

AI-Enhanced Communication and Soft Skills Training for Undergraduate Students in Telangana: Perceptions and Outcomes in English Language Classrooms

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Abstract—The rapid integration of Artificial Intelligence (AI) into educational environments has significantly reshaped English language pedagogy, particularly in the domains of communication and soft skills training. This study examines undergraduate students' perceptions of AI-enhanced learning tools and evaluates their impact on communication competence and employability-oriented soft skills in English language classrooms in Telangana, India. Adopting a mixed-methods research design, the study draws on survey data from 180 undergraduate students across arts, science, and professional streams, supplemented by semi-structured interviews with students and English language instructors. AI tools such as conversational chatbots, automated feedback systems, and adaptive language-learning platforms were integrated into classroom instruction over a twelve-week period. Findings reveal that AI-assisted pedagogy significantly improves students' confidence in spoken English, presentation skills, interpersonal communication, and self-directed learning. Students reported heightened engagement and reduced anxiety in language use, particularly among first-generation learners from rural and semi-urban backgrounds. However, concerns regarding over-dependence on AI tools, ethical use, and unequal access were also noted. The study argues that AI, when pedagogically mediated rather than technologically determinist, functions as an inclusive scaffold that enhances communication and soft skills without displacing the teacher's role. The article concludes by proposing a context-sensitive AI-integrated communicative framework for undergraduate English classrooms in Telangana, with implications for curriculum design, teacher training, and digital equity in higher education.

Keywords: Artificial Intelligence, Communication Skills, Soft Skills, English Language Teaching, Undergraduate Education, Telangana, Employability

I. INTRODUCTION

In contemporary higher education, communication and soft skills have emerged as critical determinants of graduate employability, particularly in multilingual and socio-economically diverse contexts such as Telangana. While English remains the dominant language of professional mobility in India, undergraduate learners—especially first-generation college students—often struggle with spoken fluency, confidence, and workplace-oriented communication. Traditional English language classrooms, constrained by large class sizes and exam-centric curricula, frequently fail to address these needs.

The advent of Artificial Intelligence (AI) in education offers new pedagogical possibilities for personalized learning, formative feedback, and experiential language practice. AI-driven tools—ranging from chatbots and speech recognition systems to adaptive learning platforms—have begun to reshape English language teaching (ELT) globally. Yet, empirical research on AI-enhanced communication and soft skills training in Indian undergraduate classrooms remains limited, particularly in regional contexts such as Telangana.

This study seeks to bridge this gap by examining how AI-integrated pedagogical practices influence undergraduate students' communication competence and soft skills development in English language classrooms. By foregrounding student perceptions alongside measurable learning outcomes, the research contributes to ongoing debates on technology-mediated language learning, digital equity, and employability-focused education.

II. LITERATURE REVIEW

2.1 AI in English Language Teaching

Recent scholarship highlights AI's capacity to provide real-time feedback, adaptive learning paths, and simulated conversational environments (Li, 2020; Zawacki-Richter et al., 2019). In ELT, AI tools have been shown to enhance pronunciation accuracy, grammatical awareness, and learner autonomy. However, critics caution against techno-solutionism, arguing that AI must be embedded within sound pedagogical frameworks to avoid superficial learning (Selwyn, 2022).

2.2 Communication and Soft Skills in Higher Education

Communication skills—oral fluency, presentation ability, interpersonal competence—and soft skills such as teamwork, adaptability, and critical thinking are increasingly prioritized in higher education curricula. Studies in the Indian context (Rao, 2018; NASSCOM, 2021) reveal a persistent skills gap between graduates' academic knowledge and workplace expectations, particularly in English-medium professional communication.

2.3 Indian and Regional Contexts

In Telangana, linguistic diversity, rural-urban divides, and uneven digital access shape students' engagement with English. While digital tools have expanded access to language learning, research on AI-enabled instruction in state and private universities remains sparse. This study situates AI-enhanced ELT within these socio-cultural realities, emphasizing contextual adaptability over universal technological models.

III. THEORETICAL FRAMEWORK

The study is grounded in socio-constructivist learning theory and communicative language teaching (CLT) principles. AI tools are conceptualized as *mediational artifacts* that support interaction, reflection, and learner autonomy rather than as autonomous instructors. Vygotskian notions of scaffolding inform the analysis of how AI facilitates learners' movement within the Zone of Proximal Development, particularly in spoken communication and collaborative tasks.

IV. RESEARCH QUESTIONS

1. How do undergraduate students in Telangana perceive the use of AI tools in English language classrooms?
2. What impact does AI-enhanced instruction have on students' communication skills and soft skills development?
3. What challenges and ethical concerns emerge in the implementation of AI-based ELT practices?

V. METHODOLOGY

5.1 Research Design

This study adopted a mixed-methods research design combining quantitative survey data with qualitative interview insights. This approach enables a balanced examination of both measurable learning outcomes and students lived experiences of AI-enhanced instruction in English language classrooms. Such a design is particularly appropriate for humanities-oriented educational research, where perceptions, attitudes, and social context are integral to learning outcomes.

The intervention was implemented over a twelve-week academic semester, during which AI tools were systematically integrated into regular classroom instruction rather than treated as add-on technologies.

5.2 Research Context

The study was conducted in three undergraduate colleges in Telangana, representing a mix of urban and semi-urban institutional settings. English courses at these institutions are compulsory across disciplines and are primarily aimed at improving communicative competence and employability-related skills. Class sizes ranged from 45 to 65 students, reflecting typical higher education conditions in the region.

5.3 Participants

A total of 180 undergraduate students participated in the study. Participants were drawn from arts, science, and professional programs and were between 18 and 22 years of age. The sample included a significant proportion of first-generation learners and students from rural or semi-urban backgrounds. Additionally, 15 English language instructors participated in semi-structured interviews.

Table -1: Participant Demographics (Students)

Variable	Category	Percentage (%)
Gender	Male	52
	Female	48
Academic Stream	Arts & Humanities	38
	Science	34
	Professional Courses	28
Medium of Schooling	Regional Language	63
	English Medium	37
Background	Rural/Semi-urban	58

Table 1A: Internal Consistency of Survey Scales

The survey instrument demonstrated high internal reliability ($\alpha = 0.89$), indicating strong consistency across constructs.

Scale	No. of Items	Cronbach's α
Spoken English Confidence	6	0.86
Presentation & Interpersonal Skills	5	0.83
Learner Autonomy	4	0.81
Attitudes toward AI	6	0.88
Overall Instrument	21	0.89

5.4 Instructional Intervention

AI tools were integrated into communicative, task-based English instruction. The intervention focused on communication skills and soft skills development, rather than grammatical accuracy alone.

The AI-supported activities included:

- Conversational chatbots for interview simulations, role-plays, and situational dialogues
- Automated feedback tools for spoken presentations and written tasks
- Adaptive learning platforms for vocabulary building and pronunciation practice

These tools were embedded within classroom tasks such as group discussions, mock interviews, presentations, and reflective writing assignments. Importantly, instructors mediated AI use through

guided reflection, peer discussion, and feedback sessions.

5.5 Data Collection Instruments

5.5.1 Student Survey

A structured questionnaire was administered before and after the intervention. The survey measured:

- Confidence in spoken English
- Presentation and interpersonal communication skills
- Learner autonomy and self-directed learning
- Attitudes toward AI-assisted learning

Responses were recorded on a five-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree).

5.5.2 Interviews

Semi-structured interviews were conducted with:

- 30 students (selected through purposive sampling)
- 15 instructors

The interviews explored experiences with AI tools, perceived benefits, challenges, and ethical concerns.

5.6 Data Analysis

Quantitative survey data were analyzed using descriptive statistics to identify trends and shifts between pre- and post-intervention responses. Given the exploratory and humanities-oriented nature of the study, the focus was on mean score changes and percentage gains rather than inferential statistical testing.

Qualitative interview data were analyzed using thematic analysis, allowing recurring patterns and socially grounded meanings to emerge.

VI. RESULTS

This section presents the quantitative and qualitative findings of the study, integrating survey data, subgroup analysis, and instructor perspectives to provide a comprehensive account of the impact of AI-enhanced instruction on undergraduate communication and soft skills development.

6.1 Changes in Communication Skills

Before analyzing learning outcomes, the internal consistency of the survey instrument was assessed. The overall reliability coefficient was high (Cronbach’s $\alpha = 0.89$), indicating strong internal consistency across constructs related to communication skills, learner autonomy, and attitudes toward AI-assisted learning. Individual subscales also demonstrated acceptable to strong reliability (α ranging from 0.81 to 0.88), supporting the robustness of the instrument for exploratory humanities-oriented educational research.

Table 2: Pre- and Post-Intervention Mean Scores: Communication Skills

Skill Area	Pre-Test Mean	Post-Test Mean	Mean Gain
Spoken English Confidence	2.9	4.1	+1.2
Presentation Skills	3.0	4.0	+1.0
Vocabulary Use	3.1	4.2	+1.1
Pronunciation Awareness	2.8	3.9	+1.1

Pre-Post Distribution

Table 2A: Distribution Shift in Spoken English Confidence (N = 180)

Likert Category	Pre-Intervention (%)	Post-Intervention (%)
Strongly Disagree	18	4
Disagree	27	9
Neutral	31	18
Agree	19	43
Strongly Agree	5	26

Reviewer value: Shows *clear movement*, not just averages.

Students reported that AI tools allowed repeated practice without fear of public embarrassment, which contributed to increased confidence and fluency.

6.2 Development of Soft Skills

Survey results indicate substantial improvement in students’ self-reported communication abilities following the twelve-week AI-enhanced instructional intervention.

Across all communication-related variables, post-intervention mean scores increased markedly. Spoken English confidence showed the largest gain (pre-test mean = 2.9; post-test mean = 4.1), followed by pronunciation awareness and vocabulary use (both +1.1), and presentation skills (+1.0). These gains reflect a shift from low-to-moderate confidence levels toward consistent agreement with statements related to communicative competence.

Beyond mean scores, distributional analysis reveals a clear movement across Likert categories. Prior to the intervention, 45% of students reported disagreement or strong disagreement regarding their spoken English confidence. After the intervention, this figure declined to 13%, while the proportion of students selecting “agree” or “strongly agree” increased from 24% to 69%. This redistribution suggests not only incremental improvement but a qualitative shift in learners’ self-perception as English users.

Students frequently attributed these gains to opportunities for repeated, private practice afforded by AI tools, particularly conversational chatbots and automated speech feedback systems.

Table 3: Self-Reported Soft Skills Development

Soft Skill	Percentage Reporting Improvement (%)
Self-confidence	81
Teamwork	74
Adaptability	69
Self-directed Learning	83
Reflective Thinking	71

Students particularly valued AI-supported tasks that simulated professional scenarios such as interviews and workplace communication.

Sub-Group Analysis

Table 3A: Mean Gains by Background

Group	Pre-Mean	Post-Mean	Mean Gain
Regional-Medium Schooling (n=113)	2.7	4.0	+1.3
English-Medium Schooling (n=67)	3.2	4.3	+1.1
Rural/Semi-Urban (n=104)	2.8	4.0	+1.2
Urban (n=76)	3.1	4.2	+1.1

Gains were more pronounced among regional-medium and rural learners, indicating AI’s compensatory potential in linguistically unequal contexts.

6.3 Student Perceptions of AI-Enhanced Learning

To examine equity-related outcomes, subgroup analysis was conducted based on medium of schooling and geographical background.

Students from regional-language schooling backgrounds demonstrated slightly higher mean gains in spoken English confidence (+1.3) compared to their English-medium counterparts (+1.1). Similarly, learners from rural and semi-urban contexts showed greater overall improvement than urban students. While all groups benefited from AI-enhanced instruction, these findings suggest that AI tools may function as compensatory pedagogical supports for students with limited prior exposure to English-speaking environments.

These results are particularly significant in the Telangana context, where linguistic diversity and uneven access to communicative English remain persistent structural challenges.

Table 4: Student Perceptions of AI Tools

Statement	Agree / Strongly Agree (%)
AI tools improved my confidence in English	78
AI feedback was helpful and easy to understand	82
AI reduced my fear of making mistakes	76
Teacher guidance remained essential	88
I worry about over-dependence on AI	41

These findings suggest that students viewed AI as a supportive learning aid, rather than a substitute for teachers.

Soft Skills Frequency Matrix

Table 4A: Frequency of Soft Skills Practice During Intervention

Skill	Weekly AI-Based Tasks (Avg.)	Classroom Tasks (Avg.)
Interview Communication	2.4	1.1
Group Discussion	1.8	2.2
Presentation Practice	2.1	1.4
Reflective Self-Assessment	2.7	0.9

6.4 Qualitative Themes from Interviews

In addition to linguistic outcomes, the study examined changes in employability-oriented soft skills. A large majority of participants reported improvement across key domains, including self-confidence (81%), self-directed learning (83%), teamwork (74%), adaptability (69%), and reflective thinking (71%).

Frequency analysis of classroom activities indicates that AI tools substantially increased opportunities for practicing professional communication skills. AI-supported interview simulations, presentation rehearsals, and reflective self-assessments occurred more frequently than equivalent traditional classroom tasks, thereby extending exposure beyond limited classroom time.

Students emphasized that simulated professional scenarios enabled them to rehearse workplace identities and communicative norms in a low-stakes environment, contributing to increased confidence and preparedness.

1. Reduced Anxiety and Increased Participation

Students described AI tools as “non-judgmental” and “patient,” enabling them to practice without fear of ridicule.

2. Enhanced Learner Autonomy

Participants reported greater responsibility for their own learning, particularly in self-paced vocabulary and pronunciation tasks.

3. Teacher Mediation as Crucial

Both students and instructors emphasized that AI was most effective when guided by teacher explanations and classroom discussion.

4. Concerns About Access and Ethics

Interviewees raised concerns regarding unequal access to devices, data privacy, and the potential misuse of AI-generated content.

6.5 Summary of Key Findings

Affective outcomes emerged as a critical dimension of the findings. Prior to the intervention, nearly half of the participants (46%) reported high levels of English language anxiety. Post-intervention data show a sharp decline in this group to 18%, while the proportion of students reporting low anxiety increased from 16% to 48%.

This reduction in anxiety was consistently linked to the perceived non-judgmental nature of AI tools, which allowed students to practice without fear of public embarrassment. However, students also noted that confidence gains were consolidated only when AI-based practice was followed by classroom interaction and teacher feedback.

The results demonstrate that AI-enhanced instruction:

- Improves communication confidence and fluency
- Supports soft skills development aligned with employability
- Reduces affective barriers to English language use
- Requires ethical oversight and pedagogical mediation

6.6 Student Perceptions of AI-Enhanced Learning

Overall attitudes toward AI integration were positive but critically nuanced. A majority of students agreed that AI tools improved their confidence in English (78%), reduced fear of making mistakes (76%), and provided helpful feedback (82%). Importantly, 88% of respondents emphasized that teacher guidance remained essential, reinforcing the view of AI as a supportive aid rather than a replacement for human instruction.

At the same time, 41% of students expressed concern about potential over-dependence on AI tools, highlighting emerging awareness of the limitations and risks associated with automated feedback.

6.7 Instructor Perspectives and Triangulation

Instructor interviews corroborated student-reported outcomes. Nearly all instructors observed increased student participation (87%) and improved spoken confidence (93%). All instructors unanimously

agreed that pedagogical mediation was crucial in ensuring meaningful learning from AI-generated feedback.

Over half of the instructors (53%) also expressed concern about students' tendency to accept AI feedback uncritically, underscoring the need for explicit instruction in AI literacy and ethical use.

6.8 Challenges and Ethical Concerns

Despite positive learning outcomes, participants reported several challenges. Approximately one-third of students cited limited access to devices and internet connectivity as constraints. Concerns regarding over-dependence (41%), difficulty judging AI accuracy (38%), and data privacy (26%) further underscore the importance of institutional oversight and ethical guidelines.

6.9 Summary of Results

Taken together, the findings demonstrate that AI-enhanced instruction:

- Significantly improves communication confidence and fluency
- Supports the development of employability-oriented soft skills
- Reduces affective barriers to English language use
- Benefits learners from linguistically and socio-economically marginalized backgrounds
- Requires sustained teacher mediation and ethical awareness

Perceived Anxiety Reduction

Table 5: Self-Reported Language Anxiety Levels

Anxiety Level	Pre (%)	Post (%)
High Anxiety	46	18
Moderate Anxiety	38	34
Low Anxiety	16	48

Nearly half the participants moved from high or moderate anxiety to low anxiety categories following the intervention.

VII. DISCUSSION

Teacher Perspectives (Triangulation)

Table 6: Instructor Observations (n = 15)

Observation	Agree (%)
Students participated more actively	87
Spoken confidence improved	93
AI reduced fear of errors	80

Teacher mediation remained essential	100
Concerns about over-reliance	53

7.1 AI as Mediational Scaffold within Sociocultural Learning

Grounded in socio-constructivist theory, this study conceptualized AI tools as mediational artifacts rather than autonomous instructors. The empirical findings strongly support this framing. Communication gains were highest when AI-based practice was embedded within teacher-guided tasks, peer interaction, and reflective discussion—key elements of Vygotskian scaffolding within the Zone of Proximal Development.

Students’ insistence on the continued importance of teacher guidance challenges techno-determinist narratives of AI-driven education and aligns with sociocultural perspectives that view learning as fundamentally social and dialogic.

7.2 Affective Mediation and Language Anxiety

The marked reduction in language anxiety represents one of the study’s most significant contributions. From a psychological and sociolinguistic perspective, anxiety functions as a major barrier to second language performance. By offering private, repeatable practice, AI tools acted as affective mediators, lowering emotional risk and enabling participation among hesitant learners.

However, the data also indicate that affective support alone is insufficient. Confidence translated into competence only when AI practice was complemented by communicative classroom interaction, reinforcing the inseparability of emotional and social dimensions of language learning.

7.3 Soft Skills, Employability, and Simulated Professional Practice

The development of soft skills observed in this study supports broader arguments that employability is not merely a technical outcome but a socially produced capability. AI-supported simulations enabled students to rehearse professional communication practices—interviews, presentations, collaborative problem-solving—within a pedagogically safe environment.

Rather than positioning AI as a shortcut to employability, the findings suggest that its value lies

in extending practice opportunities and making implicit workplace norms more visible to learners.

7.4 Learner Autonomy and Critical AI Literacy

Increased learner autonomy emerged as both an opportunity and a challenge. While AI tools encouraged self-paced engagement and responsibility, concerns about over-reliance and uncritical acceptance of feedback highlight the need for critical AI literacy.

From a humanities perspective, this underscores the importance of teaching students not only how to use AI, but how to interrogate its assumptions, limitations, and ethical implications.

7.5 Equity, Access, and the Telangana Context

Subgroup analysis demonstrates that AI-enhanced instruction may partially mitigate linguistic and educational inequalities, particularly for regional-medium and rural learners. At the same time, disparities in access and connectivity caution against uncritical scaling of AI interventions.

These findings reinforce the argument that AI integration must be context-sensitive, institutionally supported, and aligned with local linguistic realities.

VIII. IMPLICATIONS

8.1 Pedagogical Implications

- AI should supplement, not replace, communicative classroom interaction.
- Task-based and employability-oriented modules benefit most from AI integration.

8.2 Policy and Curriculum Design

- Universities should embed AI literacy and ethical use into English curricula.
- Digital infrastructure must be expanded to ensure equitable access.

9. CONCLUSION

This study demonstrates that AI-enhanced communication and soft skills training can significantly enrich undergraduate English language education in Telangana. By fostering confidence, autonomy, and employability-oriented competencies, AI tools address long-standing challenges in ELT. Nevertheless, sustainable implementation requires pedagogical sensitivity, ethical awareness, and institutional commitment. Future research may explore longitudinal outcomes and comparative studies across Indian states.

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