



Implementing Problem-Based Learning with Patchwork-Based Presentation Media to Enhance Student's Speaking Performance in Procedure Text

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Abstract

In English language learning, students' speaking performance remains a challenge, particularly in producing procedural texts. The purpose of this study was to examine the effectiveness of implementing Problem-Based Learning integrated with Patchwork-Based Presentation Media in enhancing students' speaking performance in procedure texts. This study was conducted with XI DPB (Desain dan Produksi Busana) 1 students at SMK Negeri 1 Pringapus using a quasi-experimental one-group pre-test-post-test design with a qualitative follow-up. The data were collected through speaking performance tests, classroom observations, and student interviews. The findings show two main results. First, the implementation of Problem-Based Learning supported by Patchwork-Based Presentation Media resulted in a statistically significant improvement in students' speaking performance, as indicated by higher post-test scores and a significant p-value ($p < 0.05$). Second, the learning approach encouraged students' active participation, developed their problem-solving skills, increased their confidence, and motivated them to engage in speaking activities. The integration of problem-based tasks and patchwork-based presentation media also helped students organize procedural sequences, use appropriate vocabulary and grammatical structures, and improve fluency and clarity in delivering procedure texts. Overall, the study concludes that implementing Problem-Based Learning with Patchwork-Based Presentation Media is an effective and student-centered approach to enhancing students' speaking performance in procedure texts, particularly in vocational high school contexts.

Keywords: Problem-Based Learning; Patchwork-Based Presentation; Speaking Performance; Procedure Text

Introduction

Speaking is one of the most essential skills in learning English, yet it remains one of the most difficult for vocational high school students to master. In Indonesian vocational schools, many students struggle to speak English fluently due to a lack of confidence, limited vocabulary, and infrequent exposure to meaningful speaking activities in the classroom (Marzuki & Hidayat, 2022). These challenges become more visible when students are asked to perform structured speaking tasks that require them to explain processes clearly and logically, such as procedure texts (Rahmawati, 2021).

For vocational students, who are expected to communicate practical skills related to their future professions, weak speaking ability can hinder both academic success and workplace readiness (Wulandari & Astuti, 2024). One common issue in vocational English classrooms is the limited opportunity for students to use English in authentic, active contexts. Many learning activities still focus on grammar explanation and written exercises, leaving little room for students to practice speaking in meaningful ways (Hidayah & Prasetyo, 2022).

As a result, students often become passive learners who hesitate to express ideas orally and rely heavily on memorization rather than communication (Nugroho et al., 2023). This situation underscores the importance of instructional approaches that center students at the heart of the learning process and encourage them to engage through real-world and relevant tasks. Student-centered learning approaches have been widely recommended as a solution to improve students' speaking performance.

These approaches emphasize active participation, collaboration, and problem-solving, which are essential elements in developing communicative competence (Kim & Kim, 2021). When students are actively involved in the learning process, they are more likely to develop confidence and take responsibility for their learning (Fitriani & Lestari, 2023). Among various student-centered approaches, Problem-Based Learning (PBL) has gained considerable attention in both general education and language learning contexts.

Problem-Based Learning is an instructional approach that engages students in learning through the exploration and resolution of real or simulated problems. In PBL classrooms, students are encouraged to identify problems, discuss possible solutions, and present their ideas collaboratively (Hmelo-Silver, 2019). This process enables students to utilize language as a tool for communication, rather than as an abstract subject, which is particularly beneficial for developing their speaking skills (Hung, 2020).

Previous studies have demonstrated that PBL can enhance students' speaking performance by increasing interaction, fostering critical thinking, and creating meaningful communicative situations (Nguyen & Pham, 2022). Despite its advantages, the implementation of PBL alone may not be sufficient to address all speaking challenges faced by vocational students. Some students still experience difficulty organizing ideas and expressing them orally, mainly when learning

materials are not supported by concrete or visual media (Sulaiman et al., 2023).

This condition suggests that PBL needs to be supported by appropriate instructional media that can help students visualize content and structure their oral responses more effectively. In vocational education, learning media that reflect students' practical and hands-on experiences are particularly important. Craft-based learning activities have been recognized as effective media to support speaking tasks because they allow students to create tangible products while explaining processes verbally.

These activities help students connect language use with real actions, which can reduce anxiety and improve speaking confidence (Dewi & Arifin, 2021). Craft projects also encourage creativity and collaboration, making the learning process more engaging for students (Liyana & Hasanah, 2023). When students are involved in creating something meaningful, they tend to be more motivated to explain their work orally. Among various craft activities, patchwork was chosen for this study due to its strong relevance to the vocational background of the students.

Patchwork activities involve clear procedural steps, such as selecting materials, arranging patterns, and assembling products, which closely align with the structure of procedure texts (Putra & Mahendra, 2022). For students in fashion-related vocational programs, patchwork is not only familiar but also meaningful, as it reflects skills they are expected to master in their field (Salsabila et al., 2024). This relevance is expected to help students understand procedural sequences more easily and express them more confidently in spoken English.

The integration of Patchwork-Based Presentation Media within the PBL framework offers a learning environment where students solve problems while creating and presenting a concrete product. Through this integration, students are encouraged to discuss problems, plan solutions, and present procedural explanations based on their patchwork projects. This approach facilitates a seamless transition between problem-solving activities and speaking practice, as students naturally explain their actions and reasoning during the learning process (Anwar & Kurniawan, 2023). Consequently, speaking activities become more purposeful and less intimidating for students.

Although previous studies have examined the effectiveness of Problem-Based Learning and craft-based learning separately, research that integrates PBL with patchwork-based presentation media to enhance speaking performance remains limited. This gap is particularly evident in the context of Indonesian vocational high schools, where students require practical, relevant, and engaging learning approaches (Pramudya et al., 2024). Therefore, further investigation is needed to explore how this integrated approach can support students' speaking development, especially in producing procedure texts.

Based on these considerations, this study aims to investigate the effectiveness of implementing Problem-Based Learning integrated with Patchwork-Based Presentation Media in enhancing students' speaking performance in procedure texts. Specifically, this study aims to investigate whether integrating PBL and

patchwork-based presentation media can significantly enhance students' speaking performance and to explore students' learning experiences during the instructional process.

Method

This study employed a quasi-experimental one-group pre-test-post-test design with a qualitative follow-up to examine the effectiveness of implementing Problem-Based Learning, supported by Patchwork-Based Presentation Media, in enhancing students' speaking performance in procedure texts. This mixed-methods approach was selected to obtain quantitative evidence of students' speaking improvement while also providing qualitative insights into students' learning experiences and classroom processes. By integrating quantitative and qualitative data, the study was able to comprehensively address both the outcomes and the instructional dynamics of the intervention.

The study was conducted at SMK Negeri 1 Pringapus during the second semester of the 2025/2026 academic year. The participants consisted of 32 students from class XI DPB (Desain dan Produksi Busana), who were selected using purposive sampling due to their vocational background and their relevance to the use of patchwork-based presentation media. This setting provided an authentic vocational learning context in which students were required to explain the procedural steps involved in creating real-life products. For the qualitative phase, eight students were selected for semi-structured interviews using criterion-based sampling, representing high, medium, and low levels of post-test speaking performance, as well as varying degrees of classroom participation, to capture diverse perspectives on the learning process.

The intervention was implemented over a four-week period and consisted of four instructional sessions, each lasting approximately 90 minutes. The instructional process followed the main stages of the Problem-Based Learning approach. The first stage involved problem orientation, in which students were introduced to an authentic problem related to the utilization of unused patchwork materials and the need to present procedural information clearly in English. The second stage focused on problem analysis and group organization, where students worked collaboratively to identify solutions and plan their patchwork-based presentations.

The third stage involved investigation and development, during which students prepared procedure texts, developed patchwork-based presentation media, and practiced oral explanations. The final stage consisted of oral presentations and reflection, during which students presented their procedures in English and engaged in feedback and reflective discussions.

The researcher acted as a teacher-researcher, delivering instruction, facilitating learning activities, and observing classroom interactions throughout the intervention. Quantitative data were collected through speaking performance tests administered before and after the intervention. Students' performances were

video-recorded and assessed using an analytical speaking rubric that consisted of pronunciation, grammar, vocabulary, fluency, and content, with each component scored on a 1–5 scale and given equal weight. To ensure reliability, the researcher and an experienced English teacher independently evaluated the speaking performances, and scoring discrepancies were discussed until an agreement was reached. The quantitative data were analyzed using SPSS version 27, including descriptive statistics and paired-sample t-tests to determine the significance of students' speaking improvement.

Qualitative data were collected through classroom observations, semi-structured interviews, and analysis of video recordings. Observation protocols focused on students' participation, confidence, collaboration, and speaking behavior during the implementation of Problem-Based Learning with Patchwork-Based Presentation Media. Interview questions explored students' perceptions of the learning activities, their speaking challenges, and the perceived benefits of using patchwork-based media. Qualitative data were analyzed thematically, following Creswell's (2013) procedures, which included data organization, coding, and interpretation. Microsoft Word and Excel were used to support data management and coding. Video recordings were reviewed repeatedly by both raters to identify patterns related to fluency, clarity, and confidence in oral presentations.

Ethical considerations were carefully addressed in this study. Permission was obtained from the school, and informed consent was secured from all participants prior to data collection. Students were informed about the purpose of the study, the voluntary nature of their participation, and the confidentiality measures in place to protect their information. All data were anonymized, and video recordings were used solely for research purposes. To enhance credibility, data triangulation was applied by integrating findings from speaking tests, classroom observations, interviews, and documentation.

Results

This section presents the study's results, obtained from both quantitative and qualitative data. The results are organized to answer the research questions concerning students' speaking performance improvement and their learning experiences after the implementation of Problem-Based Learning supported by Patchwork-Based Presentation Media.

Students' Speaking Performance Improvement

This section addresses the first research question concerning the improvement of students' speaking performance after the implementation of Problem-Based Learning supported by Patchwork-Based Presentation Media. The quantitative data obtained from the pre-test and post-test speaking assessments

indicate a clear and consistent improvement in students' overall speaking performance. Prior to the intervention, most students demonstrated limited ability to express procedural information orally, characterized by hesitation, fragmented utterances, and a lack of confidence. After the instructional treatment, students showed notable progress in delivering more fluent, confident, and well-organized oral explanations.

The statistical analysis revealed a significant difference between the pre-test and post-test speaking scores ($p < 0.05$), indicating that the instructional intervention had a positive effect on students' speaking performance. Although the normality test showed slight deviations from a normal distribution, the paired-sample t-test was considered appropriate due to its robustness and suitability for repeated-measure designs. The use of this test allowed for an accurate comparison of students' performance before and after the intervention within the same group.

To complement the statistical significance, the effect size was calculated using Cohen's d . The result showed a large effect size ($d > 0.80$), suggesting that the observed improvement was not only statistically significant but also meaningful in an educational context. This large effect size indicates that the implementation of Problem-Based Learning supported by Patchwork-Based Presentation Media had a substantial impact on students' speaking performance, rather than a marginal or incidental effect.

Table 1 presents the distribution of students' speaking scores in the pre-test and post-test.

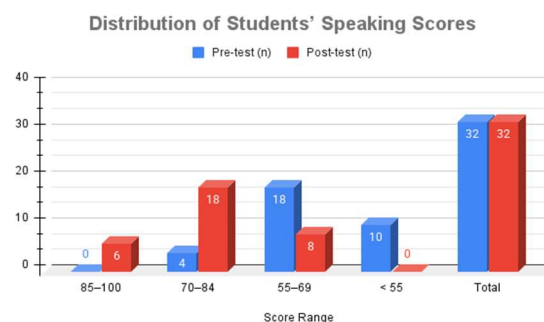


Figure 1. Distribution of Students' Speaking Scores

As shown in Table 1, the data reveal a substantial shift in students' speaking achievement from lower score ranges in the pre-test to higher score ranges in the post-test. In the pre-test, no students achieved scores in the highest range (85-100), indicating that none of the participants demonstrated very high speaking proficiency prior to the intervention. Most students were concentrated in the

middle and lower ranges, with 18 students scoring between 55-69 and 10 students scoring below 55. This distribution suggests that the majority of students initially experienced considerable difficulties in speaking English, particularly in delivering procedural texts fluently and confidently.

After the implementation of Problem-Based Learning supported by Patchwork-Based Presentation Media, the score distribution changed markedly. Six students moved into the highest score range (85–100), and the number of students scoring between 70–84 increased substantially from four to eighteen. At the same time, the number of students in the 55–69 range decreased from eighteen to eight, and no students remained in the lowest score category below 55. This pattern indicates that the intervention was effective not only in helping low-achieving students reach an acceptable level of speaking performance but also in enabling average-performing students to advance to higher proficiency levels.

The absence of students in the lowest score range in the post-test is particularly noteworthy, as it demonstrates that all participants achieved at least a basic level of speaking competence after the intervention. Moreover, the increase in the number of students in the upper score ranges reflects an overall upward shift in speaking performance across the class rather than improvement limited to a small group of students. This balanced improvement suggests that the instructional approach provided sufficient support and learning opportunities for students with different initial ability levels.

The graphical representation in Figure 1 further reinforces these findings by clearly illustrating the redistribution of students' scores toward higher performance levels after the intervention. The visual comparison between pre-test and post-test distributions highlights the effectiveness of the learning activities in promoting meaningful improvement in students' speaking performance. Taken together, the changes observed in the score distribution, supported by statistical significance and a large effect size, provide strong evidence that Problem-Based Learning, supported by Patchwork-Based Presentation Media, contributed substantially to students' improvement in speaking performance.

Students' Speaking Performance Based on Rubric Components

To provide a more detailed explanation of students' speaking improvement, the scores were analyzed based on the five speaking components: pronunciation, grammar, vocabulary, fluency, and content. Table 2 presents the mean scores of each component in the pre-test and post-test.

Component	Pre-test Mean	Post-test Mean
Pronunciation	2.8	4.1
Grammar	2.9	4.0
Vocabulary	3.0	4.2
Fluency	2.7	4.3

Content	3.1	4.4
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Figure 2. Mean Score of Speaking Components

Table 2 shows improvement across all speaking components. Fluency and content demonstrated the most noticeable gains. This indicates that students became more confident in delivering oral explanations and were better able to organize procedural information clearly. These improvements suggest that the use of problem-based activities and patchwork-based presentation media helped students express their ideas more smoothly and coherently.

A closer examination of each speaking component reveals that the improvement was not uniform but reflected the nature of the instructional activities implemented during the intervention. The most substantial gains were observed in fluency (from 2.7 to 4.3) and content (from 3.1 to 4.4). These increases suggest that students became more capable of speaking continuously with fewer pauses and were better able to convey procedural information in a logical and coherent sequence. The emphasis on explaining real products and processes during the Problem-Based Learning activities provided students with repeated opportunities to practice extended speech, which contributed significantly to their fluency development.

The improvement in the content component indicates that students gained a clearer understanding of how to structure procedural texts orally. Through group discussions and project planning phases, students were encouraged to systematically identify materials, steps, and functions. The use of patchwork-based presentation media further supported this process by serving as a visual guide that helped students remember and organize procedural stages during oral presentations. As a result, students were able to present procedures more completely and accurately in the post-test.

Improvements in vocabulary (from 3.0 to 4.2) and pronunciation (from 2.8 to 4.1) also indicate meaningful progress. The repeated use of task-specific vocabulary related to materials, tools, and processes during project development enabled students to expand and apply relevant lexical items in context. Additionally, frequent oral practice and peer interaction during group work and presentations contributed to more precise pronunciation and increased intelligibility, even though these components were not the primary focus of the instructional intervention.

The grammar component showed improvement from 2.9 to 4.0, although the gain was slightly lower compared to fluency and content. This finding suggests that while students became more confident and fluent in expressing ideas, some grammatical inaccuracies persisted. This pattern reflects the communicative emphasis of Problem-Based Learning, which prioritizes meaning-making and message delivery over explicit grammatical accuracy. Nevertheless, the overall improvement in grammar scores suggests that increased exposure to spoken English and repeated practice continue to have a positive impact on students'

grammatical development.

Overall, the component-level analysis demonstrates that Problem-Based Learning supported by Patchwork-Based Presentation Media was particularly effective in enhancing students' communicative aspects of speaking, such as fluency and content organization, while also contributing to improvements in linguistic accuracy. These findings provide further explanation for the significant increase in students' overall speaking performance observed in the post-test.

Qualitative Findings

The qualitative findings were obtained through classroom observations, semi-structured student interviews, and analysis of video recordings conducted during the implementation of Problem-Based Learning, supported by Patchwork-Based Presentation Media. The purpose of the qualitative analysis was to provide deeper explanations for the quantitative results and to capture students' learning experiences during the instructional process. The analysis revealed three major themes that explain the improvement in students' speaking performance: increased speaking confidence, improved fluency through repeated practice, and better organization of procedural content. These themes are closely connected to specific phases and activities within the Problem-Based Learning framework.

Theme 1: Increased Speaking Confidence

The first theme identified was increased speaking confidence. At the beginning of the intervention, classroom observations showed that most students were reluctant to speak English. Many students avoided eye contact, spoke very briefly, or relied heavily on notes when asked to explain procedural steps. During the early sessions, only 8 out of 32 students voluntarily participated in oral activities, and several students expressed anxiety about making mistakes in front of their peers. This hesitation was evident in video recordings, which showed frequent pauses, low voice volume, and limited eye contact during initial speaking practices.

However, as the learning process progressed, particularly during the presentation and reflection phases of Problem-Based Learning, students' confidence increased noticeably. By the final presentation sessions, 32 students actively engaged in explaining their projects in English. Students appeared more relaxed, spoke with clearer voice projection, and showed greater willingness to respond to questions. This change was strongly reflected in the interview data.

This improvement was supported by interview data. One student stated:

"Before using the patchwork presentation, I was afraid to speak English. But when I explained my own product, I felt more confident because I knew what I was talking about." (Student 7)

This theme helps explain the significant increase in post-test scores and

highlights the role of ownership and authentic tasks in reducing speaking anxiety. Another student explained that presenting something they had created themselves made them feel less afraid of making mistakes. These findings indicate that presenting self-created products within an authentic task context helped reduce speaking anxiety and encouraged students to speak more confidently.

Theme 2: Improved Fluency through Repeated Practice

The second theme that emerged from the qualitative data was improved fluency through repeated practice. This theme was closely associated with the investigation and project development phases of Problem-Based Learning. During these phases, students worked collaboratively in groups to discuss materials, steps, and presentation strategies, which required them to explain procedural information in English repeatedly. Observation notes showed that students frequently rehearsed their explanations within groups before presenting them to the class. This repeated practice allowed students to become more familiar with the language and content, resulting in smoother speech delivery.

Video recordings further supported this finding. Compared to pre-test performances, students' post-test presentations showed fewer long pauses, more continuous speech, and smoother transitions between procedural steps. Students relied less on memorized scripts and appeared more spontaneous when speaking.

As one student explained:

"Working in groups helped me practice speaking many times before the presentation, so I did not stop too much when speaking." (Student 3)

This qualitative evidence supports the quantitative finding that fluency showed one of the highest improvements among the speaking components.

Theme 3: Better Organization of Procedural Content

The third identified theme was the better organization of procedural content. The use of patchwork-based presentation media played a significant role in helping students organize their ideas in a logical manner. During the problem analysis and planning phases, students were encouraged to identify materials, tools, and steps systematically before creating their patchwork-based presentations. Observations revealed that students discussed the sequence of procedures more actively and used visual elements on the patchwork media as cues during oral explanations.

As a result, students' presentations became more structured and coherent. Many students consistently used sequencing expressions such as first, next, then, and finally during their post-test presentations.

One student stated:

"The patchwork media helped me remember the steps, so that I could explain them

in order." (Student 8)

This finding aligns with the improvement observed in the content component of the speaking rubric and explains why students were able to deliver more complete and logically ordered procedural explanations.

Despite the overall positive findings, an unexpected result also emerged from the qualitative data. Although most students demonstrated increased confidence and fluency, a small number of students showed limited improvement in grammatical accuracy. Observation and video analysis indicated that some students continued to make grammatical errors even when speaking more fluently. This suggests that while Problem-Based Learning effectively supports communicative competence and confidence, some learners may still require additional explicit grammar instruction to achieve greater linguistic accuracy.

Overall, the qualitative findings provide strong explanatory support for the quantitative results. Increased confidence, improved fluency, and better organization of ideas observed during classroom activities help explain the significant improvement in students' speaking performance. The integration of authentic tasks, collaborative learning, and patchwork-based presentation media created a supportive learning environment that enabled students to develop their speaking skills more effectively.

Discussion

Based on the results presented in the previous section, this discussion elaborates on the study's findings and relates them to relevant theories and previous research. The findings indicate that the implementation of Problem-Based Learning (PBL) integrated with Patchwork-Based Presentation Media significantly enhanced students' speaking performance in procedure texts. This result confirms that student-centered learning approaches supported by contextual and vocationally relevant media are effective in improving oral communication skills, particularly in vocational high school contexts where practical relevance plays a crucial role in learning motivation and engagement (Dolmans et al., 2022; Krajcik & Shin, 2023).

The significant improvement in students' post-test speaking scores demonstrates that PBL creates meaningful learning situations that require students to actively use English as a tool for communication rather than merely as an academic subject. Through problem orientation, group discussion, and presentation stages, students were exposed to authentic communicative demands that encouraged them to speak more frequently and purposefully. This finding aligns with recent studies demonstrating that PBL promotes sustained oral interaction and fosters speaking development by integrating language use into problem-solving activities (Li & Zhang, 2023). Similarly, Alharbi and Alghamdi (2022) emphasize that collaborative problem-solving tasks strengthen learners'

communicative competence and confidence in EFL classrooms.

The enormous effect size found in this study further indicates that the observed improvement was educationally meaningful rather than incidental. The upward shift in score distribution across all proficiency levels suggests that the intervention benefited both lower- and higher-achieving students. This finding supports recent evidence that PBL accommodates learner diversity by allowing students to participate according to their abilities while benefiting from peer scaffolding (Yew & Goh, 2022). In vocational education contexts, such inclusivity is essential because students often demonstrate heterogeneous academic backgrounds and language proficiency levels (Suhartini et al., 2024).

A closer analysis of speaking components reveals that fluency and content showed the most substantial improvement. This result suggests that the intervention was especially effective in developing students' ability to speak continuously and organize procedural information logically. From a communicative language teaching perspective, fluency develops through repeated opportunities for extended speech in meaningful contexts. In this study, students repeatedly discussed, rehearsed, and presented their patchwork projects, which required them to explain procedural steps coherently. This finding aligns with recent research indicating that task repetition within communicative activities significantly enhances fluency by reducing hesitation and increasing speech automaticity (Bygate & Samuda, 2022).

The improvement in content organization can be attributed to the use of patchwork-based presentation media as a visual and tangible scaffold. The patchwork products functioned as concrete representations of procedural steps, helping students recall and sequence information during oral presentations. This finding supports contemporary perspectives on multimodal learning, which emphasize that visual and hands-on media facilitate cognitive processing and enhance learners' ability to structure complex information (Mayer, 2021; Cheng & Tsai, 2022). The frequent use of sequencing markers such as first, next, and finally in students' post-test performances further indicates improved awareness of procedural text structure, as also observed in recent genre-based speaking studies (Hyland & Wong, 2023).

Vocabulary improvement observed in this study reflects the effectiveness of contextualized language learning. Students were repeatedly exposed to task-specific vocabulary related to materials, tools, and processes during project development and group discussions. This contextual exposure enabled students to acquire and apply vocabulary in a meaningful way, rather than memorizing isolated word lists. Recent studies confirm that vocabulary learning becomes more durable when lexical items are embedded in authentic communicative tasks that mirror real-life practices (Nation, 2022; Webb & Chang, 2023). This is particularly relevant for vocational students whose language needs are closely connected to professional contexts.

Pronunciation improvement, although not explicitly targeted, also emerged

as a positive outcome of the intervention. Frequent oral interaction, peer discussion, and presentation practice contributed to increased intelligibility and more precise articulation. This finding supports recent research suggesting that pronunciation development can occur incidentally through increased communicative exposure and interaction, even without explicit phonological instruction (Saito, 2022; Gordon & Darcy, 2023). Peer interaction during PBL activities provided learners with opportunities to notice pronunciation features and adjust their speech based on feedback and modeling.

Although grammar scores improved, the gains were relatively lower compared to other speaking components. This result suggests that while PBL is effective in promoting communicative competence, it may not fully address grammatical accuracy. Recent studies confirm that meaning-focused instruction often prioritizes fluency over accuracy, leading to slower grammatical development (Ellis, 2023). Nevertheless, the observed grammatical improvement indicates that increased exposure to spoken English and contextualized practice continue to contribute positively to learners' grammatical awareness, even though some inaccuracies persist.

The qualitative findings further elucidate the quantitative results, particularly in relation to increased speaking confidence. At the beginning of the intervention, many students experienced anxiety and hesitation when speaking English. However, presenting self-created patchwork products reduced students' fear of making mistakes, as they felt more familiar with and confident about the content they were explaining. This finding aligns with recent affective research, which emphasizes that reduced anxiety and increased learner autonomy have a positive influence on oral language performance (Teimouri et al., 2022; Oga-Baldwin, 2023).

Improved fluency through repeated practice also emerged as a dominant theme in the qualitative data. Group discussions and rehearsal sessions allowed students to practice speaking multiple times before formal presentations. This repeated practice helped students internalize language patterns and procedural sequences, resulting in smoother speech delivery. Recent empirical studies support this finding, showing that collaborative rehearsal strengthens fluency and reduces learners' dependence on memorized scripts (Suzuki & Kormos, 2022).

Better organization of procedural content was strongly linked to the use of patchwork-based presentation media. The visual layout of patchwork pieces served as a memory aid and organizational guide during oral explanations. This finding reinforces recent conclusions that craft-based and visual media are particularly effective in supporting learners' spoken discourse organization, especially in procedural and instructional genres (Lee & Lin, 2023).

Despite the overall positive findings, the study also revealed limitations. A small number of students showed limited improvement in grammatical accuracy, indicating the need for additional instructional support. This suggests that future implementations of PBL could benefit from integrating brief form-focused instruction or corrective feedback sessions to balance fluency and accuracy. Such

pedagogical integration has been strongly recommended in recent research on communicative language teaching (Larsen & Anderson, 2024).

Overall, the findings suggest that Problem-Based Learning, integrated with Patchwork-Based Presentation Media, is an effective approach for enhancing students' speaking performance in procedural texts. The approach not only improves measurable speaking outcomes but also fosters confidence, engagement, and the use of meaningful language. These findings contribute to the growing body of recent research supporting student-centered, contextual, and vocationally oriented instructional approaches in English language teaching (OECD, 2023; Widodo & Allamnakhrah, 2024).

Conclusion

This study successfully demonstrates the effectiveness of implementing Problem-Based Learning, integrated with Patchwork-Based Presentation Media, in enhancing the speaking performance of vocational high school students in procedure texts. The findings reveal that the instructional approach led to a significant improvement in students' overall speaking ability, as indicated by higher post-test scores and a large effect size. These results confirm that the integration of problem-based instruction with contextually relevant and hands-on presentation media provides a meaningful learning experience that supports students' oral communication development in vocational education settings.

Furthermore, the study found that students' speaking improvement was most evident in fluency and content organization. Through repeated practice and active engagement in problem-solving tasks, students became more capable of delivering procedural explanations smoothly and coherently. The use of patchwork-based presentation media also played an important role in helping students structure procedural steps logically and recall information during oral presentations. In addition, improvements in vocabulary, pronunciation, and grammar indicate that the instructional approach supported not only communicative aspects of speaking but also students' linguistic development. However, grammatical accuracy progressed at a relatively slower pace.

In addition to improving speaking performance, the study also revealed positive changes in students' learning experiences. The qualitative findings show that students gained greater speaking confidence, became more willing to participate in oral activities, and experienced reduced anxiety when speaking English. Presenting self-created patchwork products encouraged a sense of ownership and familiarity with the content, making speaking tasks more meaningful and less intimidating. Collaborative group work and repeated rehearsal opportunities further supported students in developing fluency and organizing procedural content more effectively.

Despite these positive outcomes, this study has certain limitations. The absence of a control group and the relatively short intervention period may limit

the generalizability of the findings. Moreover, some students demonstrated grammatical inaccuracies, suggesting that Problem-Based Learning may need to be complemented with focused language instruction to achieve balanced speaking development. Therefore, future research is recommended to involve comparative designs, longer instructional durations, and the integration of explicit grammar support to further explore the potential of Problem-Based Learning combined with patchwork-based presentation media in enhancing students' speaking performance across different educational contexts.

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