Learning speaking through dialogue task-based learning approach in physiotherapy department

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Article Info	ABSTRACT
	The ability to speak in English is an important skill for vocational students, especially in the Department of Physiotherapy of the Poltekkes Kemenkes Surakarta, considering the need for professional communication with patients and other medical personnel. However, there are still many students who have difficulty speaking actively and confidently. The purpose of this study is to ascertain how well students' speaking abilities are improved by the dialogue task-based learning technique. Using the Wilcoxon Signed-Rank test in a pretest-posttest design, a quantitative research methodology was employed. For one semester, 110 students who engaged in dialogue-based task-based learning made up the research sample. The Wilcoxon test results revealed a significant difference between the pretest and posttest scores, with a significance value of 0.000 ($p < 0.05$) and an increase in scores for all responders. In the context of health vocational education, it can be inferred that the dialogue task-based learning technique is successful in enhancing students' speaking abilities.

INTRODUCTION

English plays a vital role in Indonesian society, acting as a key to educational advancement, career development, and economic mobility. For vocational students, including those in the field of physiotherapy, English is not merely an academic subject but a practical tool for professional communication, especially when dealing with foreign patients or participating in international healthcare forums. As highlighted by Pricilia & Rahmansyah (2020), speaking is a foundational skill that supports both reading and writing proficiency. Furthermore, Annisa & Safii (2023) emphasize that acquiring speaking competence is often aligned with personal goals, such as professional achievement and self-confidence in real-world settings.

Despite its importance, English speaking skills remain a challenge for many physiotherapy students. Classroom observations at the Department of Physiotherapy, Poltekkes Kemenkes Surakarta, reveal that students often struggle to respond to English prompts and show minimal engagement in oral communication tasks. A significant factor contributing to this issue is the reliance on traditional, teacher-centered pedagogical models, which limit active student participation. Lecturing methods, although common, tend to foster passivity and discourage real communicative practice. Students report a lack of motivation and confidence in such environments, which impedes their language development and practical competence.

To address these shortcomings, a more dynamic, learner-centered approach is needed—one that aligns with both communicative competence theory and the demands of English for Specific Purposes (ESP). Task-Based Language Teaching (TBLT), particularly its dialogue-focused variant, offers a promising alternative. TBLT emphasizes the completion of meaningful, real-world tasks using the target language, thus fostering both linguistic accuracy and communicative fluency (Erawati, 2019). The dialogue-based TBL approach further enhances these outcomes by embedding structured verbal interactions into learning tasks, helping students engage in context-rich, discipline-specific communication.

Critically, recent studies support the efficacy of this model but also highlight its limits. For instance, Lytovchenko et al. (2025) demonstrated that while AI tools like ChatGPT can assist in the pre-task planning of ESP dialogue tasks, human facilitation remains essential for evaluating creativity and communicative intent. In public health education, Wu et al. (2025) found that dialogue methods such as the Steno card system improved both literacy and clinical outcomes, pointing to the role of structured interaction in behavior change. Similarly, Ellianawati et al. (2025) and Ikhsan et al. (2025) found that collaborative, dialogue-driven learning can develop critical thinking and civic engagement when tailored to subject-specific content. These findings reinforce the idea that meaningful dialogue, embedded in tasks relevant to the learners' field, contributes significantly to deeper learning and skill transfer.

The relevance of dialogue-based TBL in vocational and healthcare settings is further demonstrated by Lume & Hezbollah (2022), who reported improved speaking scores among vocational students using this method, and by Trisnawati (2018), who linked task-based dialogue work to the development of critical thinking, an essential skill for clinical decision-making in healthcare. Confidence-building is another important dimension: Adzani et al. (2024) and Azwari et al. (2025) found statistically significant improvements in students' speaking confidence and performance when dialogue-based tasks were applied in a senior high school setting. These studies collectively point to the potential of TBLT not only to improve language skills but also to develop transferable professional competencies.

However, the integration of a dialogue task-based learning approach is not without challenges. Effective implementation demands meticulous task design, alignment with learning outcomes, curriculum flexibility, and instructor readiness. These systemic requirements are often difficult to meet in rigid academic structures. Furthermore, instructors may lack specific training in designing authentic communicative tasks tailored to physiotherapy contexts, and students with limited foundational English skills may struggle without sufficient scaffolding.

Therefore, this study aims to explore the implementation of a dialogue-based task-based learning approach in the Department of Physiotherapy at Poltekkes Kemenkes Surakarta. By situating the research within a communicative competence framework and drawing from the principles of ESP and learner-centered pedagogy, the study seeks to evaluate both the effectiveness and practical challenges of the model. The goal is to contribute to the development of English teaching strategies that are pedagogically sound, contextually relevant, and responsive to the real-world needs of physiotherapy students.

RESEARCH METHODS

This study employed a quantitative experimental method using a one-group pre-test and post-test design. The aim was to assess the effectiveness of a dialogue task-based learning (TBL) approach in improving the speaking skills of students in the Physiotherapy Department at Poltekkes Kemenkes Surakarta. The total sample consisted of 110 third- and fourth-semester students enrolled in English for Specific Purposes (ESP) courses.

Test Administration and Content Design

Speaking ability was measured using a performance-based speaking test administered twice: before the intervention (pre-test) and after the implementation of the TBL method (post-test). The test tasks were constructed to reflect real-life communication scenarios relevant to the field of physiotherapy. These included simulated therapist-patient dialogues, interprofessional case discussions, and role-plays involving clinical explanations. Task design was validated by both an English lecturer and a healthcare content expert to ensure authenticity and alignment with students' future professional needs.

Assessment Rubric and Rating Procedure

The speaking performance of each student was evaluated using a comprehensive rubric (see Table 1, covering eight key components: pressure (intonation and stress), pronunciation,

vocabulary/diction, sentence structure, fluency, content relevance, attitude, and confidence. Each component was rated on a scale with qualitative benchmarks (Excellent, Good, Enough, and Less) and corresponding numerical scores.

Table 1. Speaking Skills Assessment Guidelines Grid

Aspects Assessed	Benchmark	Score	Criterion
Pressure	Highly precise use of pressure	18-20	Excellent
	Proper use of pressure	15-17	Good
	Improper use of pressure	12-14	Enough
	Very inappropriate use of pressure	9-11	less
Pronunciation	Highly precise use of speech	18-20	Excellent
	Proper use of speech	15-17	Good
	Improper use of speech	12-14	Enough
	Very inappropriate use of speech	9-11	less
Vocabulary/ diction	Very precise vocabulary/diction selection	8-10	Excellent
	Selection of the right vocabulary/diction	5-7	Good
	Incorrect vocabulary/diction selection	3-4	Enough
	The choice of vocabulary/diction is very imprecise	1-2	less
Sentence structure	Very precise use of sentences	8-10	Excellent
	Proper use of sentences	5-7	Good
	Inappropriate use of sentences	3-4	Enough
	The use of sentences is very inappropriate	1-2	less
Smooth	Very fluent in speaking	8-10	Excellent
	Fluent in speech	5-7	Good
	Lack of fluency in speaking	3-4	Enough
	Very poor speaking	1-2	less
Disclosure of speech material	Disclosure of speech materials that fit the story perfectly	8-10	Excellent
	Disclosure of speech materials that fit the story	5-7	Good
	Disclosure of speech material that does not fit the story	3-4	Enough
	The disclosure of the speech material is very inconsistent with the story	1-2	less
Attitude	A very reasonable attitude	8-10	Excellent
	Reasonable attitude	5-7	Good
	Unnatural attitude	3-4	Enough
	A very unnatural attitude	1-2	less
Courage	Very brave to speak in front of the class	8-10	Excellent
	Dare to speak in front of the class	5-7	Good
	Lack of courage to speak in front of the class	3-4	Enough
	Very lacking courage to speak in front of the class	1-2	less

Three trained raters independently assessed each student's speaking performance. These raters included two English lecturers and one clinical instructor familiar with medical English communication. Prior to the assessments, a calibration session was conducted to standardize rater interpretation of the rubric. Inter-rater reliability was calculated using Cronbach's Alpha, which yielded a coefficient of 0.87, indicating a high level of agreement among raters.

Data Analysis and Hypothesis Testing

To evaluate the effectiveness of the dialogue TBL intervention, the Wilcoxon Signed-Rank test was used to compare pre-test and post-test scores. This non-parametric test was selected due to the ordinal nature of the scoring and the non-normal distribution of the data. Statistical analysis was conducted using SPSS version 20, with a significance level set at $\alpha = 0.05$ (5%). The test aimed to determine whether the observed changes in speaking performance were statistically significant, thereby testing the research hypothesis that the dialogue TBL approach improves students' speaking skills in an ESP context.

RESULTS AND DISCUSSION

Sample Characteristics

The study involved 110 students from the Department of Physiotherapy at Poltekkes Kemenkes Surakarta. Speaking skills were assessed before and after the implementation of the Dialogue Task-Based Learning Approach. As shown in Table 2, the average pre-test score was 82.08, while the post-test average increased to 87.08. The consistency of the standard deviation (SD = 3.39) across both tests suggests a uniform distribution of performance improvement among students.

Table 2. Description of Statistics

Variables	Mean	SD	Min.	Max.
Speaking skills before the provision of intervention to apply the Dialogue Task-Based Learning Approach (pre-test)	82,08	3,39	73	91
Speaking skills after the provision of the Dialogue Task-Based Learning Approach (post-test)	87,08	3,39	78	96

Normality Test

The goal of this normality test is to determine whether or not research data is normally distributed. The table below displays the findings of the study's normalcy test.

Table 3. Normality Test Results

	Group	Kolmogorov-Smirnova			Shapiro-Wilk		
		Statistics	Df	Sig.	Statistics	Df	Sig.
Test	Pretest	.151	110	.000	.933	110	.000
	Posttest	.151	110	.000	.933	110	.000

a. Lilliefors Significance Correction

As can be seen from the above table of results for the normalcy test, the df (degree of freedom) number for both the pretest and the posttest is 110. This indicates that each category has more than fifty data samples. It is therefore suitable to apply the Kolmogorov-Smirnov technique to determine whether the data in this study is normal. When the sig value for the pretest is 0.000 (<0.05) in the Kolmogorov-Smirnov test, the pretest data is abnormally distributed; for the posttest, the sig value is obtained. 0.000 (<0.05), the posttest results are likewise not normally distributed. In order to test the differences using non-parametric statistics, the Wilcoxon test is the next step.

Bivariate Test

If the pretest and posttest results were abnormal, they were tested using nonparametric Wilcoxon. The Wilcoxon test results in Table 4 compare speaking abilities prior to and following the introduction of the Dialogue Task-Based Learning Approach.

Table 4. The Effect of the Application of the Dialogue Task-Based Learning Approach in Improving Speaking Skills

		N	Mean Rank	Sum of Ranks
Posttest - Pretest	Negative Ranks	0a	.00	.00
	Positive Ranks	110b	55.50	6105.00
	Ties	0c		
	Total	110		

Table 5. Statistic Test

	Posttest - Pretest
Z	-10.488[b]
Asymp. Sig. (2-tailed)	.000

Following the adoption of the conversation task-based learning strategy, all 110 respondents shown an improvement in their speaking skills scores, according to the analysis of the Wilcoxon Signed Ranks test findings. This is demonstrated by the fact that 110 respondents had positive ranks, the mean rank was 55.50, and the sum of the ranks was 6,105. No responders had stable scores (tied = 0) or

reduced scores (negative ranks = 0), suggesting that this method generally improved pupils' speaking abilities.

Additionally, the statistical test's results revealed a Z value of -10.488 and an Asymp. Sig. (2-tailed) = 0.000. Since the significance value is less than 0.05, it may be said that the null hypothesis (H$_0$) is rejected because the pretest and posttest results differ significantly. Thus, at the Department of Physiotherapy, Poltekkes Kemenkes Surakarta, the dialogue task-based learning technique has been statistically demonstrated to be successful in enhancing students' speaking abilities.

Discussion

The results of the Wilcoxon Signed-Rank test indicated a significant improvement in students' speaking skills after the implementation of the Dialogue Task-Based Learning (TBL) approach. All participants showed higher post-test scores compared to their pre-test results, confirming the effectiveness of this method in enhancing speaking performance in an English for Specific Purposes (ESP) context, particularly for physiotherapy students.

This finding is consistent with previous research demonstrating the success of task-based learning approaches in improving speaking skills. For instance, Syafiq et al. (2024) reported that the application of TBL in nursing education significantly enhanced students' fluency, vocabulary use, and overall communicative competence. Similarly, Afifah & Devana (2020) found that task-based learning contributed to substantial progress in speaking ability among students of an English education program, indicating that this method is effective for learners of English as a foreign language.

The success of the Dialogue TBL approach in this study is largely due to its alignment with student-centered learning principles. Unlike traditional teacher-dominated methods, this approach encourages learners to take an active role in their education. When students are responsible for completing meaningful, dialogue-based tasks, such as role-playing therapist-patient interactions or conducting discussions, they engage more deeply, both cognitively and emotionally. As Rauf et al. (2025). explain, the effectiveness of such approaches lies in their ability to combine authentic language use, task completion, and contextual communication within a structured learning process.

Beyond the statistical outcomes, several pedagogical factors explain the effectiveness of this approach. First, the tasks were designed to simulate real-world scenarios in physiotherapy practice, such as patient consultations and professional dialogues. This authenticity likely motivated students, as they recognized the relevance of these activities to their future careers. Second, the structured verbal interactions enabled students to repeatedly practice speaking in a supportive environment, which helped reduce anxiety and build both fluency and accuracy.

The learning process also emphasized active engagement. Students worked in pairs or groups on dialogue-based tasks that required collaborative problem-solving and communication. These repeated verbal exchanges improved their vocabulary, sentence structure, and confidence. Feedback from lecturers and peers played an important role in correcting errors and reinforcing effective language use. This aligns with findings by Zamhariroh & Thobroni (2024), who showed that such interactive tasks enhance fluency and comprehension in ESP contexts.

Although this study did not formally include student feedback, classroom observations indicated strong engagement. Students who were initially hesitant to participate gradually became more involved in speaking activities. This increase in participation suggests that the method also had a positive effect on students' affective domains, such as motivation and confidence. This finding echoes those of Safitri et al. (2020), who found that task-based learning supports both language competence and confidence through peer interaction.

However, the study is not without limitations. The absence of a control group restricts the ability to isolate the intervention as the sole cause of improvement. Additionally, while three raters were trained and achieved high inter-rater reliability, the evaluation of speaking skills remains partially subjective. Future studies could benefit from incorporating student reflections or interviews to capture deeper insights into their learning experiences. Moreover, large class sizes and limited resources may pose challenges for broader implementation, especially where individualized feedback is difficult to provide.

Despite these limitations, the findings have important implications for language instruction in vocational education. The Dialogue TBL approach aligns well with the practical communication needs of physiotherapy students. It shifts the classroom dynamic from passive lecture-based learning to active, student-centered engagement. According to the principles of Communicative Language Teaching, students learn more effectively when they find the language content relevant to their needs (Ridwan et al., 2023). This was evident as students practiced professional communication skills in simulated, discipline-specific scenarios such as delivering therapy instructions or explaining treatment procedures.

So, the Dialogue Task-Based Learning approach significantly improved the speaking skills of physiotherapy students by offering authentic, contextual, and interactive learning experiences. The structured tasks promoted both language development and professional readiness. For vocational programs seeking to strengthen English communication skills, especially in healthcare fields, this approach offers a relevant and effective alternative to traditional language instruction.

CONCLUSION

According to the study's findings, students in Department of Physiotherapy at the Poltekkes Kemenkes Surakarta have shown that the dialogue task-based learning technique is successful in enhancing their speaking abilities. All students' speaking abilities improved, according to the Wilcoxon test findings, which revealed a substantial difference between pretest and posttest scores. By encouraging students to actively use English in professional settings, this method helps them become more proficient, self-assured, and fluent speakers of ideas and information.

Given these results, it is advised that instructors of English at vocational schools, particularly physiotherapy, continue to develop and apply a dialogue task-based learning approach in the teaching and learning process. Learning materials and activities should be designed as close as possible to real communication situations in the world of work, such as simulated dialogue with patients, medical discussions, and case presentations. In addition, vocational education institutions also need to provide training or workshops to teaching staff in order to be able to design dialogue tasks that are communicative, contextual, and in accordance with the needs of students' professions.

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