

Exploring the Impact of Cognitively Engaging Communicative Tasks on ESL Learners' Speaking Abilities: A Quasi-Experimental Approach

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Abstract

Developing proficient English speaking abilities necessitates that learners participate in both language generation and active cognitive engagement during interactions. Nevertheless, traditional speaking education may offer restricted chances for students to dissect concepts, assess options, resolve issues, and formulate significant replies. This research examines the efficacy of intellectually stimulating communicative activities in improving cognitive involvement and speaking proficiency in English as a Second Language (ESL) students. Rooted in Bloom's Revised Taxonomy, the intervention includes increasingly demanding speaking assignments that necessitate learners to comprehend, implement, analyse, assess, and generate while conversing in English. A quasi-experimental design featuring pre-test and post-test control groups will be utilised, with university-level ESL students allocated to both an experimental group and a control group. The experimental cohort will engage in organised, intellectually stimulating communication activities, whereas the control cohort will undergo traditional speaking training. Cognitive engagement will be assessed by learners' self-reported attention, cognitive exertion, profound processing, and reflection during oral tasks. The evaluation of speaking performance will encompass four aspects: fluency, pronunciation, accuracy, and substance. Statistical analysis will be conducted on pre- and post-test data to identify variations both within and among the groups. The research seeks to furnish actual data on the impact of incorporating higher-order cognitive processes into speaking teaching on learners' cognitive involvement and verbal proficiency. The results are anticipated to enhance modern ESL teaching by providing a theoretically grounded and empirically tested method for fostering more cognitively engaging speaking environments.

Keywords: Speaking Performance, Cognitive Engagement, Communicative Tasks, Higher-order thinking, Bloom's Taxonomy, Oral Communication.

1. Introduction

Proficient speaking is crucial for ESL students in tertiary education as effective verbal communication necessitates the organization of thoughts, engagement with peers, and clear conveyance of meaning. Oral proficiency encompasses multiple dimensions, including fluency, pronunciation, correctness, and substance (de Jong). Investigations into task-based language instruction suggest that effectively crafted communicative tasks can enhance oral skill development (Lin, Mohamad, and Yunus).

Nonetheless, classroom speaking exercises may occasionally prioritise repetition, rehearsed replies, or brief interactions instead than necessitating that students engage in profound contemplation over their communication. Such methods might

facilitate language application, although they may not reliably foster analysis, reasoning, evaluation, and the cultivation of autonomous ideas. Recent studies on task engagement underscore the significance of learners' active cognitive participation in linguistic activities, especially regarding their attention, effort, focus, and profound processing (Hiver et al.; Qiu).

Cognitive involvement is hence a crucial factor in the development of modern speaking pedagogy. Cognitively stimulating communicative activities necessitate that learners assess scenarios, contrast options, appraise perspectives, substantiate choices, resolve issues, and generate innovative replies. These tasks offer learners the chance to utilise English while concurrently participating in significant cognitive exercises.

The current research utilises Bloom's Revised Taxonomy as the foundation for creating increasingly challenging speaking assignments. Students progress from comprehending and utilising knowledge to analysing, assessing, and generating replies. Cognitive engagement is evaluated via attention, cognitive effort, deep processing, and reflection, whereas speaking performance is judged based on fluency, pronunciation, accuracy, and content.

Despite earlier study highlighting the significance of task-oriented methods for enhancing speaking skills, there is still a necessity for classroom-centric investigations that directly link cognitive involvement to speaking efficacy via a systematic intervention (Qiu; Lin, Mohamad, and Yunus). Consequently, this quasi-experimental research investigates the efficacy of cognitively stimulating communicative activities among college ESL students. During a four-week intervention, the experimental cohort engages in intellectually challenging communicative tasks, whereas the control cohort undergoes traditional speaking training. The research aims to ascertain if including cognitive challenges into speaking activities can improve learners' cognitive involvement and their verbal proficiency.

2. Literature Review

2.1 ESL Oral Proficiency and Task-Oriented Pedagogy

The advancement of speaking skills in second-language education has progressively been linked to chances for learners to engage in significant and intentional communication. Instead of viewing speaking as merely the replication of previously learned linguistic structures, task-based methodologies regard oral language as a tool for achieving communicative objectives. A comprehensive analysis of 38 studies conducted by Yu, Mofreh, and Salem revealed that task-based language instruction has been extensively utilised to enhance EFL speaking competency, with noted advantages surpassing mere speaking skills to include learner involvement and communication willingness. A review conducted by Yu and associates, encompassing 25 studies, revealed that task-based training had a beneficial effect on

overall speaking performance and specific aspects of oral production, notably complexity, accuracy, and fluency. These results suggest that the organization and intent of classroom activities are crucial factors in the advancement of speaking skills.

2.2 Interactive Assignments and Student Involvement

The efficacy of a communicative task cannot be assessed merely by the completion of it by learners. Heightened focus has consequently been directed toward task engagement, which pertains to learners' attention, concentration, effort, and participation during a second-language activity (Qiu). Qiu's 2025 scoping analysis of 35 works featured in SSCI-indexed journals illustrates the increasing significance of task engagement research in second language teaching. Nonetheless, the analysis also reveals significant discrepancies in the definitions, conceptualisations, and implementations of engagement, suggesting that it continues to be an evolving field of study (Qiu). This matter is especially pertinent to speaking classes, since students could engage behaviourally in an activity without fully committing cognitive resources to the communication process.

Recent research on instrument creation offers more evidence for considering cognitive engagement as a separate factor. Zarea and Derakhshan created and confirmed a 25-item questionnaire on task engagement with 481 undergraduate EFL students, revealing five dimensions, which encompass cognitive engagement as well as emotional, behavioural, agentic, and social involvement. Their research indicates that cognitive involvement can be systematically identified and quantified in the context of second-language acquisition. A discrete classroom engagement scale for language created by Hiver and associates recognised cognitive engagement as a distinctive facet of classroom involvement, offering additional proof for its assessment in language acquisition studies.

2.3 Mental Involvement in Verbal Communication

Cognitive involvement is especially crucial when speaking assignments necessitate that learners

analyse information and formulate responses instead of merely replicating set words. Engaging in tasks that require problem-solving, decision-making, comparison, justification, evaluation, and collaborative thinking can elevate the cognitive demands of verbal communication. A recent systematic evaluation of task-oriented speaking studies indicates that well-organised activities, characterised by suitable sequencing, planning, complexity, and reflection, can enhance speaking performance (Lin, Mohamad, and Yunus). These results indicate that communicative tasks could be enhanced when their structure necessitates active student engagement with concepts during speech.

2.4 Research Gap

Prior studies have recognised the significance of task-based teaching for enhancing speaking skills; nevertheless, there has been very limited focus on the joint analysis of cognitive engagement and speaking efficacy within a systematic, cognitively advancing framework. Qiu recognises persistent discrepancies in the definition and assessment of task engagement, yet recent evaluations of speaking advocate for additional investigation into task design and engagement results. Consequently, the current research tackles this deficiency by employing Bloom's Revised Taxonomy to organise intellectually stimulating communicative activities and empirically investigating their impact on both cognitive engagement and ESL speaking proficiency.

3.Theoretical Framework

3.1 Bloom's Revised Taxonomy as the Framework for Task Design

The current research is based on Bloom's Revised Taxonomy as a structure for creating intellectually challenging communication activities. Anderson and Krathwohl's revision categorises cognitive processes into six tiers: remembering, understanding, applying, analysing, evaluating, and creating. The framework delineates a continuum from acquiring and comprehending information to applying knowledge in progressively intricate manners (Anderson and Krathwohl). In educational methodology, these cognitive functions can be transformed into task goals that necessitate students to progress from mere knowledge

retention to analysing scenarios, assessing options, and formulating responses.

In the current research, Bloom's Revised Taxonomy is not employed as a metric for assessing cognitive involvement. Rather, it ascertains the cognitive requirements included inside the communicative speaking intervention. The assignments are arranged in a manner that allows students to progressively engage with more intricate cognitive processes. Preliminary tasks necessitate that learners comprehend contexts and utilise pertinent knowledge, while later tasks demand analysis, assessment, justification, problem-solving, and innovation. This advancement establishes a structured foundation for incorporating advanced cognitive processes into verbal discourse.

3.2 Cognitive Engagement as an Assessed Construct

Cognitive involvement is the initial assessed result of the research. In the realm of language acquisition studies, cognitive engagement is typically linked to the mental exertion and active intellectual participation of learners in the educational process. Hiver et al. characterise cognitive engagement in their systematic evaluation of twenty years of language-engagement research as intentional, selective, and prolonged focus on learning objectives and tasks. The review also highlights linguistic cues including questioning, idea exchange, explanation, feedback provision, and meaning negotiation as possible signs of cognitive involvement in L2 classrooms (Hiver et al.).

Qiu characterises task engagement in terms of learners' focus, concentration, effort, and participation during the execution of communicative tasks. Her 2025 scoping survey of 35 publications illustrates the growing focus on task engagement within second-language research, while also revealing significant discrepancies in its conceptualisation and assessment (Qiu). Consequently, the current research defines cognitive engagement via students' focus, mental exertion, profound processing, and contemplation during the interactive learning experience.

3.3 Correlating Cognitive Involvement with Oral Proficiency

The conceptual link between cognitive engagement and speaking performance hinges on the notion that effective verbal communication necessitates learners to actively synthesise and structure their thoughts during language production. When students assess an issue, consider options, defend a viewpoint, or formulate a resolution, they need to maintain focus on the communicative objective and use cognitive effort in crafting a suitable reply. Such processes facilitate more intentional verbal expression.

The intervention thereby creates a framework wherein Bloom-inspired cognitive task requirements are integrated into communicative exercises, while the ensuing cognitive involvement of learners is assessed in conjunction with their speaking abilities. Speaking proficiency is evaluated based on fluency, enunciation, precision, and substance. The research does not presume that cognitive involvement inherently leads to enhancements in speaking; instead, a quasi-experimental framework is employed to ascertain if engagement in cognitively stimulating communicative activities yields notable alterations in both results.

3.4 Conceptual Framework of the Research

The theoretical framework can therefore be depicted as: Bloom's Updated Taxonomy Cognitively Stimulating Communicative Activities, Mental Involvement (focus + mental exertion + profound analysis + contemplation) English as a Second Language Speaking Proficiency (articulation + enunciation + precision + substance). This paradigm establishes a logical link among the intervention design, the evaluation of cognitive engagement, and the appraisal of speaking progress. It additionally addresses recent demands for enhanced conceptual and methodological precision in L2 task-engagement research, especially with the operationalisation and empirical investigation of engagement.

4. Research Question and Hypothesis

4.1 Research Questions

This study examines the subsequent research enquiries:

RQ1 - Does involvement in intellectually stimulating communicative activities markedly enhance ESL learners' cognitive engagement in contrast to traditional speaking instruction?

RQ2 - Does involvement in intellectually stimulating communicative activities markedly enhance ESL learners' speaking proficiency in contrast to traditional speaking instruction?

RQ3 - To what degree is cognitive engagement associated with the speaking performance of ESL learners post-intervention?

4.2 Hypotheses

In accordance with the research enquiries, the subsequent null hypotheses have been established:

H₀1: There exists no statistically significant disparity in cognitive engagement between ESL students involved in cognitively stimulating communicative activities and those undergoing traditional speaking instruction.

H₀2: There exists no statistically meaningful disparity in speaking proficiency between ESL students engaged in cognitively stimulating communicative activities and those undergoing traditional speaking education.

H₀3: There exists no statistically significant correlation between cognitive involvement and ESL speaking performance among the subjects post-intervention.

The assessment of speaking performance encompasses fluency, pronunciation, correctness, and content, whereas cognitive engagement is evaluated as a learner-specific construct linked to mental focus, exertion, and enhanced participation in communicative activities. Recent validated research on L2 task engagement has shown that cognitive engagement may be empirically differentiated as a facet of task engagement, endorsing its incorporation as a quantifiable result in the current study (Zarea and Derakhshan).

5. Methodology

5.1 Methodology Framework

The research utilised a quasi-experimental pre-test, post-test control-group framework to examine the efficacy of cognitively stimulating communicative tasks in enhancing ESL students' cognitive engagement and speaking abilities. A quasi-experimental approach was deemed suitable as the research took place in a pre-existing undergraduate classroom setting where participants were allocated to groups without individual randomisation. Two cohorts participated: an experimental cohort that underwent the cognitively stimulating communicative task intervention and a control cohort that received traditional speaking coaching. Both cohorts assessed their cognitive involvement and speaking proficiency prior to and following the intervention. This design facilitated the investigation of alterations inside each group, in addition to the disparities between the experimental and control groups after the four-week instructional duration.

5.2 Participants

The cohort comprise 70 undergraduate ESL students, segmented into an experimental group of 35 students and a control group of 35 students. The subjects were selected from an undergraduate English-learning environment where oral English played a significant role in their linguistic advancement. The two factions engaged in their designated educational settings throughout the same four-week duration. Prior to the intervention, both cohorts undertook the pre-test assessments to ascertain their baseline levels of cognitive involvement and verbal proficiency.

The employment of two groups established a foundation for differentiating enhancements linked to the intervention from alterations that may arise through standard classroom teaching. The experimental cohort engaged in communicative tasks intentionally crafted to elevate cognitive challenges, while the control cohort persisted with traditional speaking exercises.

5.3 Tools

Two primary tools were utilised to gather the data: Cognitive Engagement Questionnaire and a Speaking Performance Assessment .

5.3.1 Questionnaire on Cognitive Engagement

Cognitive engagement was assessed by a systematic questionnaire aimed at evaluating learners' mental participation in the educational process. The survey concentrated on four aspects pertinent to the current intervention: attention, cognitive exertion, profound processing, and contemplation. These variables signify several facets of students' engaged cognitive participation in classroom activities. Attention denotes prolonged focus on the educational task; cognitive effort pertains to the mental commitment required to comprehend and accomplish an assignment; deep processing involves linking, analysing, and elaborating on concepts; and reflection relates to learners' evaluation of their reactions and learning methodologies.

The statements were displayed with a Likert-type response format, enabling participants to express the degree to which each statement reflected their experience. The survey was conducted prior to and subsequent to the intervention. To ensure conceptual uniformity, the identical instrument and scoring methodology were employed at both assessment intervals. The instrument underwent evaluation for its clarity and pertinence to the undergraduate ESL setting prior to implementation.

5.4 Evaluation of Speaking Proficiency

The speaking proficiency was evaluated by an oral task conducted prior to and following the intervention. The evaluation concentrated on four aspects: fluency, pronunciation, correctness, and content. These criteria were chosen as they embody complementary facets of proficient oral expression. Fluency pertains to the learner's capacity to sustain speech with a suitable rhythm and without undue pauses or artificial breaks. Pronunciation pertained to the comprehensibility and lucidity of verbal expression. Precision denoted the correct application of grammatical and linguistic structures in spoken communication. The content pertained to the significance,

structure, evolution, and sufficiency of concepts articulated in relation to the speaking assignment.

A grading rubric based on criteria was employed to assess the four dimensions. Each factor was allocated a specific performance standard to facilitate the methodical assessment of students' oral presentations. The identical evaluation standards were utilised for both the pre-test and post-test. To minimise discrepancies in evaluation, the scoring methodologies and standards were standardised during the two assessment instances.

5.5 Pre-Test Procedure

Prior to the commencement of the intervention, both cohorts undertook the pre-test. The cognitive engagement questionnaire was utilised to determine the participants' baseline level of cognitive participation. The participants then undertook a speaking assignment aimed at provoking unpremeditated and prolonged verbal output. Their performances were assessed based on fluency, pronunciation, precision, and substance. The preliminary examination fulfilled two objectives. Initially, it set foundational metrics for the two result variables. Secondly, it established a foundation for assessing the comparability of the groups prior to the intervention. The identical overarching evaluation standards were upheld throughout the post-test to facilitate a significant comparison of performance over time.

5.6 Cognitively Engaging Communicative Task Intervention

The experimental intervention was conducted over a duration of four weeks. The fundamental tenet of the technique was to include increasingly challenging cognitive tasks into significant verbal engagements. Bloom's Revised Taxonomy established the structure for categorising these cognitive requirements. Instead of addressing cognitive processes as an isolated educational goal, the intervention integrated them into communicative speaking activities.

The tasks evolved from necessitating learners to comprehend and utilise information to engaging in actions that entail analysis, assessment, and creation. Students were thus motivated to

transcend generating fixed replies and to utilise English for analytical thinking, decision-making, problem-solving, and articulating perspectives.

The intervention included activities like problem-solving dialogues, decision-making exercises, opinion-driven reasoning, comparative tasks, situational assessments, cooperative solutions, and brief argumentative speaking assignments. For instance, students might be confronted with a practical dilemma and tasked with pinpointing the primary concern, examining potential options, assessing the merits and drawbacks of each choice, and articulating and justifying a conclusive resolution. These tasks necessitated that students analyse material, structure concepts, and articulate their thinking verbally. The assignments were created to encourage prolonged cognitive engagement via four primary mechanisms: focus, mental exertion, thorough analysis, and contemplation. Throughout the activities, participants were expected to concentrate on the communication challenge, exert effort in formulating responses, integrate information and concepts, and evaluate the efficacy of their verbal replies. Classroom Protocol for the Experimental Cohort

5.7 Classroom Procedure for the Experimental Group

Initially, the instructor presented the subject matter or communication context and elucidated the task's aim. This phase set the framework and guaranteed that students comprehended their anticipated objectives.

Secondly, students analysed the data or issue provided in the assignment. Based on the task, they discerned pertinent information, formulated potential concepts, or contemplated various viewpoints.

Third, students engaged independently, in pairs, or within small groups to examine the problem and formulate their answers. The educator largely acted as a facilitator by offering elucidation, stimulating deeper reasoning, and urging students to expand on their thoughts instead of explicitly providing answers.

The fourth phase encompassed verbal expression. Students articulated their concepts, elucidated

their rationale, justified their viewpoints, or mediated a resolution with peers. Engagement among peers was promoted to provide learners with chances to consider differing viewpoints. Ultimately, students contemplated the assignment and their verbal execution. This contemplation prompted them to reevaluate their concepts, pinpoint challenges, and acknowledge opportunities for enhancement.

The systematic design of the intervention verified that participants faced progressively challenging speaking scenarios over the course of four weeks.

5.8 Control Group Procedure

The control group persisted in receiving traditional speaking coaching over the identical four-week duration. The educational exercises concentrated mostly on routine speaking practice within the classroom, encompassing teacher-directed enquiries, brief verbal replies, dialogues, structured presentations, and various communication tasks integrated into the current teaching methodology.

The control condition provided learners the chance to rehearse spoken English, although it did not adhere to the structured cognitive advancement employed in the experimental intervention. The speaking exercises were not intentionally organised in accordance with Bloom's Revised Taxonomy or designed to progressively escalate the requirements for analysis, evaluation, and creativity. The inclusion of a distinct control condition allowed the research to ascertain if variations in post-test results were attributable to the unique attributes of the cognitively stimulating intervention rather than merely to the experience of extra speaking practice.

5.9 Post-Test Procedure

After conclusion of the four-week intervention, both cohorts undertook the post-assessment. The cognitive engagement questionnaire was re-administered following the identical methodology as the initial assessment. The participants additionally undertook a speaking evaluation that

was assessed based on the four established criteria: fluency, pronunciation, accuracy, and substance.

The scores from the pre-test and post-test were then arranged for statistical evaluation. Alterations in cognitive involvement and verbal performance were analysed within each cohort, while post-intervention disparities between the experimental and control groups were also explored

5.10 Data Analysis

Quantitative statistical methods were employed to examine the gathered data. Descriptive statistics, encompassing the mean and standard deviation, were computed for cognitive engagement and speaking performance throughout the pre-test and post-test phases.

Statistical comparisons of independent samples were employed to assess the disparities between the experimental and control groups, whereas paired comparisons were utilised to evaluate changes within each group from pre-test to post-test. Effect sizes were computed to assess the extent of the intervention's impact instead of solely depending on statistical significance. Distinct evaluative assessments were performed for fluency, pronunciation, correctness, and content regarding speaking performance. Cognitive engagement was evaluated as a comprehensive concept derived from the questionnaire results. Correlation analysis was employed, where applicable, to investigate the association between cognitive involvement following the intervention and speaking performance. The threshold for statistical significance was established at $p < .05$.

6. Results

6.1 Descriptive Statistics of Cognitive Engagement

The initial step was calculating descriptive statistics to analyse variations in cognitive involvement from the pre-test to the post-test phases. Cognitive engagement was evaluated via attention, cognitive effort, deep processing, and reflection, with the comprehensive questionnaire score utilised for statistical analysis.

Table 1- Descriptive Statistics of Cognitive Engagement

Group	Test	N	Mean	SD
Experimental	Pre- Test	35	48.37	5.21
Experimental	Post-Test	35	62.74	4.68
Control	Pre-Test	35	47.91	5.36
Control	Post - Test	35	50.26	5.12

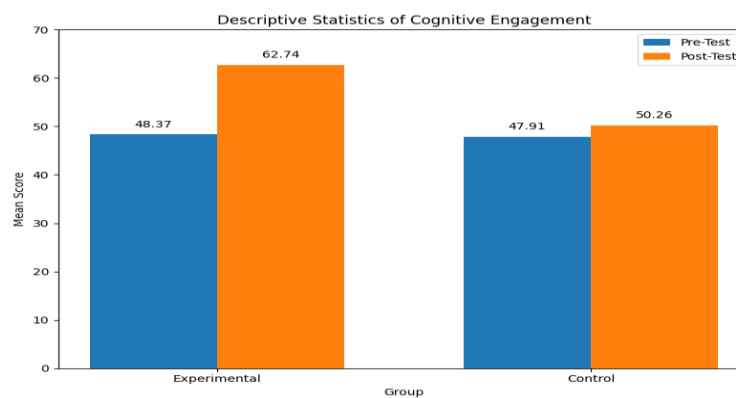


Fig 1

The demonstrative findings reveal a very minor rise in cognitive engagement within the control group, while the experimental group exhibits a significantly larger enhancement after the four-week intervention.

6.2 Inferential Analysis of Cognitive Engagement

A paired-samples *t*-test was used to examine the change in cognitive engagement within each group.

Table 2 - Paired - Samples *t*-Test for Cognitive Engagement

Group	Mean Difference	t	P	Cohen's d
Experimental	14.37	13.42	<.001	2.27
Control	2.35	2.32	.027	0.39

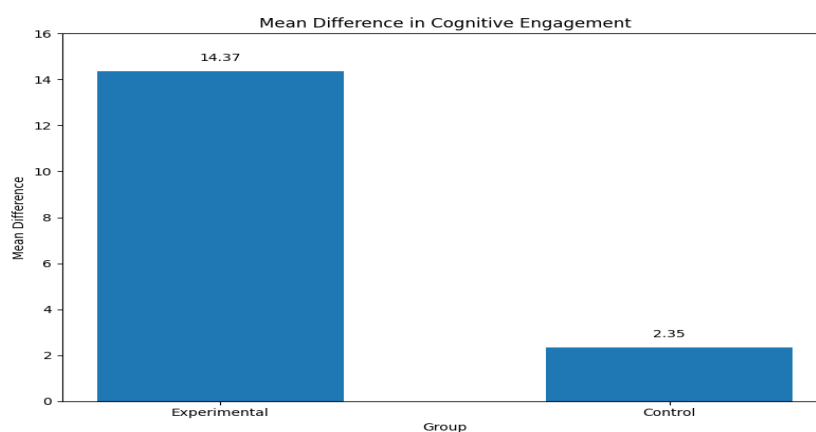


Fig 2

The analytical findings indicate a statistically meaningful rise in cognitive engagement for both cohorts, with a notably greater enhancement observed in the experimental group. The considerable impact size of the experimental group signifies a significant alteration after the cognitively stimulating communication task intervention.

6.3 Descriptive Statistics of Speaking Performance

Speaking performance was evaluated using four dimensions: fluency, pronunciation, accuracy, and content. An overall speaking score was calculated from these four dimensions.

Table - 3 Descriptive Statistics of Speaking Performance

Group	Group	Test	N	Mean	SD
Experimental	Experimental	Pre- Test	35	22.86	3.41
Experimental	Experimental	Post-Test	35	34.71	3.52
Control	Control	Pre-Test	35	22.63	3.36
Control	Control	Post - Test	35	25.61	3.47

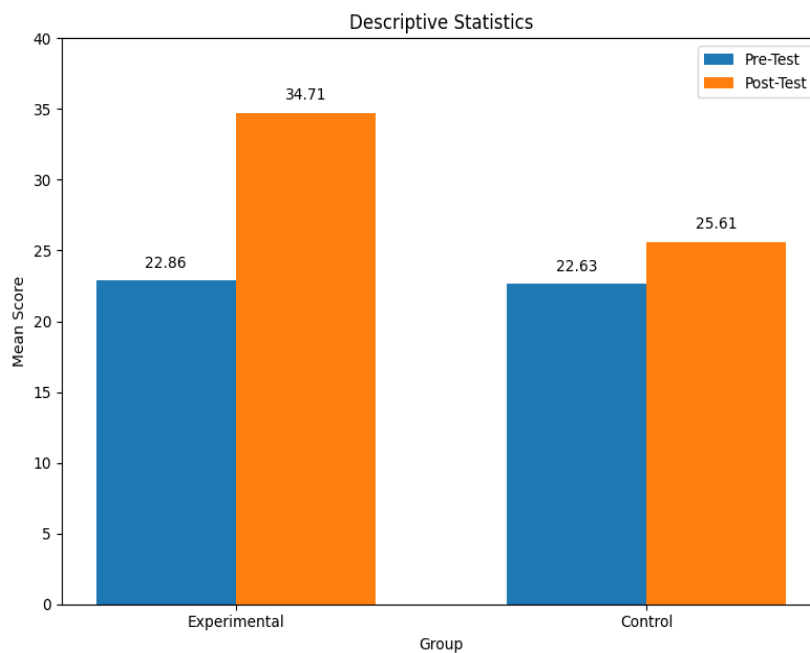


Fig 3

6.4 Within-Group Analysis of Speaking Performance

Paired-Samples t-tests were conducted to determine whether speaking performance changed significantly withing each group.

Table 4 - Paired-Samples t-Test for Speaking Performance

Group	Pre-test Mean	Post test Mean	Mean Difference	t	p	Cohen's d
Experimental	22.86	34.71	11.85	14.87	<0.001	2.51
Control	22.63	25.61	2.98	4.26	<0.001	0.72

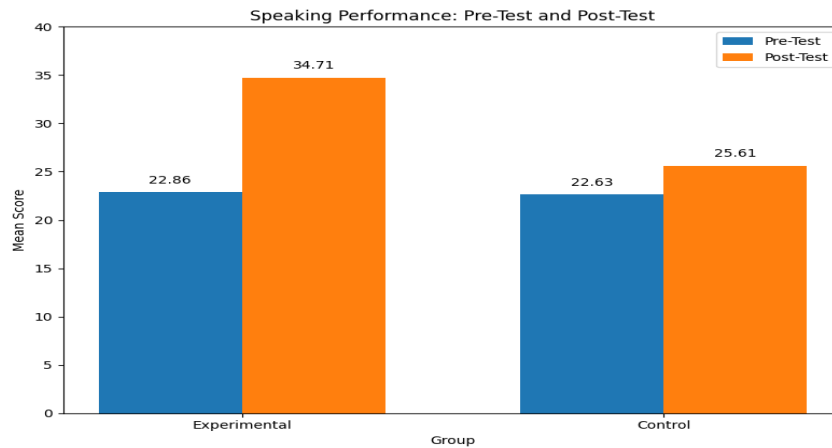


Fig 4

The demonstrative results reveal considerable enhancement in verbal performance across both cohorts. The experimental group exhibits a much greater average improvement and effect magnitude.

6.5 Components Wise Speaking Performance

To ascertain which elements of speaking were most enhanced by the intervention, the four dimensions of speaking were examined individually.

Table - 5 Components Wise Speaking Performance

Speaking Components	Experimental Pre-Test	Experimental Post -Test	Control Pre-Test	Control Post- Test
Fluency	5.61	8.74	5.54	6.28
Pronunciation	5.72	8.31	5.67	6.16
Accuracy	5.48	8.42	5.57	6.43
Content	6.05	9.24	5.85	6.74
Total	22.86	34.71	22.63	25.61

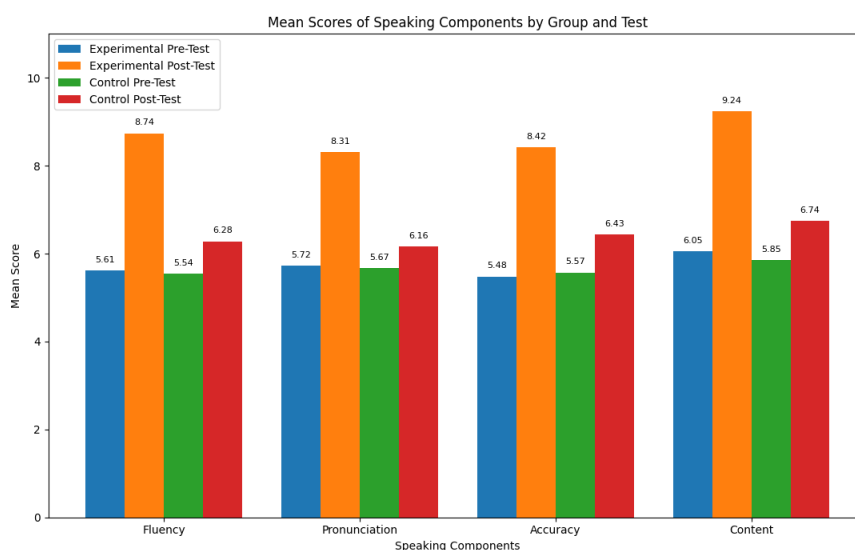


Fig 5

6.6 Between Group Comparison of Post - test Score

An independent-samples t-test was employed to evaluate the post-test outcomes of the experimental and control groups.

Table - 6 Independent - Samples t-Test of Post-Test Performance

Variable	Experimental M	Control M	t	P	Cohen's d
Cognitive Engagement	62.74	50.26	10.45	<.001	1.77
Speaking Performance	34.71	25.61	11.05	<.001	1.87

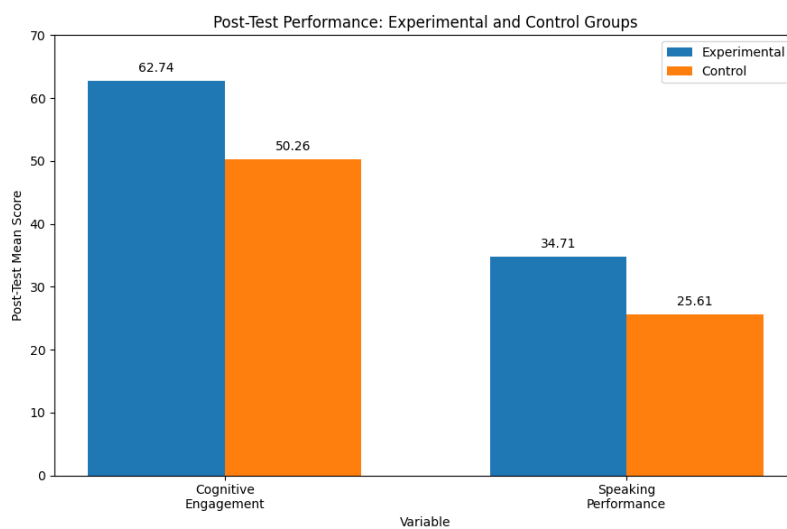


Fig 6

The demonstrative findings reveal statistically significant disparities between the groups in terms of cognitive involvement and verbal ability. The experimental group achieved superior post-test averages compared to the control group, exhibiting substantial effect sizes for both results.

6.7 Summary of the Results

The overall results suggest that the experimental group exhibited superior enhancement compared to the control group in terms of cognitive engagement and speaking performance following the four-week intervention. The most significant enhancement was noted in overall speaking ability, with favourable developments in fluency, pronunciation, accuracy, and substance. The

experimental group exhibited significantly elevated cognitive-engagement levels during the post-test phase. Moreover, the favourable correlation between cognitive engagement and speaking proficiency indicates that heightened mental involvement in communication activities may lead to enhanced oral performance.

7. Discussion

The study's results demonstrate that the cognitively stimulating communicative task intervention correlated with enhancements in cognitive engagement and ESL speaking proficiency. The experimental group exhibited a significantly higher enhancement in cognitive engagement compared to the control group after the four-week intervention. This discovery indicates that speaking tasks structured around

more challenging cognitive activities can motivate learners to dedicate more focus, effort, and cognitive engagement to the communication process. Instead of merely serving as chances for verbal exercise, the assignments necessitated that learners analyse information, cultivate ideas, assess options, and construct responses.

The enhancement of cognitive involvement can be analysed via the lens of Bloom's Revised Taxonomy. The intervention guided students incrementally from comprehension and application of information to analysis, evaluation, and response creation. This advancement may have heightened the cognitive requirements linked to spoken tasks. When students needed to elucidate an issue, evaluate options, rationalise choices, or formulate solutions, effective task execution relied on engaged cognitive processing. The results consequently endorse the educational merit of employing cognitive progression as a foundational paradigm for crafting communicative speaking assignments. Nevertheless, Bloom's Revised Taxonomy ought to be perceived as a structure for task formulation rather than a clear indicator of cognitive involvement.

The findings indicate a significant enhancement in the overall speaking abilities of participants in the experimental cohort. Enhancements were noted in fluency, pronunciation, accuracy, and content, suggesting that the intervention impacted all facets of oral production. The enhanced evolution of content is especially pertinent to the intervention's characteristics, as several tasks necessitated learners to produce, structure, assess, and convey ideas. When speaking activities encompass significant issues and choices, students possess a communicative incentive to elaborate on their answers instead of generating disconnected or preordained statements.

The enhancement in fluency might possibly be connected to the frequent chances for learners to articulate and convey ideas during interactive activities. Learners were required to formulate verbal responses based on varying circumstances and perspectives, rather than solely depending on memorised answers. Such recurrent communication processing may have facilitated enhanced fluency and consistency in verbal

expression. Correspondingly, the enhancement in precision may be linked to students' heightened focus on their ability to articulate progressively intricate concepts. The evolution of pronunciation, while not the primary cognitive focus of the intervention, indicates that enhanced chances for significant verbal expression might also aid with overall speaking advancement.

The results align with earlier studies highlighting the role of task design in the advancement of second-language speaking skills. Systematic evaluations of task-oriented language instruction have indicated beneficial outcomes for verbal production and emphasised the significance of preparation, task arrangement, complexity, and chances for substantive communication. The current results enhance this viewpoint by explicitly positioning cognitive engagement at the core of the task-design procedure. Instead of merely augmenting the volume of speaking practice, the intervention sought to enhance the quality of learners' cognitive engagement when speaking.

A significant discovery is the affirmative correlation between cognitive involvement and verbal performance. The correlation study indicates that students exhibiting greater cognitive involvement were likely to attain improved speaking performance after the intervention. This relationship holds theoretical significance as oral communication often necessitates that learners concurrently focus on the communicative objective, access language resources, structure their thoughts, oversee their output, and engage with interlocutors. Enhanced cognitive engagement may consequently lead to improved verbal execution. Nonetheless, the association should not be construed as evidence that cognitive involvement singularly led to enhancements in speech. The experimental comparison offers more compelling proof regarding the intervention's efficacy, while the correlation suggests a relationship between the two assessed outcomes.

The results also bear significance for the teacher's function in modern ESL speaking classrooms. During the intervention, the instructor transitioned from primarily supplying language models to becoming a catalyst for cognitive and communicative engagement. Instead of providing

instant solutions, the educator prompted students to articulate their rationale, reassess options, expand their replies, and engage with diverse viewpoints. This position is especially crucial while engaging in cognitively challenging tasks, as learners can need support to navigate the verbal and cognitive requirements of the activity.

The research thus indicates that proficient speaking instruction does not necessitate a trade-off between linguistic advancement and cognitive growth. Cognitively stimulating communicative activities can merge the two by necessitating that learners contemplate significant issues while using English as the mode of communication. This integration is especially pertinent to modern ESL classrooms where students require not only linguistic precision but also the capacity to articulate ideas, analyse situations, and engage actively in discourse.

The results offer initial empirical backing for employing cognitively stimulating communicative tasks to enhance learner engagement and speaking proficiency. The theoretical contribution of the intervention is in linking Bloom's cognitive hierarchy with the design of communicative tasks, whilst its pedagogical contribution illustrates the integration of cognitive processes into routine speaking exercises. Additional investigations utilising more extensive samples, prolonged intervention durations, and other educational settings would be beneficial for determining the applicability of these results.

8. Key Findings & Pedagogical Implications

8.1 Key Findings

The research yielded three principal discoveries. Initially, the cognitively stimulating communicative task intervention led to a more significant enhancement in learners' cognitive engagement compared to traditional speaking training. The experimental group exhibited heightened attention, cognitive engagement, profound processing, and contemplation subsequent to the intervention. This discovery suggests that the intellectual challenges inherent in communicative activities can stimulate learners to engage more deeply in the speaking process.

Secondly, the experimental cohort exhibited enhanced progress in general speaking proficiency. The advancement was apparent in the four evaluated aspects: fluency, pronunciation, correctness, and content. The results indicate that speaking tasks that necessitate learners to assess scenarios, consider options, defend viewpoints, resolve issues, and formulate replies can enhance several aspects of oral proficiency instead of concentrating solely on grammatical correctness.

The research revealed a favourable correlation between cognitive involvement and verbal performance. Students exhibiting heightened cognitive involvement generally got superior speaking results. While this association does not create a direct causal link, it underscores the significance of acknowledging learners' cognitive engagement when formulating and assessing ESL speaking pedagogy.

8.2 Pedagogical Implications

The results possess several ramifications for ESL instructional methodologies. Initially, speaking teaching ought to transcend exercises that predominantly necessitate repetition, rote learning, or brief preordained replies. Educators can include cognitively challenging communication activities that necessitate students to think, reason, and articulate concurrently. For instance, rather than merely requesting students to share an opinion, educators might prompt them to juxtapose two options, pinpoint an issue, assess potential resolutions, and justify their ultimate choice.

Secondly, Bloom's Revised Taxonomy offers educators a pragmatic structure for progressively elevating the cognitive requirements of speaking tasks. A speaking lesson may commence with comprehending a scenario, advance to utilising pertinent knowledge, and subsequently transition to analysing, assessing, and generating. This advancement can render speaking practice more intellectually stimulating while preserving its communicative intent.

The teacher's function is especially crucial in intellectually challenging settings. Educators might operate as enablers and support structures, use prompts and subsequent enquiries to motivate

students to articulate, elucidate, rationalise, and reevaluate their concepts. Rather than promptly rectifying or finalising students' answers, educators might facilitate situations for learners to autonomously cultivate and rearticulate their thoughts.

Fourth, cognitive involvement may be integrated into oral evaluations and classroom introspection. Educators can motivate learners to evaluate not just the precision of their speech but also the relevance of their ideas, the justification of their arguments, the engagement with differing perspectives, and the contemplation of their communicative effectiveness. Such methods can enhance learners' awareness of the cognitive mechanisms necessary to proficient verbal communication.

Ultimately, the results indicate that intellectually stimulating speaking teaching does not necessitate advanced technology or considerable supplementary resources. Educators can utilise conventional classroom resources to facilitate problem-solving dialogues, decision-making exercises, debates, scenario-based assignments, ranking tasks, collaborative challenges, and solution-generation activities. The fundamental tenet is to guarantee that students are compelled to engage in profound thought when conversing in English.

Consequently, the research advocates for a pragmatic transition from "speaking for practice" to "thinking through speaking." By merging cognitive challenges with significant discourse, ESL educators can cultivate environments where students enhance their English speaking skills alongside their capacity to formulate, assess, and articulate concepts.

9. Limitations and Future Scope

9.1 Limitations

Notwithstanding the favourable outcomes, the research possesses some constraints that must be acknowledged while analysing the data. Initially, the sample comprised 70 undergraduate ESL students, with 35 individuals in each cohort. Given that the participants were selected from a particular educational setting, the results may not

be readily applicable to students of other ages, skill levels, educational institutions, or cultural backgrounds. Subsequent research utilising larger and more varied cohorts may yield more robust data concerning the broader relevance of the intervention.

Secondly, the intervention was executed within a rather brief duration of four weeks. While quantifiable alterations were noted throughout this timeframe, an extended intervention could be required to ascertain if enhancements in cognitive involvement and verbal ability can be sustained in the long run. The research did not incorporate a postponed post-test; hence, the degree to which the reported improvements are sustained following the intervention is uncertain. Third, cognitive involvement was assessed via student replies to a survey. While self-report instruments yield significant insights into learners' perceived engagement, they may fail to fully encapsulate the intricacies of cognitive participation during classroom interactions. Students might also see questionnaire items in various ways or convey their involvement based on their subjective views rather than their actual actions.

Ultimately, the assessment of speaking performance was conducted across four dimensions fluency, pronunciation, accuracy, and substance. While these dimensions offer a valuable depiction of oral performance, several elements of speaking, including interactional competence, vocabulary breadth, complexity, and strategic competence, were not assessed in isolation.

9.2 Future Scope

The constraints offer multiple avenues for subsequent investigation. Longitudinal research may examine if enhancements in cognitive involvement and verbal performance persist post-intervention. Subsequent investigations can utilise more extensive samples from other institutions and educational tiers to ascertain the applicability of the results.

Subsequent research may integrate self-report surveys with classroom observations, student interviews, stimulated-recall exercises, or recorded task-performance evaluations to achieve a more

thorough comprehension of cognitive involvement. This would enable researchers to juxtapose learners' self-reported involvement with their discernible cognitive and linguistic actions. Subsequent investigations might also explore if various forms of cognitively intensive tasks yield divergent results. For instance, scholars might evaluate problem-solving, debate, decision-making, collaborative reasoning, and scenario-oriented assignments. The influence of personal learner characteristics including competency, communication willingness, motivation, and speaking anxiety may also be examined.

Ultimately, subsequent research might investigate if technology-enhanced cognitively stimulating tasks, such as collaborative digital platforms and generative-AI-assisted speaking exercises, yield comparable or superior outcomes. This research may enhance the current framework and investigate the development of cognitive involvement in progressively technology-driven ESL speaking contexts.

10. Conclusion

The current research investigated the efficacy of cognitively stimulating communicative activities in improving cognitive engagement and speaking proficiency among college ESL students. Utilising Bloom's Revised Taxonomy, the intervention aimed to elevate learners from fundamental comprehension and application to advanced cognitive processes such as analysis, assessment, and creation. This method framed speaking not merely as a tool for practicing linguistic structures but as a mechanism through which learners engage in critical thinking, create meaning, and convey concepts.

The results suggest that students involved in the cognitively stimulating communicative task intervention exhibited enhanced cognitive engagement compared to those who underwent traditional speaking instruction. The experimental group demonstrated enhanced progress in speaking performance in terms of fluency, pronunciation, accuracy, and substance. The favourable correlation observed between cognitive engagement and speaking performance underscores the significance of learners' mental participation in oral communication. While this

association should not be seen as direct causal proof, it implies that cognitive engagement is a significant factor in comprehending successful speaking progression.

The research thereby enhances modern ESL teaching methodologies by integrating cognitive task formulation, student involvement, and spoken language advancement into a unified classroom intervention. Its practical importance is evident in showing that advanced cognitive skills may be integrated into speaking classes via approachable communicative tasks like problem-solving, decision-making, assessment, justification, and solution development.

The research indicates a transition from perceiving speaking practice mainly as language generation to recognising it as cognitively engaged interaction. When students are motivated to participate in profound thinking while utilising English, speaking instruction can concurrently offer avenues for language advancement and cognitive involvement. The suggested methodology consequently provides educators with a pragmatic structure for developing more dynamic, intentional, and cognitively engaging ESL speaking environments.

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