

Periodic Progressive Classroom Instruction in Speaking Skills (PPCISS) for Technical Students

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Abstract—Language, the systematic use of sounds and symbols to convey ideas, plays a crucial role in communication, particularly in a globalized and technologically advanced world. English has emerged as a universal medium for interaction, trade, and scientific discourse, making it vital for professionals across borders and industries. With the globalization of business and the IT revolution, communication skills have become increasingly important, especially for engineering graduates who often possess technical knowledge but lack strong communicative competencies. To address this gap, the research explores the effectiveness of Periodic Progressive Classroom Instruction in Speaking Skills (PPCISS), a structured teaching model designed to enhance speaking abilities in technical students. PPCISS aims to improve fluency, confidence, and presentation skills through a step-by-step approach involving regular assessments and progressively challenging tasks. It caters to both formal and informal communication contexts, equipping students for professional environments. The model draws theoretical support from linguistic scholars such as Hymes, Chomsky, and Cummins, integrating sociolinguistic and cognitive principles to tailor spoken English instruction to technical learners. The study investigates how PPCISS influences the speaking proficiency of students, preparing them to meet the demands of the global job market. Emphasizing the importance of language skills and technical expertise, the research underscores that effective communication is key to career success. PPCISS serves as a potential solution to bridge the gap between technical competence and verbal articulation, offering a practical framework for developing essential speaking skills among engineering graduates.

Index Terms—communication, revolution, globalization, speaking skills, global job market

I. INTRODUCTION

Technical education equips students with core competencies in engineering, computer science, and other STEM fields, but technical prowess alone is insufficient in the current global job market. Communication skills, especially in English, have become essential for technical students, enabling them to effectively present ideas, collaborate on projects, and participate in interdisciplinary teams. This paper introduces Periodic Progressive Classroom Instruction in Speaking Skills (PPCISS), a structured, periodic instruction model that develops communication competencies progressively to meet the demands of technical professions.

The student needs to be fluent in all four LSRW skills, although speaking is the most crucial. The receptive or input abilities that learners can develop independently via practice include listening, reading, and writing. Speaking is a productive or output skill, and since students need a lot of teacher support, the researcher has focused on issues with these skills. Speaking English is one of the most difficult jobs for most language learners, especially for those who are not well-versed in vocabulary and grammar. However, these issues can be resolved with a little bit of work and participation in using in the appropriate setting.

Speaking verbally freely and efficiently is a necessary skill for language proficiency; Nunan (100), in *Practical English Language Teaching*, states that the speaker must learn how to:

- Use the sounds and sound patterns of English speaking.
- Sequence their ideas in ways that make sense
- Use the word patterns and sentences appropriately.
- Make appropriate word and sentence choices.
- Speak the language fluently and with assurance.

II. PROBLEMS IN SPEAKING

In the "Oxford Handbook of Language Evolution," Tallerman and Gibson argue that language is not a single, unified entity but rather a complex set of traits that likely evolved over an extended period of time, with some characteristics appearing in species that predate humans. They further suggest that language depends on cognitive abilities that have long been present in the primate lineage, such as memory, and that the language faculty involves more than just distinct linguistic features (Tallerman & Gibson, 2012, p. 2).

The *Cambridge International Dictionary of English* (1995) defines "language" as a system of communication made up of a limited set of rules that govern how various components can be combined to create meaningful messages. Similarly, the renowned linguist and anthropologist Sapir (1921) described language as a uniquely human, non-instinctive way of conveying ideas, emotions, and desires through a system of symbols that are deliberately produced. When addressing technical students, it's important to consider the challenges they might face when learning or using English, particularly in the context of language's complex nature as outlined in both the Oxford Handbook of Language Evolution and definitions like those in the *Cambridge International Dictionary of English* and Sapir's views.

Typically, speaking involves putting one's thoughts into words. Due to the fact that they must execute an action in English, students find speaking the language to be stressful. Students' psychological issues include shyness, fear of making mistakes, and lack of confidence when expressing ideas, anxiety about how others would perceive them and nervousness are the things that prevent them from speaking English.

In the context of teaching and learning in India, teachers often manage the courses by either instructing or prescribing the course material. The children are not given a sufficient opportunity to engage in any of the language activities. Instead of the policy makers and syllabus designers making a mistake, it is the instructors and students that do so. The students struggle greatly when they start studying engineering as they do not have sufficient exposure to language exercises that involve speaking and writing.

To develop an effective English to technical students, drawing upon F.G. French's statement in *The Teaching of English Abroad* (1960), can frame the approach around the following key ideas: the importance of English as a gateway to trade, science, and innovation, the integration of English with technical knowledge, and the development of both language proficiency and technical skills.

III. LITERATURE REVIEW

The PPCISS approach is grounded in established theories of language acquisition and pedagogical methodologies:

- [1] Vygotsky's Cognitive Theory of Language Learning (1978) emphasized the social nature of language learning, suggesting that language development is most effective when learners interact with others in meaningful contexts. PPCISS integrates this by encouraging technical students to engage in collaborative speaking tasks, allowing them to practice technical vocabulary and speaking fluently within social learning settings.
- [2] Swain's theory posits that the act of producing language (output 2005) is crucial for language development, especially in second language acquisition. PPCISS encourages students to consistently produce spoken English in technical contexts, helping them internalize language structures while refining their ability to communicate effectively about technical subjects.

- [3] Richards and Rodgers (2014), task-based learning focuses on meaningful language use in real-world situations, making it a valuable approach for technical students. By engaging in speaking tasks tied directly to their academic and professional interests (such as giving presentations, explaining complex ideas, or discussing technical issues), students are able to apply English in contexts that mirror their real-world experiences.
- [4] According to Bandura Social Cognitive Theory (1986), self-regulation and observational learning play vital roles in skill development. PPCISS incorporates regular opportunities for students to observe their progress, receive constructive feedback, and engage in reflective practices, helping them monitor their own speaking improvement and further develop self-confidence.
- [5] Krashen's Comprehensible Input and Output theory (1982) asserts that language learners acquire language best when exposed to comprehensible input and provided with opportunities for meaningful output. PPCISS is designed to balance both, offering technical students' exposure to English-language materials in their field (such as technical articles or videos) and encouraging them to produce spoken English in various speaking tasks.
- [6] Hymes' concept of communicative competence (1972) focuses on the ability to use language effectively and appropriately in various contexts. In contrast to Chomsky's (1965) notion of linguistic competence, which centers on abstract grammatical rules, Hymes proposed that real-world communication requires more than just knowledge of syntax and semantics. Technical students need to develop not only linguistic knowledge but also the ability to adapt their language use based on audience, context, and purpose. PPCISS encourages students to engage in speaking tasks that mirror real-life technical communication scenarios, thereby fostering communicative competence.
- [7] Chomsky's linguistic competence (1965) focuses on an idealized, uniform speech community where the speaker-listener has complete knowledge of the language and remains unaffected by distractions, memory constraints, and errors. However, this idealized model does not account for the real-world use of language. In contrast, PPCISS focuses on the reality of language use, where technical students often need to negotiate meaning, adjust to misunderstandings, and engage in problem-solving tasks. By using real-world, task-based speaking exercises, PPCISS emphasize practical language use over theoretical competence, supporting students in overcoming the challenges of communication in dynamic technical environments.
- [8] Cummins' model of language proficiency (2007) distinguishes between **Basic Interpersonal Communicative Skills (BICS)** and **Cognitive Academic Language Proficiency (CALP)**. BICS refers to the everyday, social language skills that are context-embedded and require minimal cognitive effort. For technical students, developing BICS is crucial as they need conversational fluency for interactions with peers, instructors, and professionals. PPCISS integrates the development of BICS into its framework, ensuring that students can effectively communicate in both technical and social settings. Additionally, as students' progress, PPCISS aims to enhance CALP by engaging students in more cognitively demanding tasks, such as giving technical presentations, explaining complex concepts, and participating in debates.
- [9] The Role of Socio-Economic and Cognitive Factors (Chopra, 1994; Kaile, 1987) Studies by Chopra (1994) and Kaile (1987) emphasize the importance of socio-economic status, intelligence, and creativity in language learning outcomes. These factors influence how students from different backgrounds approach language learning, particularly in academic and technical fields. PPCISS takes these factors into account by providing differentiated instruction based on individual needs and varying levels of cognitive abilities and socio-economic conditions. This personalized approach ensures that students from diverse backgrounds can equally benefit from the speaking practice and skill-building exercises offered in the framework.
- [10] Relevance of Literature and Accumulated Knowledge (Best, 1950; Lamb, 2013). Best (1950) underscores the importance of preserving human knowledge in books and libraries, which allows subsequent generations to build on the achievements of the past. Similarly, Lamb (2013) emphasizes the role of literature reviews in positioning new research within existing studies. For PPCISS, a thorough review of existing language teaching methodologies, particularly those focusing on technical English, informs the development of the framework. By integrating existing research on communicative tasks, task-based learning, and language proficiency, PPCISS draws upon the accumulated knowledge to develop effective speaking instruction strategies for technical students.
- [11] Somasundaram's Effectiveness of Communicative Tasks (2009) investigated the effectiveness of communicative tasks in enhancing reading comprehension skills among college students. He found that communicative tasks are highly effective in developing language skills as they engage students actively in the learning process. PPCISS integrates communicative tasks as a central component of the speaking curriculum, encouraging students to engage in real-life communicative scenarios that require them to use technical English. These tasks include role plays, technical presentations, and peer reviews, all of which are designed to promote active language use and ensure that students acquire the communication skills necessary for their academic and professional success.
- [12] Ubon's Competencies for Language Teaching (1985) focused on the essential competencies required for primary school English teachers in teacher training programs. While the study was focused on teacher training, the competencies identified—such as clear communication, contextual adaptation, and the ability to engage

students—are equally relevant to students learning English. **PPCISS** integrates these competencies into the student learning process by creating a learning environment where technical students must not only improve their language skills but also apply these skills in practical, real-world situations. The framework encourages technical students to use English in a variety of contexts, such as explaining complex technical concepts, participating in group discussions, and delivering technical presentations.

- [13] Bawa's Evaluative Studies in Technical English Education (2001) conducted an evaluative study on English education for secondary students in the Union Territory of Chandigarh, focusing on how well students were able to apply their English skills in technical contexts. His study highlighted the importance of context-specific language instruction, especially in technical education. **PPCISS** builds on Bawa's findings by ensuring that the speaking tasks students engage in are directly related to their future professional work. These tasks might include discussing case studies, explaining technical problems, and simulating workplace interactions in English. By contextualizing speaking tasks in the technical domain, **PPCISS** ensures that students not only develop general language skills but also gain the specific language proficiency they need in their fields.

IV. METHODOLOGY

The researcher has developed a novel approach called periodic progressive classroom instruction in speaking skills (PPCISS) to identify solutions for the speaking skills issues in order to close the gap and improve the speaking abilities of engineering students. This methodology includes a number of activities to successfully and compulsorily engage the students.

This methodology includes six modules that cover speaking techniques over the course of one and a half months. 50 final year Engineering and technology students participated in this study. The six modules created specifically for speaking for this research were taken into consideration when creating a course schedule.

The PPCISS for speaking skills, which the researcher specifically designed to advance the students' English proficiency, has been used to advance the students from one level to the next higher level. In order to discover the scheduled approaches to be used for teaching Speaking skills within the allotted time of 30 hours, or half semester.

A. Survey Questionnaire

The chosen students were evaluated and separated into four groups according to their level of language proficiency in speaking skills using a questionnaire.

- Can you pronounce the words in English correctly? yes \ no
- Do you understand the meaning of words in English? yes \ no
- Can you read fluently in English? yes \ no
- Do you understand the context of the topic while reading? yes \ no
- Can you answer the questions in reading comprehension without errors? yes \ no
- Do you practice speaking in English regularly? yes \ no
- Can you express your ideas clearly in English? yes \ no
- Do you have confidence in speaking to the peer groups? yes \ no
- Do you feel shy to speak in English? yes \ no
- Do you have fear of committing mistakes when you speak? yes \ no
- Do you feel nervous when you speak? yes \ no

The results of the questionnaire showed that speaking was more difficult for the pupils than listening and reading. Thus, the researcher's work has been limited to speaking exclusively.

B. List of Speaking Modules

Module No	Name of the Module	Hours per week
S1	Drilling	5
S2	Group Discussion	5
S3	Role Play	5
S4	Individual Presentation	5
S5	Dynamic Presentation	5
S6	Extempore	5
		30

C. Instructional Strategies

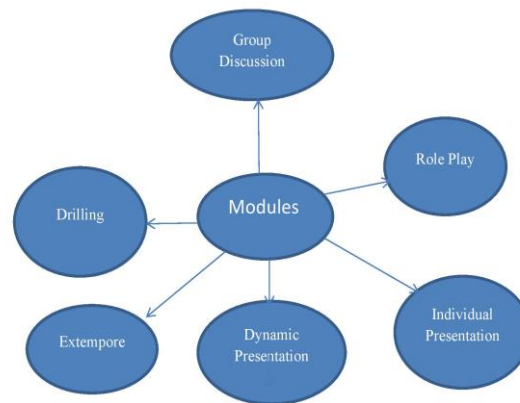


Figure 1.

To implement the Periodic Progressive Classroom Instruction in Speaking Skills (PPCISS) model, several proven speaking techniques were integrated to foster a well-rounded development of students' communication skills. Each technique serves a distinct purpose in enhancing various aspects of speaking abilities, allowing students to develop confidence, fluency, and adaptability in their communication. Here's a detailed explanation of each technique used:

1. Drilling

Purpose: Drilling is used to reinforce accurate pronunciation, intonation, and fluency. By repeating phrases and sentences, students gain familiarity with the rhythm and sound patterns of English, reducing pronunciation errors and increasing clarity.

Method: In PPCISS, drilling exercises begin with simple, commonly used technical phrases and gradually move to more complex technical language. This structured repetition helps students to internalize correct sounds, improves their speaking speed, and allows them to focus on other aspects of communication (e.g., body language) once fluency in verbal delivery is achieved.

Outcome: Drilling helps students build a foundation of accurate and clear language skills, which are essential for further stages of speaking practice, especially when addressing technical topics that require precision.

2. Group Discussion

Purpose: Group discussions promote collaborative learning, helping students practice spontaneous communications while also teaching them to listen actively, respond appropriately, and articulate ideas clearly in a group setting.

Method: Students are assigned topics relevant to their field of study, such as emerging technologies or recent scientific developments. In groups of 4–6, they discuss these topics under the guidance of an instructor, who monitors participation and offers corrective feedback when necessary. This setup simulates real-world teamwork scenarios and encourages students to express their technical knowledge while respecting differing viewpoints.

Outcome: Group discussions enhance students' confidence in speaking within a team, enabling them to communicate technical ideas clearly and persuasively, a skill crucial for collaborative projects and professional meetings.

3. Role Play

Purpose: Role-playing allows students to step into different roles (e.g., a project manager, a technical support engineer, or a client) and use specific language, tone, and approach appropriate for each role. This helps them understand audience-specific communication and adapt their speaking style accordingly.

Method: In PPCISS, role-playing exercises are designed to mimic real-life scenarios, such as explaining a technical concept to a client, troubleshooting with a colleague, or pitching a new idea. Each student takes on a particular role with associated responsibilities, encouraging them to think creatively and communicate in alignment with that role.

Outcome: Role-playing strengthens adaptability and perspective-taking skills, making students more versatile communicators who can effectively interact with various stakeholders in their future careers.

4. Individual Presentation

Purpose: Individual presentations focus on building each student's confidence in presenting ideas independently, without the support of a group. This technique allows students to practice structuring their thoughts, managing stage presence, and effectively delivering information to an audience.

Method: Students prepare short presentations on technical topics or personal projects. They are encouraged to use visual aids, such as slides, to enhance their presentations and practice clear organization of content. The instructor provides feedback on pacing, clarity, eye contact, and voice modulation.

Outcome: This technique helps students become self-reliant speakers, capable of delivering structured information and maintaining audience engagement, which is essential for technical presentations in academic and professional settings.

5. Dynamic Presentation

Purpose: Unlike structured individual presentations, dynamic presentations require students to adapt their communication in real time, responding to unexpected questions or challenges from the audience. This prepares them for dynamic, less predictable interactions that are common in professional environments.

Method: Students are given a technical topic to present, but unlike in individual presentations, the audience (typically peers or instructors) interrupts with questions or prompts for additional explanations. Students must respond on the spot, adjusting their delivery to maintain coherence while addressing diverse queries.

Outcome: Dynamic presentations build resilience and quick-thinking abilities, equipping students to handle high-pressure situations such as client meetings or Q&A sessions after a formal presentation.

6. Extempore

Purpose: Extempore speaking builds impromptu speaking skills, helping students articulate thoughts clearly and logically on unprepared topics. It enhances spontaneity and adaptability, skills necessary for engaging in on-the-spot discussions or interviews.

Method: Students are given a topic related to their field or a general subject at random and allowed only a brief moment to gather their thoughts. They must then speak for 1–2 minutes, structuring their thoughts rapidly and expressing them clearly without prior preparation. Instructors assess their logical flow, language choice, and confidence.

Outcome: Extempore strengthens students' ability to think and communicate clearly under time constraints, promoting mental agility that is invaluable for spontaneous discussions, informal interactions, and even formal interviews.

Each technique in PPCISS contributes to the progressive development of speaking skills by targeting different communication aspects. Drilling and group discussions lay the foundation, while role play and individual presentations refine delivery and audience engagement. Dynamic presentations and extempore exercises further enhance adaptability and spontaneity, ensuring that technical students can confidently handle both prepared and spontaneous speaking situations. This multi-faceted approach is intended to equip technical students with robust, real-world communication skills that will support them in their future careers.

V. DATA ANALYSIS

A. Pre Test

To split the students a speaking proficiency exam was administered. The test served as a means of classifying and evaluating the students. Group pupils are those who achieved a score of at least 70% on these exams. The B group includes the students who earned 55 to 69%. The C category includes the pupils who received 35 to 54%. Students that achieve less than 35% are in group D.

Only 11 students, or 20% of the 50 students who took the test in the class, received a score of at least 70 out of 100, and they were placed in group A. In group B, 14 students, or 30%, who scored between 55 and 69, were accommodated. Group C could accommodate 12 more students, or 25% of the students who received between 40 and 54. Twelve additional students, or 25% of the class, were placed in group D.

TABLE I
PRE-TEST EVALUATION

NO OF STUDENTS	GROUP	Marks	percentage
11	A	70above	20
15	B	55 to 69	30
12	C	40 to 54	25
12	D	less than 40	25

To improve the speaking skills in English six modules were designed which cover a practice session of one and of month, that is, six weeks.

B. Post Test-T Test

Based on the aforementioned rationale, the researcher has spent the last one and half month implementing PPCISS (periodic progressive classroom instruction in speaking skills).

The students were given a second survey with 12 items to gauge the PPCISS speaking method's performance.

- Can you pronounce the words in English correctly? yes \ no
- Do you understand the meaning of words in English? yes \ no
- Can you read fluently in English? yes \ no
- Do you understand the context of the topic while reading? yes \ no
- Can you answer the questions in reading comprehension without errors? yes \ no
- Do you practice speaking in English regularly? yes \ no
- Can you express your ideas clearly in English? yes \ no
- Do you have confidence in speaking to the peer groups? yes \ no
- Do you feel shy to speak in English? yes \ no
- Do you have fear of committing mistakes when you speak? yes \ no

- Do you feel nervous when you speak? yes \ no

According to the poll, 97% of the students indicated that this PPICL for speaking skills was satisfactory and should be used.

The students in group a performed very well, earning more than 90% of the possible points, while the students in other groups were promoted to group A, B, or C based on their interest, comprehension, and effort. The D cadre has been expelled. Following the administration of the assessment exam and using the results of the questionnaire to determine the efficacy of the output skills, the improvement of the students from one level to another level was displayed in a graph.

TABLE 2
POST-TEST EVALUATION

NO OF STUDENTS	GROUP	Marks	percentage
22	A	70above	46
14	B	55 to 69	29
12	C	40 to 54	21
2	D	less than 40	4

TABLE 3
PRE-TEST & POST-TEST ANALYSIS

GROUP	Pre test	percentage	Post test	percentage
A	11	20	22	46
B	15	30	14	29
C	12	25	12	21
D	12	25	2	4

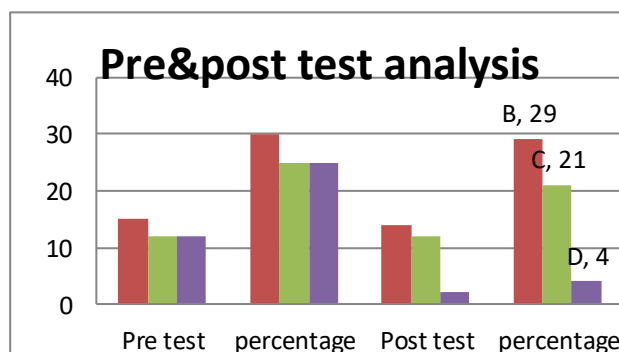


Figure 2.

Each module in the PPCISS (Periodic Progressive Classroom Instruction in Speaking Skills) program contributes to achieving specific outcomes related to pronunciation, semantics, fluency, reading, speaking practice, expression, confidence, courage, hope, and bravery. Each module is structured to progressively develop these skills, which are critical for technical students aiming to improve their communication abilities.

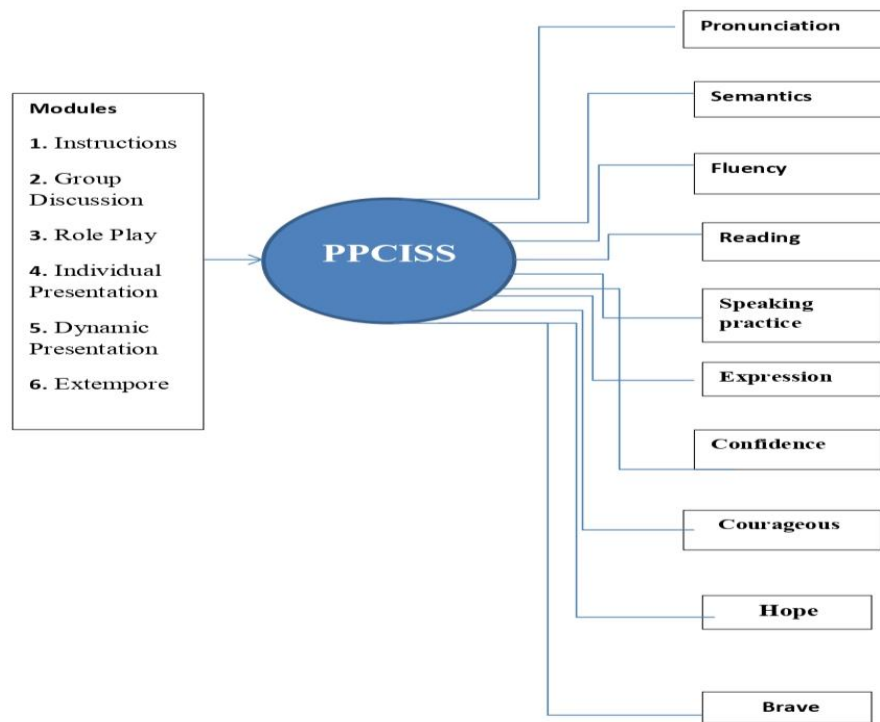


Figure 3.

Module 1: Instructions provide a foundational understanding of the PPCISS program's goals, the importance of communication skills, and the specific outcomes expected from each module.

Pronunciation: Students understand the importance of correct pronunciation in professional communication.

Semantics: Gain awareness of technical vocabulary and language structure.

Hope & Courage: Initial motivation to tackle each module with the confidence that their communication skills will gradually improve.

Module 2: Group Discussion Enhance students' ability to communicate effectively within a group, practicing pronunciation, fluency, and the correct usage of semantics in discussions.

Pronunciation & Semantics: Improve pronunciation and use of precise language for technical terms.

Fluency: Develop smoother speech patterns through interactive discussions, reducing hesitation.

Confidence & Expression: Gain confidence in expressing ideas clearly in a group, essential for teamwork.

Hope & Courage: Build courage to participate actively in group settings, feeling supported by peers.

Module 3: Role Play Develop students' adaptability in communication by practicing pronunciation, context-appropriate semantics, expression, and bravery in professional scenarios.

Pronunciation & Semantics: Pronunciation tailored to specific scenarios, using role-appropriate language and technical vocabulary accurately.

Expression: Students develop expressive speech suited to different audiences, improving adaptability.

Bravery & Confidence: Gain bravery and confidence to communicate with individuals in varied roles, preparing for real-life workplace interactions.

Module 4: Individual Presentation Enhance independent speaking skills by focusing on pronunciation, fluency, semantics, and confidence, while encouraging clear expression and structured speaking practice.

Pronunciation & Semantics: Improve pronunciation clarity and use of complex technical terms.

Fluency & Speaking Practice: Build fluency and gain valuable speaking practice by presenting solo.

Confidence: Grow confidence in public speaking by presenting in front of peers.

Expression & Bravery: Develop expressive delivery, with the bravery to present ideas independently.

Module 5: Dynamic Presentation Strengthen real-time speaking adaptability, pronunciation accuracy, and semantics while reinforcing fluency, confidence, and the ability to think quickly in spontaneous situations.

Pronunciation & Semantics: Maintain clear pronunciation and use of accurate terminology despite interruptions.

Fluency: Improve fluency and confidence in handling questions or spontaneous interactions.

Courage & Confidence: Increase courage to face unscripted situations, with growing confidence to handle diverse audience interactions.

Hope & Bravery: Develop bravery to manage unexpected situations, strengthening hope in their own communication capabilities.

Module 6: Extempore Develop spontaneity, fluency, pronunciation, and expressive ability under time constraints, fostering confidence, courage, and hope for impromptu speaking.

Pronunciation & Semantics: Reinforce pronunciation accuracy and practice using technical vocabulary spontaneously.

Fluency & Speaking Practice: Enhance fluency and quick-thinking abilities for on-the-spot speaking.

Confidence & Courage: Build the confidence to speak impromptu, courageously facing unknown topics.

Hope & Bravery: Strengthen hope and bravery for unprepared speaking situations, a skill valuable for interviews and professional encounters.

Each module in the PPCISS model builds toward specific communication skill outcomes:

The Periodic Progressive Classroom Instruction in Speaking Skills (PPCISS) model is designed to foster a comprehensive development of English-speaking abilities, with each module building toward specific communication skill outcomes that are critical for students, particularly those in technical fields. These outcomes not only address the foundational components of language proficiency but also empower students to become effective communicators in both academic and professional settings. The structured approach of PPCISS supports gradual, measurable progress, allowing students to develop confidence and competence in their speaking abilities. Below is an extended exploration of each of these communication skill outcomes:

Pronunciation:

Pronunciation is a fundamental aspect of effective communication, especially for students in technical fields, where accurate articulation of complex, field-specific vocabulary is essential. Throughout the modules, PPCISS places strong emphasis on the accurate pronunciation of both common and technical terms. This involves training students to recognize and reproduce sounds correctly, understand the nuances of intonation and stress, and become comfortable with different accents or variations in speech. By incorporating focused pronunciation exercises and feedback sessions, the model ensures that students can communicate technical information clearly and be easily understood, both in academic discussions and professional settings.

Semantics:

Semantics, or the meaning and appropriate usage of words, plays a critical role in technical communication. PPCISS teaches students how to select context-appropriate vocabulary, particularly in technical disciplines where precision and clarity are paramount. In each module, students are introduced to the nuances of technical terminology and how to use it accurately in various situations. They learn to avoid common pitfalls, such as overuse of jargon, and develop the ability to adapt their vocabulary depending on the audience, whether they are explaining complex concepts to a peer, a supervisor, or a non-expert. This semantic agility is essential for effective communication in diverse professional environments.

Fluency:

Fluency in speaking refers to the ability to speak smoothly, naturally, and coherently, without unnecessary pauses or hesitation. PPCISS fosters fluency through structured speaking exercises that challenge students to practice impromptu speech and maintain a natural flow in their communication. Group discussions, debates, and extempore sessions are central to developing fluency. These exercises encourage students to think quickly, organize their thoughts on the spot, and engage in meaningful dialogue. As students' progress through each module, they become more adept at speaking confidently and fluidly, even when discussing complex or unfamiliar topics.

Reading:

Reading comprehension plays an integral role in supporting speaking skills, particularly in technical fields where students must be able to understand and discuss specialized materials. PPCISS incorporates exposure to technical reading materials—such as research papers, manuals, and case studies—into its curriculum. By reading and interpreting these texts, students reinforce their understanding of technical concepts and build a broader vocabulary. As they engage with this material, they are better equipped to articulate ideas and explain concepts clearly during presentations or discussions. Reading, therefore, serves as both a learning tool and a means of strengthening their ability to speak authoritatively on technical subjects.

Speaking Practice:

A critical feature of PPCISS is the emphasis on structured speaking opportunities, such as individual presentations and dynamic presentations. These modules encourage students to develop their speaking skills in a variety of formats, whether they are delivering a prepared speech, answering questions, or participating in a team-based discussion. The individual presentation module focuses on helping students articulate their ideas in a clear, organized manner, while the dynamic presentation module emphasizes adaptability and responsiveness to audience feedback. These experiences not only improve students' public speaking abilities but also prepare them to handle high-pressure situations where clear and confident communication is essential.

Expression:

Effective communication is not just about content but also about how it is delivered. Expression involves the ability to convey meaning, emotion, and intent through vocal tone, body language, and facial expressions. PPCISS includes role-playing and extempore modules to encourage students to develop expressive delivery suited to different contexts and audiences. For example, in a technical presentation, students learn how to convey complex ideas with clarity and authority, while in a team meeting or informal setting, they practice adjusting their tone to foster collaboration and

engagement. Through these exercises, students develop the emotional intelligence needed to adapt their communication style to different situations.

Confidence:

Confidence is one of the most important attributes for effective speaking, particularly in a professional context where communication can directly impact career opportunities. PPCISS gradually builds students' confidence by starting with manageable speaking tasks and progressively increasing the difficulty as they improve. Initially, students may start with simple exercises or short individual presentations, but as they advance through the modules, they take on more complex tasks, such as delivering technical talks or participating in debates. Each successful speaking experience helps students gain the confidence to take on more challenging tasks, reducing their anxiety and helping them speak with greater assurance.

Courage & Bravery:

Speaking in public, particularly in a second language, can be intimidating, especially when it involves impromptu or unprepared interactions. PPCISS incorporates spontaneous speaking exercises and activities, such as responding to audience questions or engaging in unplanned discussions, to help students build courage. By facing these unanticipated speaking situations, students gradually overcome their fear of making mistakes and develop the bravery to speak up in any situation. This courage is especially important for students in fields like engineering and technology, where they may need to present ideas or respond to critiques in professional settings, such as conferences, interviews, or team meetings.

Hope:

The progressive design of PPCISS helps students maintain hope and belief in their capacity to improve. One of the core principles of the model is the idea of gradual improvement through small, manageable steps. As students' progress through each module, they are able to see tangible progress in their speaking abilities. This incremental success builds their self-esteem and reinforces their belief that they can continue to improve. The hope nurtured by this process encourages students to remain motivated and committed to their language learning journey, even when faced with challenges.

Collective Impact:

Together, these outcomes create a robust framework for language development that not only improves technical communication but also enhances interpersonal skills, emotional resilience, and self-efficacy. As students become more competent in pronunciation, semantics, fluency, and expression, they are empowered to take on increasingly complex speaking tasks with greater ease and professionalism. Confidence, courage, and hope provide the psychological and emotional support needed to sustain this progress over time, making PPCISS a truly transformation methodology for students in technical fields. By the end of the program, students are not just skilled speakers—they are well-rounded communicators, ready to face the demands of both academic and professional environments with poise and assurance.

VI. CONCLUSION

The research introduces a novel methodology, the Periodic Progressive Classroom Instruction in Speaking Skills (PPCISS), which addresses key challenges faced by students, particularly those in specialized fields like engineering and technology, in mastering English-speaking skills. Traditional language teaching methods often focus on passive skills such as reading and writing, leaving a gap in the development of active skills like speaking. PPCISS, by focusing specifically on speaking within a structured, progressive framework, fills this gap, offering a more targeted and effective approach to language proficiency.

Unlike conventional methods, which may rely heavily on rote learning or isolated speaking drills, PPCISS integrates listening, reading, and writing into the speaking practice, creating a holistic learning environment. By progressing through periodic stages of learning—each designed to build on previous skills—students develop a deeper understanding of language use in various contexts. This gradual approach not only helps improve speaking fluency but also reinforces language retention and comprehension in other areas of communication.

The research findings highlight that students who were taught using PPCISS showed significant improvements in their English proficiency, particularly in oral communication. These students exhibited greater confidence, coherence, and clarity in speaking tasks, as well as enhanced listening skills, which are vital for effective communication in academic and professional settings. Furthermore, the integration of reading and writing exercises supported vocabulary acquisition and grammar usage, indirectly boosting speaking abilities as well.

For students in fields like engineering and technology, where technical communication is often required in global, multicultural settings, mastering English communication becomes crucial for career advancement. PPCISS is particularly beneficial for these students, who may face unique challenges, such as limited exposure to English outside the classroom, a tendency to focus more on technical jargon, and less emphasis on conversational or public speaking skills. By fostering a comprehensive skill set that includes not only technical language but also effective communication strategies; PPCISS equips these students with the tools necessary to articulate complex ideas in English, both in academic discussions and real-world professional scenarios.

Moreover, PPCISS promotes an adaptive, student-centered teaching approach. The periodic progression model allows instructors to tailor lessons to the specific needs and pace of their students, offering more flexibility than

traditional one-size-fits-all methods. This adaptability makes PPCISS an invaluable resource for diverse classroom environments, including those with students at varying proficiency levels.

In summary, the Periodic Progressive Classroom Instruction in Speaking Skills (PPCISS) represents a significant advancement in language teaching methodologies. Its focus on speaking skills, coupled with the integration of listening, reading, and writing, offers a more comprehensive approach to language learning. For students in engineering and technology, this method is particularly effective in overcoming the challenges associated with mastering spoken English and is a valuable addition to current pedagogical practices. By incorporating PPCISS into their curriculum, educators can better prepare students to meet the demands of global communication, enhancing both their academic success and their professional prospects in the increasingly interconnected world of science and technology. Future research could examine the long-term effectiveness of PPCISS by tracking students' speaking proficiency over extended periods post-instruction. This would help determine whether the skills acquired are retained and transferred into professional contexts.

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