

Language Learning Strategies Under the PBL Approach: Study of Seventh Graders' Speaking

Estrategias de Aprendizaje de Idiomas bajo el Enfoque de Aprendizaje Basado en Proyectos: Estudio de la Habilidad Oral en estudiantes de Séptimo Grado

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Abstract

This study deeply examines the potential impact of Project-Based Learning (PBL) on the speaking abilities of a group of seventh-grade students at a public school in Cartagena, Colombia, and its connection to language learning strategies. A mixed-gender group of thirty-five students aged between 12 and 15 was randomly chosen for this explorative action research. The methodology involved six dynamic workshops wherein the students were evaluated using a multi-modal approach including surveys, a research diary, and a non-participant observation checklist. These tools helped examine the efficacy of different strategies and students' oral performance during their final presentations. Data were systematically collected and analyzed with recurrent information organized into defined

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Received: August 14th, 2023. Accepted: July 9th, 2024

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categories and coded into emerging themes from the applied artifacts. Comparative analyses of students' performances across three distinct stages - diagnosis, action, and evaluation - revealed noticeable differences in learning outcomes, confidence, and motivation among the participants. The authors claim that incorporating the PBL approach and language learning strategies can boost students' motivation, foster autonomous learning, and nurture critical thinking and collaborative skills.

Keywords: Collaborative work, confidence, language learning strategies, project-based learning, speaking skill

Resumen

Este artículo indaga sobre el impacto potencial del Aprendizaje Basado en Proyectos (ABP) en la habilidad oral de un grupo de estudiantes de séptimo grado de una escuela pública en Cartagena, Colombia, y también explora su conexión con las estrategias de aprendizaje de idiomas. Las investigadoras seleccionaron al azar un grupo de 35 estudiantes cuyas edades estaban entre 12 y 15 años para efectos de esta investigación-acción. La metodología incluyó seis talleres bajo un enfoque multimodal que incluía encuestas, un diario de campo, y una lista de chequeo no participante. Estas herramientas ayudaron a evaluar la eficacia de diferentes estrategias y el desempeño oral durante sus presentaciones orales finales. La información se recogió y examinó sistemáticamente organizada en categorías definidas codificadas con base en temas emergentes de los artefactos aplicados. Los análisis comparativos de los desempeños de los estudiantes a través de tres diferentes etapas (diagnóstico, acción y evaluación) revelaron diferencias notables en los resultados del aprendizaje, la confianza y la motivación entre los participantes. Las autoras postulan que la incorporación del enfoque ABP y las estrategias de aprendizaje de idiomas pueden aumentar la motivación de los estudiantes, fomentar el aprendizaje autónomo, el pensamiento crítico y las habilidades de colaboración.

Palabras Claves: Aprendizaje basado en proyectos, confianza, estrategias de aprendizaje de idiomas, habilidad oral, trabajo colaborativo

Introduction

Mastering multiple languages is desirable in today's global society, prompting many individuals to seek instruction from specialized institutions. To meet this demand, these entities employ educators trained in contemporary and effective teaching approaches such as Project-Based Learning (PBL). As Lam (2011) noted, PBL is a dynamic approach in which students delve into real-world problems, prompting a deeper understanding and retention of the subject matter compared to traditional textbook-based learning. This approach effectively promotes cognitive, social, and language skills, while accounting for the learner's context, turning it into a potent source of knowledge.

This study is centered on implementing Project-Based Learning (PBL) to encourage the oral skills in English among 35 seventh-grade students at a public school in Cartagena. After an initial diagnosis, we concluded that most of them exhibited a lack of motivation in verbally employing their target language (TL). When students were required to speak, many

of them displayed feelings of embarrassment. In addition, difficulties were observed during group activities, particularly with low levels of tolerance and cooperation. These issues pose potential impediments to their overall language performance. Therefore, the need to investigate possible underlying causes and devise appropriate strategies arose. The goal is to provide these students with effective tools to enhance their oral proficiency and foster better teamwork.

This paper explores the components and characteristics of PBL, as framed within Oxford's (1990) taxonomy of language learning strategies, and examines its impact on fostering cooperative work and enhancing speaking skills. The research was conducted in line with Kemmis and McTaggart's (1988) concept of Action Research, which delineates four critical steps: planning, action, observation, and reflection. The diagnostic phase formed the initial stage, highlighting the urgent need to improve speaking skills within the target group. Several categories emerged from this stage, including speaking difficulties signifying a reluctance to speak due to internal and external factors. This connected with the next category, high affective filter, indicating significant emotional barriers to language learning. Nonetheless, it was observed that most of the students were enthusiastic about learning a target language (L2), underscoring the need for a teaching approach that actively engages them in their learning process.

Following the collection and analysis of data in the diagnostic stage, the subsequent step entailed planning six workshops rooted in the PBL approach. These sessions aimed to bolster speaking fluency, encourage cooperative work, and nurture 21st-century skills such as creativity and collaboration. Bell (2010) posits that PBL fosters a more profound understanding of a topic, promotes deeper learning, enhances higher-level reading abilities, and boosts learning motivation. Hence, implementing this approach allows students to comprehend the causality of a problem situation, stimulating their enthusiasm to continue their learning journey.

In the final phase of this research, an evaluation of the six workshops was undertaken, and the collected data were analyzed to discern key findings and formulate recommendations for English as a Foreign Language (EFL) teachers. The analysis uncovered notable improvements in students' speaking fluency, confidence, and language proficiency.

Previous Studies

This section displays seven studies about the impact of PBL on speaking skills. It comprises national, Latin American, and international research to validate PBL, the advantages of implementing Oxford's (1990) learning strategies taxonomy in an EFL class, and alignment with current language learning features regarding teachers and students.

In this action research, Vaca Torres and Gómez (2017) examined how thirty-ninth graders from a public school in Colombia enhanced their speaking skills through PBL. This study aimed to generate collaboration, help each other, be responsible, and work at their own pace. The instruments used for collecting data were field notes, transcripts of learners' oral performance, and an interview. The information was analyzed using the grounded approach to discover patterns in the collected data. Results revealed an increase in oral production since learners needed target vocabulary to communicate their ideas and to overcome their speaking fear which was possible through PBL work.

Additionally, Riswandi (2018) analyzed two aspects of PBL implementation. First, the effect on ninth graders' speaking skills from Surakarta, Indonesia, and second, the teaching and learning process. The Action Research was implemented in two cycles. The researcher employed an observation checklist, field notes, a performance test, a questionnaire, and an interview to gather information.

Triangulation was used to validate data. Each cycle revealed its results. Cycle one displayed an increase in students' motivation and speaking skills. However, some students were still reluctant to speak. Cycle two revealed that most of the students participated actively during the project. This study also displayed students' progress in linguistic features such as pronunciation, grammar, fluency, comprehension, and vocabulary.

Dewi's (2016) study aimed to describe PBL applicability in a classroom. The researcher implemented observations and teaching experiences in which she realized students' four needed aspects: time to practice speaking, more vocabulary, and interest because of the teachers' methodology, and contents from real life. Based on this data, and students' achievements in an English proficiency test, the researcher applied Action Research in two cycles administering researchers' and learners' observation sheets, tests, and student questionnaire sheets. After comparing the pre and post-test results, findings pointed out that students increased participation and improved their speaking.

Alhaysony (2017) relayed in reporting the research results of Learning Strategies usage in Saudi EFL 66 men and 68 women students from Aljouf University. This objective was to understand the relationship between three aspects of Language Learning strategies, gender, and the duration of English language study. The researcher administered a questionnaire focusing on cognitive, metacognitive, memory, affective, compensation, and social strategies. Results from this study revealed that metacognitive, compensation, and cognitive strategies were mainly used, and memory and affective were less utilized. Moreover, results showed that women used more Language Learning strategies than men.

Moreover, a Colombian study validated the positive impact of metacognitive strategies to elevate EFL awareness of stress and intonation. Peñuela (2018) conducted this action research to examine the effect of three metacognitive strategies: overviewing, goal setting,

and self-evaluation. The participants were ten adult students from a private language center in Bogota. These learners presented a lack of awareness of using suprasegments (stress and intonation) to communicate in an oral interview. The research was conducted in three cycles using learning logs, recorded artifacts, and field notes to collect data. The author analyzed the information by triangulation. The results demonstrated awareness raised through a triadic process, including fostering the understanding of suprasegmental features, promoting metacognition to increase self-regulation, and provoking self-awareness.

In the same way, González et al. (2018) demonstrated the impact of cognitive strategies in a mixed-method study to develop listening in EFL. The participants were students in the first year of a university's Bachelor's Degree program in Foreign Languages. The research study employed a diagnostic test. Qualitative and quantitative instruments included The Strategy Inventory Language Learning in version 7.0, focus groups, diaries, and rubrics. Findings showed that listening was developed due to a more regulated and supervised use of cognitive strategies.

Qualitative research conducted by De Araúz (2009) validated Oxford's language learning characteristics. In her study, 30 first-year students from the Bachelor's Degree in English participated. The researcher used questionnaires, interviews, in-class observations, reflective portfolios, and students' diaries concerning listening, writing, speaking, and reading skills to gather information. The author used Oxford's taxonomy with a learning styles questionnaire to reinforce their research. Results showed that most learners used each strategy and had more confidence.

Methodology

Considering that this study examines the effect of learning strategies under the PBL approach on learners' speaking skills, a qualitative approach such as Action Research (AR) was appropriate. The objectives were to comprehend learners' low performance in oral tasks and possible causes of anxiety during these activities and compile data on pupils' experiences and opinions about the proposed methodologies to tackle their language deficiencies. Creswell (2009) affirms that qualitative research sifts through human individual or group situations. It is the case of Action research, which involves the participants' employment of different instruments to collect information and reflect on this data.

Burns (2001) argues that the core of Action Research lies in the systematic observation of ongoing social processes across various contexts—in this case, the classroom—to intervene in them to bring about changes that will eventually lead to improvements. According to Kemmis and McTaggart (1988), Action Research is a cyclical process that involves four essential components: planning, action, observation, and reflection.

As teacher researchers, we conducted these processes during three stages: diagnostic, action, and evaluation. For this study, we set research questions and objectives. To further understand the phenomenon, we managed a literature review. Following this, we implemented six workshops to collect data in the action stage. Likewise, we outlined the instruments to collect data (observations, surveys, a non-participant observation checklist, and transcripts). After this, it was necessary to reflect on the process to validate the impact of these workshops. Ultimately, the authors analyzed advances in students' performance and objectives' achievements during the evaluation .

Diagnostic Stage

This stage was carried out in the second semester of 2021 during the COVID-19 pandemic. It was done in hybrid classes: some students were in virtual classes while others were face-to-face. First, the teacher researcher used a teacher interview, a student survey, journals, and a diagnostic test to understand the phenomenon more deeply. The survey was to validate the data collected in the journal, which contains Likert scales, multiple choice, semantic scales, numerical scales, and open-ended questions related to speaking skills, feelings while doing oral tasks, methodology to learn English, and attitudes towards English lessons. In addition, the interview with the teacher was implemented to collect information about the previous teacher's perceptions of participants' English learning in terms of cognitive and social skills. The diagnostic test was applied regarding the four skills of listening, writing, reading, and speaking, in which oral proficiency was the weakest skill in the participants. Each instrument was coded and then triangulated to find concurrency.

The analysis of each instrument revealed speaking difficulties (lack of knowledge of vocabulary and expressions to speak fluently about any topic), high affective filter, lack of L2 understanding, and students' low participation in class. However, they showed a willingness to learn English, and a tendency to do collaborative work.

14 Finally, the analysis conducted during the diagnostic stage informed the selection of the PBL approach for the six workshops and the associated learning strategies. This decision was made considering the learners' needs, the educational context, and the school's pedagogical model. To ensure alignment with this approach and to accommodate the participants' preference for group work, the teacher-researcher carefully selected workshop topics that resonated with these factors.

The table below provides a succinct yet clear explanation of the reasons for using each instrument during the Diagnostic stage.

Table 1. *Data Collection Techniques and Instruments during the Diagnostic Stage*

No.	Data Collection Techniques	Data Collection Instruments	Rationale
1	Students' survey	Questionnaire	To collect information about probable causes of students' demotivation towards English class and how they perceive this language.
2	Teacher's interview	Interview protocol	To gather data about the students' motivation towards the English class, the attitudes, feelings, perceptions, and other relevant aspects that interfere with language learning in the previous course (6 grade).
3	Non-participant observation	Diagnostic Test	To collect information about students' performance in the four skills: reading, listening, writing, and speaking to determine the most prominent difficulties.
4	Participant observation	Journal	This instrument aims to collect information about the students' behavior, and attitudes regarding the activities proposed in class.

Action Stage

During this stage, the teacher researcher implemented six workshops following the Gold Standards of PBL, incorporating one learning strategy per workshop based on Oxford's (1990) taxonomy. In her book, she defines learning strategies as "actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations" (p. 8). Therefore, applying learning strategies can be a useful tool for motivating students to construct knowledge and apply it to real-life situations when learning a target language. These workshops included issues related to various aspects of Cartagena city. In addition, projects had audio-visual support, such as images or videos. Activities during the sustained inquiry and authenticity stages in which students familiarize themselves with the learning strategy, vocabulary, or the project's core by doing speaking or

writing activities. The following stages included self and peer assessment activities, giving opinions, evaluating, and making decisions about the project's resources to present the final product. Finally, the researcher applied a post-test to determine the impact of the PBL approach and learning strategies.

The table below provides a brief description of the workshops implemented, the learning strategies applied, and the skills targeted in each workshop.

Table 2. *Workshops' Description*

Workshop's Name	What was the project about?	Learning strategy	Project's focus
Workshop 1: A Visit to the Aviary	Participants displayed an interview between native people and tourists talking about bird species and different activities in the National Aviary on Barú Island.	Applying images and sounds	Vocabulary recognition through images
Workshop 2: Protecting our Mangroves	Learners centered on describing actions to preserve Mangroves and mentioning bird species that live in these ecosystems by role-playing a situation in which they showed the summarized information and actions organized in a mind map.	Creating a structure for input and output (Summarizing and Mind mapping)	Vocabulary knowledge, developing thinking skills, a self-assessment checklist
Workshop 3: Knowing Cartagena Islands	Pupils prepared a presentation about tourist attractions and activities tourists may do in the Cartagena Islands. They planned their task based on information gathered from some web pages to submit a brochure.	Planning for a language task (identifying the purpose of a language task)	Encourage speaking, creativity, peer feedback, and having roles in teamwork
Workshop 4: Embellishing Our City	Students learned several strategies to control nervousness by presenting news to other partners about causes and actions to embellish deteriorated places in their communities.	Lowering your anxiety (meditation, relaxation, and deep breathing)	Confidence and self-esteem
Workshop 5: Giving a Good Impression	Participants represented a tourist tour by reflecting on positive attitudes to impress tourists and created a podcast interviewing a tourist.	Switching to the first language	Increase students' confidence. Self-assessment questionnaire and developing language learner and teacher profile

Workshop's Name	What was the project about?	Learning strategy	Project's focus
Workshop 6: My Neighborhood, My Customs	Learners performed a dialogue with community members about their neighborhood's cultural aspects and displayed the information in a brochure or public announcement.	Getting help (using mimics or gestures)	Teacher's feedback to the students and vocabulary knowledge

For this stage, the teachers researchers employed three instruments to collect information during the first three workshops: (a) a non-participant observation checklist in which an external teacher evaluates students' performance during the final product presentation; (b) the journal registered details about every class and important insights into the lesson; and (c) the students' survey gathered data about their perceptions of the topic, learning strategy, language improvement, collaborative work, and confidence. Nevertheless, based on the journals' observations, it was necessary to include transcripts of the participants' speech in the final stage showing information about their use of vocabulary, fluency, and message clarity. The teacher-researchers also used a speaking assessment rubric during each workshop.

The following table describes the data collection techniques and instruments used during the research process. Moreover, it justifies each.

Table 3. *Data Collection Techniques and Instruments in the Action Stage*

No.	Data collection techniques	Data collection instruments	Rationale
1	Participant Observation	Journal	To register and analyze information about students' behavior, participation, and language use.
2	Students survey	Questionnaire	To collect information about learning strategy usefulness and PBL effectiveness to foster speaking ability and students' perceptions about the proposed activities to work on the workshops' topic.
3	Non-participant observation	Checklist	To collect data about the effectiveness and the impact of the strategy, vocabulary, anxiety levels, and collaborative work for developing the Workshops.

No.	Data collection techniques	Data collection instruments	Rationale
4	Participant observation	Journal	To collect data about students' performance concerning the use of the language and their behavior and perceptions towards the EFL classroom.
5	Test	Post-test	To assess the progress of speaking skills and compare it with the pre-test results and examine the impact of the action stage of the study.
6	Scoring	Rubrics	To evaluate students' speaking skills by scoring from 0 to 5 according to the CEFR for an A1 level in fluency, message clarity, and vocabulary.

Participants

This study was conducted with 35 students from a seventh-grade course (10 girls and 25 boys). Their ages ranged between 12 and 15 years old. The teacher-researchers considered convenience sampling theory to collect and analyze data (Mackey & Gass, 2005). These participants came from low-income families with deep socio-economic phenomena such as drug addiction, gangsters, robbery, or prostitution. However, they were committed, respectful, and willing to participate in projects' activities.

They had a low English language proficiency level, as perceived in the diagnostic stage results. Likewise, the most prominent deficiency was in their speaking ability considering their deficient connection with the language. Besides, they spent two years at home because of the pandemic COVID-19 and most did not have the internet to connect to virtual classes. Moreover, they did not study the language in primary or preschool. Therefore, they needed higher levels of writing, listening, reading, and speaking skills. They knew some words and expressions but needed more for their grade.

Data Analysis Procedure

To analyze data, the teacher researchers followed what Seliger and Shohamy (2003) state about analyzing information to find common issues and refer to shifting, organizing, summarizing, and synthesizing to produce some results and conclusions of the research. This is what Saldaña (2016) defines as a code (it could be a word or phrase that represents the nature of a piece of information). Therefore, the teacher researchers used a coding process to examine the information gathered from the diagnostics and action stages instruments. According to Freeman (1998), triangulation is a process in which the researcher

includes several facts and opinions about the object of the study or investigation question. Furthermore, instruments were triangulated with a description (operationalization) and percentages. The non-participant observation checklist, journal, and transcripts were coded in a Microsoft Word document and afterward, these codes were refined in a Microsoft Excel document with their frequencies. The student's survey was coded manually and written in another Microsoft Excel document with the number of occurrences.

The following table presents the codes that emerged during the evaluation stage and explains each one.

Table 4. *Codes Emerged during the Evaluation Stage*

Categories	Operationalization
High performance in project	It explains when the students demonstrate in their performance social or cognitive skills such as creativity, teamwork, and others derived from project work when conducting the project.
Students' satisfactory performance and language progress	It expresses the students' participation in class and project activities, evidence of their previous or topic's knowledge, and their improvement in language issues such as fluency, skills recognition, language awareness of grammar, and pronunciation.
Low affective filter	It demonstrates the students' willingness to participate in the activities and expresses confidence and relaxation to speak during oral activities.
High affective filter	It refers to the students' unwillingness to participate because of nervousness, lack of confidence, or embarrassment produced by anxiety.
Usage of vocabulary learned	It represents when the students learn new vocabulary and express it in class participation or incorporate it into their activities and final product.
Strategy effectiveness/ ss. strategy use	It describes the effectiveness of the strategy used concerning ss language abilities and times when the students use it in class, when the teacher presents it, or when they use it in their final product presentation.
Speaking fluency	The code represents when the students speak without hesitation, clearly, and efficiently while doing oral activities.
Teacher pedagogical and methodological issues	This code represents every time the teacher motivates learners to participate in class, teamwork, confidence exemplifies, asks for an activity, uses a strategy to make the students understand the topic or activity, or elicits answers from this activity. It also explains when the teacher encourages them to participate and to use English. This category also includes when the teacher gives feedback.

Categories	Operationalization
Interest in oral activities	It describes the students' willingness to participate in oral activities and the ease of conducting these kinds of tasks.
Misunderstanding of the message	It appears when the students speak, and the message needs to be clarified or understood, or they speak in a low voice.
Pronunciation difficulties	It reports the students' pronunciation mistakes.
Low performance in project	It represents when the students demonstrate low social and cognitive skills such as participation in project design, creativity, and teamwork.

Results and Discussion

This research demonstrates the impact of learning strategies under the PBL approach on seventh graders' speaking skills. This section presents the results after triangulating the information obtained from the students' survey, transcript, non-participant observation checklists, and journals applied in each workshop. After examining the frequency of the previously mentioned instruments, the following categories obtained the same percentage: *e: Students' good performance and language progress* and *low affective filter* with 16%, followed by *High performance in the project* with 13%. The codes *Usage of vocabulary learned* and *Strategy effectiveness and use* both had 10%.

These last codes obtained significant percentages showing that fluency improvement and teacher orientation are needed (speaking fluency with 7% / teacher pedagogical and methodological issues with 11%). The following chart displays the categories with the percentages and frequencies obtained in each project.

The following table presents the frequency of each emerging category across the six workshops. Furthermore, it displays the percentage of occurrence for each category.

Table 5. *General Workshops Triangulation*

Categories	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Workshop 5	Workshop 6	Total	Percentage
High performance in Project	66	73	190	119	106	111	665	13%
Students' good performance and language progress	108	102	134	132	102	235	813	16%

Categories	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Workshop 5	Workshop 6	Total	Percentage
Low affective filter	84	163	176	112	123	150	808	16%
High affective filter	80	123	70	47	97	43	460	9%
Usage of vocabulary learned	94	82	57	77	81	102	493	10%
Strategy effectiveness/strategy use	39	50	20	139	70	180	498	10%
Speaking fluency	23	Not present	51	94	111	87	366	7%
Teacher pedagogical and methodological issues	65	46	174	112	106	57	560	11%
Interest in oral activities	Not present	56	Not present	55	73	83	267	5%
Misunderstanding of the message	Not present	Not present	13	18	18	12	61	1%
Pronunciation difficulties	Not present	Not present	17	16	29	36	98	2%
Low performance in project	41	32	Not present	Not present	Not present	Not present	73	1%
Totals	600	727	902	921	916	1096	5162	100%

After analyzing the information from the six workshops and following the research objectives, the researchers distinguished the following findings:

Finding 1. Speaking Fluency Changed According to the Learning Strategy

Fluency varied according to the learning strategy since some students facilitated more natural and spontaneous speech. The category “speaking fluency” experienced a notable increase in Workshop 4, where an effective strategy was deployed (relaxation, deep breathing, and meditation), and in Workshops 5 and 6, where a compensation strategy (switching to mother tongue and getting help, using mimics and gestures) was used to bolster confidence and allow learners to articulate more eloquently. Hence, these strategies helped participants have fewer pauses and profit from the time to speak because they dominated vocabulary and the topic being dealt with (Fillmore et al., 2014, p. 93; Vaca Torres & Gómez, 2017).

Some students' comments validate this observation. For instance, "*Me sentí bien porque me salió fluido*", "*Bien seguro, mejor pude hablar fluido por corto tiempo.*" (see translations in the footnotes³). Other journals' comments also supported this hypothesis, for instance, "*Despite having pronunciation difficulties students did not stop their speech or hesitate, which means they were more fluent*", "*Breathing and meditation practices were helpful because they were fluent, and the audience understood their role.*" Conversely, this aspect obtained low frequency in workshops 1, 2, and 3 in which transcripts were not part of the instruments and language learning strategies targeted cognitive issues related to retention, recall of information, and metacognitive processes for participants to understand how they learned and analyze features surrounding the projects (Peñuela, 2018).

Finding 2. PBL Stimulated Interest in Oral Tasks

Implementing this approach incentivized participants' interest in performing oral tasks as Dewi, 2016 suggests in the study we cited in the previous studies section. The code "interest in oral tasks" reflected that collaborative work and investigation of familiar topics increased students' participation and lesson involvement. This, in turn, fostered a willingness to engage in speaking activities, regardless of potential errors, indicating the effective nature of these pedagogical strategies in stimulating oral language participation (Dewi, 2016). Thomas (2000) states that PBL should be developed, considering driven questions to foster students' participation in the project and information gathering. The survey generated significant data about this fact. For example, when some students were asked the question "*¿Piensas que el trabajo por proyectos te permite participar más de las actividades en la clase de inglés? Si o No ¿Por qué?*" Some of them replied, "*Si, porque puedo expresarme oralmente más que en otras clases*" or "*si, porque cada persona del grupo se expresa a través de la actuación y todos hablamos*"⁴.

Finding 3. Students Ameliorated Social and Cognitive Skills through the PBL Approach

Drawing on Shin's (2018) research, PBL is a pivotal approach for cultivating other aspects such as intrinsic motivation, creativity, and collaboration. This assumption confirms what the six workshops' implementation revealed in terms of cognitive skills such as memory, classification, and recall that facilitated vocabulary learning, searching for information, and creation of materials. Additionally, collaborative work, which is a social skill, was improved since students had a role in their group facilitating performance during the final product

³ "I felt good because it came out fluently," "Very confident, I was able to speak fluently for a short time."

⁴ "Do you think that project work allows you to participate more in the activities in English class? Yes or No Why?" "Yes, because I can express myself orally more than in other classes" or "Yes, because each person in the group expresses themselves through acting and we all speak."

presentation. As Nguyen (2011) asserts, PBL stimulates cooperative skills such as trust in partners' work and provides opportunities to reflect deeply on peers' feedback. This approach fostered their active involvement and nurtured their ability to work within a team effectively.

Another social skill meliorated was giving and receiving feedback, as evident in the suggested activities during the critique revision stage of the project in which other social skills such as paying close attention to the other's utterances, empathy, good manners, and non-verbal communication took place. This finding corroborates Larmer et al.'s (2015) assumption about enhancing feedback moments in which students evaluate their work with classmates and the teacher.

Finding 4. Improvement of Language Features with Language Learning Use and PBL Workshops

The research objective was to define the impact of learning strategies under the PBL approach on learners' speaking skills. The code "Students' good performance and language progress" gave evidence of the effectiveness of those strategies. Furthermore, those strategies allowed students to learn thinking and problem-solving skills, and knowledge-acquisition skills guaranteeing learning through the process (Hardan, 2013; Riswandi, 2018). For example, Workshop 6 showed a higher frequency of occurrences compared to the other five workshops, although all marked significant learner engagement. Moreover, the participants expressed satisfaction level towards most of the strategies, especially those used in Workshop 1 (Imagery and Sound), Workshop 3 (Planning for a Language Task and Identifying the Purpose of a Language Task), Workshop 4 (Lowering Anxiety through Meditation and Breathing), and Workshop 6 (Asking for Help through Mimics and Gestures). These workshops led to substantial improvements in fluency, pronunciation, grammar awareness, and self-recognition of their language abilities, further underscoring the effectiveness of the strategies employed.

For instance, some students wrote on the survey 1: "*Esta estrategia me ayuda a soltarme y relajarme al hablar en público con las demás personas*", "*Hablo más fluido*", or "*he mejorado las pronunciaciones en inglés y me he soltado más al hablar.*"⁵ (See English translation in the footnotes). The PBL methodology also took an important place in students' progress since they could monitor their learning through teacher's feedback and peer feedback considering that learners noticed their weaknesses and strengths. This last aspect is described as a formative process since students received comments about issues to improve or maintain to foster learning (Falchikov, 1996, as cited by Ching & Hsu, 2013).

⁵ "This strategy helps me to loosen up and relax when speaking in public with other people", "I speak more fluently", or "I have improved my English pronunciation, and I have become more relaxed when speaking."

Finding 5. Language Learning Strategies Augmented Vocabulary in Participants

Data displayed a significant improvement in learners' vocabulary range after comparing the pre and post-test results. It can be said that learning strategies promote retention and recall of vocabulary. Celce-Murcia (2001) points out that explicit vocabulary learning allows students to focus on vocabulary through different strategies, such as examining their previous vocabulary knowledge, using images, and several techniques to facilitate their education. Every project showed the category usage of vocabulary learned. Workshops 1, 2, 5, and 6 focused on *image and sound*, *summarizing*, *semantic mapping*, *switching to mother tongue*, and *asking for help*; those strategies constituted an essential way to develop students' abilities to enrich their lexicon. Moreover, those strategies inspired students to apply them to their oral activities recognizing the positive effect on stress control (*lowering your anxiety*) and metacognition (*arranging and planning your learning*).

Finding 6. Language Learning Strategies and PBL Fostered Confidence through Collaborative Work

PBL and language learning strategies fostered confidence since the beginning of the projects, reflected in the code *Low Affective Filter*. Workshops 2, 3, and 6 promoted self-esteem and collaborative work. In the same way, Workshops 1, 4, and 5 also enhanced self-assurance and relaxation in oral activities, despite having low rates. These facts led us to an essential feature of the affective strategies of *Lowering your anxiety*, *Encouraging yourself*, and *Taking your Emotional Temperature* (its acronym LET). These strategies aided students in controlling emotions and attitudes that negatively influence their language learning process (Oxford, 1990, González et al, 2018).

Moreover, PBL influenced participants' confidence since collaborative work stimulated comfort through role assignation. They felt support from their peers to accomplish projects' objectives.

24 *Finding 7. Contextualized Projects Stimulated Strategies' Effectiveness and Use*

Workshops showed that topics based on environmental and sociocultural issues spurred students to take advantage and enrich their knowledge and vocabulary. This was evident in the code *Strategy effectiveness and use* that got high frequencies in Workshops 4 and 6. These workshops showed that the strategies *Lowering your anxiety* and *Asking for help* had a positive impact on participants' language learning and speaking ability.

Finding 8. Classroom Environment Accentuated Researchers' Intervention

Half of the six workshops showed a high frequency regarding strategies to make participants understand the activities, giving feedback, motivating students to participate, or eliciting answers from a task represented in the code *teachers' pedagogical and methodological issues*. This finding validates Harmers' (2007) theory of the teacher's role as a controller, prompter, tutor, and resource since the teacher researcher became a fundamental part of the process, orienting and motivating participants to be actively involved in the projects. Workshops 3, 4, and 5 had a high frequency. This factor may result in learners' need for guidance and motivation to conduct projects and their activities. In addition, other factors such as time, participants' encouragement, and behavioral constraints took place while implementing the workshops.

Conclusions

Considering the aspects mentioned in the findings, and in the previous section regarding the research question, the teacher researchers concluded that:

- a. Participants show more fluent speeches when using practical strategies centered on context and interaction. Moreover, they demonstrate improvement in memory and problem-solving skills.
- b. PBL encourages learners' natural speeches since they use oral activities that involve exchanging information in L1 and L2 and gathering information about projects' themes.
- c. PBL provides students with opportunities to explore and improve cognitive and social skills. The collected data revealed that students learn more effectively in a collaborative ambiance.
- d. Familiarizing learners with the PBL approach and learning strategies fosters progress in language acquisition of functional and linguistic aspects such as fluency, confidence, and vocabulary recognition. Additionally, this approach facilitates the creation of contextual settings where students can express their opinions regarding any aspect of the projects such as material use and information assimilation.
- e. Strategies focused on context, first language, and students' emotional aspects effectively lower anxiety levels and encourage seeking assistance; thereby facilitating effective communication. This improvement can be attributed to the pupil's use of these strategies in fulfilling the objectives of the workshops, particularly the need

- to integrate new vocabulary into their speech for task completion and final product presentation.
- f. The collaborative principles inherent to PBL, combined with various learning strategies, cater to students' cognitive, affective, and metacognitive aspects. This comprehensive approach helps foster students' confidence and motivation, and reduces anxiety levels, thereby creating an environment conducive to learning.
 - g. Context facilitates using learning strategies since students incorporate facts from their lives. When these strategies align with learning strategies, participants find it more interesting to communicate these aspects in L2.
 - h. A high degree of teacher intervention is necessary due to students' need for encouragement and guidance in each activity. However, such intervention also provides constructive feedback and motivates learners to participate and utilize the target language actively.

Implications and Limitations

Context is critical in classroom activities and should be incorporated into teachers' lesson plans. This incorporation ensures that students learn academic content and gain insights into their realities. For instance, in this study, participants were unfamiliar with certain local features, such as mangroves, the islands of Cartagena, or traditions in their neighborhoods. Students learned about these important aspects of their surroundings by integrating these elements into the workshops. Another crucial consideration for teachers when planning lessons is understanding students' needs and skills.

This study encountered several limitations at each stage, but these did not hinder the overall implementation and indeed provided valuable insights into the participants' abilities and needs. For example, in the diagnostic stage, schools adopted hybrid classes due to the COVID-19 pandemic and some students were learning remotely while others attended classes in-person. During the action stage, the first constraint revolved around student behavior. The sample group contained more male students demonstrating disruptive conduct, necessitating heightened intervention from the teacher-researcher to mediate these issues. Familiarity with strategies presented another hurdle, as students were unaccustomed to their use in classroom settings and required more practice.

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