementation in the academic writing course has shown significant support in achieving the vision of the course. This is due to the fact that 97.5% of study participants concur that using PBL in academic writing has improved their writing skill. It can be concluded that students think that giving a project in the form of writing scientific articles in English really encourages students to develop their writing skill. The second skill that is also developed is reading. In writing a scientific article, students are forced to read as many books or scientific journals as possible to be able to support the idea of writing their article. This is where their reading skill are also developed because they not only read, but also draw conclusions, mind maps, and even cite what they read.

However, only 15% of students agree they have improved their speaking skill. Based on direct observations by the researchers, this is because class activities do not require students to talk a lot, such as making presentations or exchanging arguments. However, the short direct consultation process as a form of monitoring from the lecturer requires students to explain a little about their projects and the problems they encounter. Finally, listening skill do not show any presentation at all because this skill is actually not emphasized in this academic writing course. The study's results still confirm those of Simpson (2011) and Srikrai (2008), who found that project-based learning helped students improve their language skills. The use of group projects that has been applied in this course was also supported by Natividad and Batang (2008), who said that adult learners can learn foreign languages by working in groups.

Table 3. The developed 21st century skills from the project-based learning implementation in academic writing course



21st century skills	No. of students (N = 40)	Percentage
Problem-solving	34	85 %
Critical thinking	34	85 %
Technology literacy	29	72.5 %
Communication	22	55 %
Cooperation	21	52.5 %
Decision-making	19	47.5 %

Amid increasingly sophisticated technological developments, the lifestyle in the 21st century has undergone dramatic changes. Therefore, technology is the primary tool for generations to acquire the skills needed in the 21st century. There are many important skills needed in this century. According to P21 (2011), in order to succeed in the modern world, one must possess 21st century skills like critical thinking, problem-solving, cooperation, and communication. Trilling and Fadel (2009) identified learning and innovation skill, digital literacy skill, and skills for life and career as the three main 21st century skills. On the other hand, Raizen emphasized the significance of students developing 21st century skills like collaboration, problem-solving, critical thinking, and decision-making in Griffin and Care (2015). One of the essential qualities for success in the twenty-first century is critical thinking (Issa & Khataibeh, 2021). With the support of technology as a crucial instrument for improving the learning environment, these skills can become vital in the twenty-first century (Boholano, 2017). However, problem-solving, critical thinking, technology literacy, communication, cooperation, decision-making are 21st century skills that become the focus of this present study.

These new challenges in the 21st century is again challenging the teachers, so their teaching methods do not ignore the importance of enhancing students' 21st century skills. It is why project-based learning is here to overcome these problems. PBL provides students ample opportunities to develop 21st century skills through collaborative projects that reflect students' skills and knowledge (Bell, 2010). It also increases students' critical thinking through how they will solve problems related to a given project (Meyer, 2015). Students are also invited to be creative and up-to-date with current issues through project-based learning involving technology in its implementation. In addition, so that students can complete their projects well, they are also forced to be able to communicate and coordinate with other group members and critically evaluate and solve problems encountered. Another important thing in implementing PBL is inviting students to reflect on their inquiry (Thomas, 2000). Because of this, acquiring 21st century skills are necessary to succeed in or finish their projects (Trilling & Fadel, 2009). As a result, it can be claimed that the usage of project-based learning in the 21st century and the skills needed for this century are closely tied.

Regarding how PBL also improves students' English skills, Macadangdang (2019) said that students' problem solving skill developed when they have acquired



better skill in English and maths. As many as 34 students, out of the total, believe that problem-solving is one of the 21st-century talents they feel is best developed, according to the survey that was done, as shown in table 2. It is consistent with research by Zhang et al. (2021) that found PBL helped students become better problem solvers. The first part of this academic writing course's introduction does call for students to identify research topics that they are interested in. Then, students must discuss thinking about solutions to these problems and writing them in a group article project. Here, it can be observed that problem solving, a key component of project-based learning, has received significant attention ever since the start of lectures. Students must think critically as they go through these issues in order to solve them and develop their critical thinking skill for other issues that may arise when they conduct research in the field. It is because research has shown that students admitted that there were many conflicts that may arise while doing group work. However, as the project progressed, students improved in self-esteem and were inspired to find solutions (Akindele, 2012). In other words, group projects require students to think in order to address actual problems. Students' critical thinking skill is developed by the effective implementation of PBL (MacMatch et al. 2017; Tiwari et al. 2017; Giri 2021; Issa & Khataibeh 2021). Therefore, the ability to think critically is also the skills that students say is best developed in the use of PBL in academic writing.

Students must be able to embrace the usage of increasingly prevalent technology in the 21st century due to the rapid growth of technology in that century. Not surprisingly, many students in this scientific article writing project are conducting research that focuses on the use of a particular technology such as Quillbot, Mendelej, Tik tok, etc. Not only that, the process of writing an article that they do is also inseparable from the use of technology. Examples include lecturers encouraging students to do mind mapping of their reading using Meindmeister, working on progress articles collaboratively using Google Drive or Google forms, even using research instruments that rely heavily on technology such as online interviews. Therefore, technology literacy can show that 72.5 % of students agree that the application of PBL in their academic writing course has developed their literacy in technology. This is consistent with the findings of Yang and Puakpong's (2016) study, which demonstrated that project-based learning can help non-English major students develop their technological skill. On the other hand, current research indicates that the use of PBL can help enhance the technological skill of English students.

Finally, there are three 21st century skills in which almost half of the total sample population agree that they feel developed. The first is communication, the second is cooperation, and the last is decision making. Students in this academic writing course are divided into groups of two to three people to work on the project for adopting PBL. In the process, each group member must honestly communicate whatever needs to be discussed in working on the project, not only to fellow members, but also to the lecturer during the consultation process. Students were therefore better able to interact with others and communicate as a result of group work (Lin et al. 2015). Apart from that, PBL implementation in a class can positively enhance students' social behaviours (Febriana, 2017). In order for the project to run according to its goals and on time, students must cooperate with all



members in the group. By participating in this kind of group session, students' cooperation skill were improved (Essien, 2018). It is in accordance with Hung et al. (2012) who said that PBL developed cooperation between group members and also promoted their learning outcomes. After communicating and cooperating, in the end students must be able to make a decision or decision making about how their project should be done. It can also be seen that student-centered learning is emphasized here because students are ultimately required to independently think about the most appropriate solution to complete their project.

Table 4. Students' voices on the Project-Based Learning implementation in their academic writing course

No	Question	Answer	
		Yes	No
1	Based on PBL implementation in your academic writing course, do the lecturers give clear instruction regarding the project?	97.5 %	2.5 %
2	Do the lecturers also provide a clear timeline regarding the project?	100 %	0 %
3	Do the lecturers monitor the progress of your group's project?	100 %	0 %
4	Do the lecturers give clear feedback related to your group's project?	95 %	5 %
5	Do you/your group make any plan in completing the project?	97.5 %	2.5 %

Project-Based Learning, as previously said, places a strong emphasis on the teacher's role as a facilitator and the need for student-centered learning. However, researchers are interested in seeing how students perceive how the lecturers and students in implementing PBL in an academic writing course. According to Habok and Nagy (2016), instead of a traditional role, the lecturer's role had become a facilitator. From the table above, it is very clear that almost all students agree that their lecturers have carried out their duties as facilitators well. This is addressed from several points in the form of giving clear instructions regarding the project, providing a clear timeline, monitoring the student projects, and providing clear feedback. Here, teacher's feedback is very important because according to Kavlu (2017), who stated that teachers' feedback in the PBL implementation not only develops students' social communicative skill, but also their language skills. According to the current study's findings, which demonstrated that students' perceptions of their language and communication skill had developed. In addition, students also seem to have their respective plans in completing their projects. It can be concluded that the lecturers as facilitators have guided as well as possible and facilitated students to go through the entire process. The rest, it all depends on



students who autonomously and independently have to work with their groups to complete a given project by considering every input from their lecturers.

In order to fully apply project-based learning in the academic writing course, researchers in this study also requested students to provide brief perceptions on areas that needed improvement. After all the answers have been reviewed, the researchers made summary as presented in the table below:

Table 5. Issues related to things that can be improved from Project-Based Learning implementation in academic writing course

Students' perceptions	Issues
<p>Student 5: <i>The thing that needs to be improved is about student discipline in full-filling each progress of their project.</i></p> <p>Student 14: <i>No, it's all good. But I think the SRL diary doesn't make students motivated enough in finishing the project.</i></p> <p>Student 19: <i>Students must be more actively involved in the learning process as well as several other learning processes such as asking questions, finding explanations for phenomena, and applying information.</i></p> <p>Student 30: <i>I think from other groups who provide feedback to finish faster.</i></p> <p>Student 33: <i>The project must attract students to complete the project. they should not get bored with the project and learn something. So, they don't just find new material and knowledge.</i></p> <p>Student 34: <i>Maybe the discipline of the students will be improved even more.</i></p> <p>Student 38: <i>To improve the implementation of Project-Based Learning, it is necessary to find out how to make students more enthusiastic in doing project-based assignments.</i></p>	Students' motivation
<p>Student 7: <i>I think the lecturers should give us a longer time to complete the project.</i></p> <p>Student 22: <i>So far so good, the lecturers give clear feedback, timeline, and instruction. Maybe we just need more consultation time in class.</i></p> <p>Student 30: <i>The time given for data collection is too short.</i></p> <p>Student 36: <i>Should give a long timeline to writing.</i></p> <p>Student 40: <i>Needs to make the time table to be effective while doing the PBL.</i></p>	Time allocation
<p>Student 15: <i>I think before the lecturers give a task to writing, the teacher can give a clear explanation and follow up the student if they are understood or not about the material.</i></p> <p>Student 18: <i>What needs to be improved in Project-Based Learning in Academic Writing is the procedure for writing an article in detail. Like how to make an introduction, content, conclusion, until how to write abstractly.</i></p>	Teaching-learning process



Student 26: *Actually, the implementation of Project-Based Learning in the Academic Writing course is already good but for skill improvement, it is more about improving reading and writing. So, I think the lecturer can provide something innovative and creative that can improve listening and speaking skills.*

Student 6: *We need to build the cooperation in a team more solid so that the implementation of PJBL in that course works better.*

Students' teamwork

Student 21: *Project-based learning needs to be communicative between each member of the group so the result can be confirmed as a group work.*

In implementing Project-based Learning in class, lecturers generally have prepared a stage scenario of how the method is applied from the beginning of the meeting to the end. Taken from Anggraini and Wulandari (2021), the project-based learning learning model consists of six stages. First, the project determination stage that starts what kind of project students will choose and the lecturer approves. Students are given crucial concepts and information about academic writing at the beginning of this course. In addition, students are also asked to do brainstorming in the form of finding problems in the field for research. After the proposed ideas from students have been received, they will proceed to the second stage, namely planning the steps for completing the project. At this stage, each group that has been prepared at the beginning of the meeting must discuss and develop their respective plans for carrying out their research project from the beginning to finish. Next, the creation of the project implementation schedule is the third stage. Here, the lecturer provides a timeline of how and what progress each week must be completed by each group. In fact, each group also has its own timeline for carrying out their projects. After several meetings have passed, the completion of the project with the monitoring of the lecturer as a facilitator enters the fourth stage. In this fourth stage, each group has completed its weekly progress and each research project can be said to be complete. Then, the stage then changes to the publication of project results. After all groups have finished writing their research papers, they are required to publish them in the journal they have chosen and adjust it to their type of research. These kinds of steps are conducted because in PBL, students learn throughout the entire process (Warr & West, 2020). Finally, the evaluation stage of the project results is carried out to conclude in an outline what has been achieved and what needs to be developed from the course through assessment from lecturers.

In carrying out the stages mentioned above, the researchers in this study succeeded in gathering several important issues that could improve how PBL should be implemented. According to students' perceptions in this course, there are some important issues which are quite repeatedly expressed by students. The first is related to students' motivation. This issue has become one of the teachers' difficulties in implementing PBL. It's because studies by Naviri et al. (2021) indicated that teachers had trouble motivating students who had previously attended a big PBL classroom. Overall, students think that implementing PBL in their academic writing courses should be more appealing to students' interests. This must



be considered so that all students are more motivated and disciplined in completing progress every week. This is because active and motivated students can be seen from how involved they are in doing the tasks given (Sudjana, 2004). Therefore, Rusman (2012) describes several ways that can be done to improve student activity, two of them is to give enjoyable teaching in accordance with the learning objectives and provide more time for learning activities. Hence, this first issue is also related to the second issue, namely the time allocation. Some students perceived that they needed more time to do activities such as consultations and given deadlines for certain progress. If students don't get enough time to carry out consultation sessions with lecturers, then the appropriate solution is for lecturers to always receive consultations from their students outside of class hours. Meanwhile, giving a deadline that is considered too soon can be reconsidered for an extension by still paying attention to the timeline that has been made.

Regarding the teaching learning process, three students have different views on this matter. Student 15 suggests that before students do real writing practice related to their respective projects, teachers must equip students with sufficient knowledge regarding each chapter. According to teachers' perception research towards PBL, teachers felt the challenge mostly because they lacked the time to prepare the materials (Ravelle, 2019). Additionally, it is consistent with Mansor et al. (2015), who claimed that PBL-using teachers did not cover all of the curriculum's required materials. Even though students have been given material to read independently, some students are less able to absorb the material without a clear explanation first from the lecturer. Therefore, lecturers must provide sufficient material and ensure that all students understand what they are doing. This is also related to the perceptions of student 18 who need more detailed material to carry out their projects. Therefore, lecturers can manage more of their time to provide reading materials and explanations that are more detailed but still able to provide a clear view of their students. By doing so, the collaboration while doing the project in PBL can leads to active learning (Yamada, 2020).

The third student on the issue related to the teaching-learning process gave his views regarding the project in the academic writing course which focuses more on writing and reading only. Indeed, speaking and listening are not the main skills that are emphasized in courses that require students to read a lot in order to produce good writing. However, Simpson's research (2011) shows that PBL can also develop language skills. Therefore, it would be better if in the future the implementation of PBL could also promote all English language skills, including listening and speaking. The last issue raised by two students was related to students' teamwork. As stated by Akindele (2012), students admit that there were many conflicts that may arise while doing group work. This conflict also includes students' difficulties in maintaining good communication between members so that the group remains solid in working on group projects. As it happened, Ayish and Deveci's (2019) research showed that many students prefer working alone rather than in groups because of their negative past team work experience. These problems also came from unequal work distribution, slacking, or group members' irresponsible behaviour. As a consequence, students who work with their group are experiencing some academic struggles (Eckard, 2020). Actually, here students are trained to solve such problems so that their problem solving skill and social skill



are developed. According to Shernoff et al. (2017), students who work collaboratively will know the problem solving skill. As lecturers, they can monitor how each group member works together and provide suggestions that can help them solve their problems so that it would not ruin their academic achievements.

More than half of the students in the academic writing course expressed satisfaction with the implementation of project-based learning, despite some feeling there were shortcomings. This can be seen from a total of 17 students who gave their perceptions regarding the shortcomings of implementing PBL, while the rest felt quite satisfied and had nothing to improve on. But when implementing PBL, it is crucial for teachers to pay attention to students' views and preferences (DeMink-Carthew & Olofson, 2020). Nevertheless, students also should have a voice regarding their study (Hira & Anderson, 2021). Therefore, as has already been mentioned, it is still crucial to talk about the issues they have regarding the incorporation of PBL in their academic writing course. The findings of this study revealed that students believe their speaking, writing, and reading skill have improved, which has consequences for the development of students' English language skills. These results show a sufficient link to support past research which has successfully shown that the PBL learning model's activities give students the chance to combine their subject-matter expertise and language skills while working on group projects. (Fried-Booth, 1997; Stoller, 1997; Willie, 2001; Solomon, 2003). Hence, PBL is really suitable to be implemented in language courses to teach its particular language skills.

Writing skill, which made up the majority of the outcomes of the current study, concurs with Artini et al. (2018) who claimed that the use of PBL significantly improved students' writing skill who were English majors. In this academic writing course, students are encouraged to apply academic writing skills such as contextualizing, summarizing, quoting, sourcing, agreeing or disagreeing, evaluating, defining, exemplifying, explaining, describing, comparing, classifying, referencing visuals, recommending and connecting (Fang, 2021). Therefore, developing students' writing skill on this academic writing course can be said to be successful. However, students' English skills in general can also be improved as they carry out their project progress (Kettanun, 2015). Meanwhile, all the 21st century skills investigated in this study show a sizable percentage, as shown in table 3. These findings are consistent with a study by Stein (1995) in Puangpunsi (2021), which showed that project-based learning activities incorporated students' problem-solving, teamwork, cooperation, negotiating, and many other interpersonal skills, all of which are crucial for survival in the twenty-first century. From students' perspectives, it is clear that this university has implemented project-based learning in its academic writing courses because it believes it would help students improve their 21st-century and English language skills.

Conclusion

Based on the study's findings, which have already been mentioned, students felt that the use of project-based learning in their academic writing course had improved their language skills and prepared them to survive in the twenty-first century. This study's findings indicate that the three skills with the highest percentages are writing, problem-solving, and critical thinking. This is so that students can acquire



academic writing skills in this academic writing course. However, some students also believe that their listening skill and reading skill are also improving. In addition, the implementation of PBL in this academic writing course emphasizes problem-solving skill, which have grown to be vital skill in this century. This is because PBL encourages students to detect genuine problems and develop critical thinking skill to solve them. Apart from that, this study also looks at how students perceive the application of their PBL academic writing course. Therefore, the results of this study also revealed several issues faced by students. These issues are among others related to students' motivation, time allocation, teaching-learning process, and students' teamwork. Thus, this study provided some pedagogical implications.

First, implementing PBL in language courses will be better if the lecturer doesn't only focus on just one or a few skills. In other words, lecturers can integrate the four main language learning skills which consist of writing, reading, speaking, and listening all at once. Second, lecturers must be able to choose teaching activities in class and outside class that can increase student motivation to work on projects with full punctuality throughout the entire process. Third, lecturers must consider giving time to collect assignments by adjusting how difficult the assignments are and how the conditions of the students are. Fourth, students must be given a clear and sufficient explanation of the material as a provision for them to practice directly. In addition, students must also be ascertained whether they understand or not with the material provided. Finally, lecturers can also invite students to communicate the problems they experience while working on group projects, including problems between group members. This is done so that students can receive suggestions from more mature parties so that problems are quickly resolved properly. However, the scope of this study is restricted to how students view the use of PBL in the academic writing course and how it relates to the development of students' English language skills and 21st century skills. Therefore, the results of this study cannot be generalized widely. Further research related to this matter is highly recommended, especially using more varied methods and valid calculations to provide more in-depth analysis on how effective the application of PBL is on a wider range of subjects.

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