

An Applied Study on the Technology-enhanced “ESP Listening and Speaking Instruction Model” for College English

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ABSTRACT

College English listening and speaking have been plagued by three stubborn issues for quite some time. Too much generic content, digital tools used only skin-deep, and final exams that count for far too much. All this gets in the way of turning out graduates who can actually function in English at work. Drawing on needs analysis and blended learning, we propose a tech-supported ESP model for college settings. Two strands run through it: self-paced online study and in-class interactive practice. Micro-lectures, mobile platforms, and automated speech scoring supply the technical backbone. Our aim is threefold—make materials more professionally relevant, make learning progress more transparent, and broaden the ways we assess. Early trials suggest that students do improve measurably in ESP listening and speaking, and their motivation to learn on their own seems to pick up too. We also touch upon how value-oriented education could be woven into ESP instruction, naturally rather than forcibly. This, we hope, might serve as a rough reference for other reform-minded programmes.

Keywords: *English for specific purposes, Technology-enhanced instruction, Listening and speaking instruction, Blended learning.*

1. INTRODUCTION

College English reform has been moving ahead steadily over the past few years. More and more teachers now buy into the idea that students should be at the center of things. Real communicative competence, they insist, grows only when learners engage in genuine interaction and hands-on practice. A classroom that truly revolves around learners tends to foster not only skills but also interest and self-assurance. At the same time, information technology has been moving at a dizzying pace, opening avenues for language teaching that were barely imaginable a decade back. ESP, on the other hand, has gained real traction in recent years. The job market keeps telling us they want graduates who can actually function in English within their own disciplines—engineering, medicine, business, law. So here we are, with two big currents flowing together: rapid advances in technology and this growing push for ESP. They're converging, and that convergence? It feels like a genuine opportunity to

rethink listening and speaking teaching from the ground up.

So where does one even begin with something like this? We figured the sensible thing was to go back to the literature first—both ESP itself and technology-assisted instruction. We wanted to get a handle on how thinking in these areas has shifted over time. But reading is one thing; practice is another. So we also turned our attention to the classroom, trying to pin down the main obstacles that listening-speaking courses tend to hit in Chinese colleges and universities. And we didn't just rely on published studies for that—we drew heavily on what we've observed in our own teaching. From all that, we put together a technology-enhanced ESP framework, and we tried to lay out its theoretical rationale, operational steps, and assessment design with reasonable care. Now, the big question is whether it actually works in practice. But our hope is that we've come up with something useful—a practical blueprint that can be adapted across different institutional contexts,

whether we're talking about elite research universities or regional teaching colleges.

2. THE REAL-WORLD CONTEXT FOR REFORM

2.1 Changing Social Demands

Social expectations have changed a good deal over the last decade, and college English simply has to respond. The College English Teaching Guidelines (2020 edition), brought out by the Ministry of Education's steering committee, explicitly identifies ESP as a mandatory part of the curriculum. Institutions are now required to set up ESP modules that link up with particular academic fields or career trajectories, moving beyond the old one-size-fits-all approach. This means that teaching must serve both students' academic growth and their future professional lives. So the emphasis should gradually shift away from general language training. What we really need is functional proficiency in specialized communication—being able to grasp technical presentations, join in disciplinary discussions, and turn out professional documents that meet field-specific conventions. This shift isn't just a paper exercise; it reflects genuine changes in the job market, where employers increasingly expect graduates to handle English effectively in their own domains. Arguably, failing to make this move would leave our students under-prepared for the globalized economy they are about to step into. The real puzzle, though, is how to bring about these changes without losing sight of the foundational skills that students still require.

2.2 New Possibilities Opened by ICT

Technology has broken open possibilities we could hardly have dreamt of ten years ago, and the pace is only quickening. The ICT in Education 2.0 Action Plan (2018) makes deep integration of technology a national policy priority, so there is strong top-down backing. That means better infrastructure, sure, but also better digital skills—for teachers and students alike. So what tools are we talking about? Quite a few have made their way into language classrooms. Take micro-lectures. Teachers can produce short videos to explain tricky terms or demonstrate sentence patterns—content that might otherwise put students to sleep. Students watch these whenever they have a spare moment, which means they can fit preparation around everything else on their plates. Then there are mobile platforms. These push out content tailored

to individual needs and log every click, every view, every completed exercise. That generates a mountain of data—viewing habits, completion rates, the spots where students get stuck. We can use that information to adjust our teaching, at least in principle. Speech assessment tools are another case in point. They give instant feedback on pronunciation, fluency, accuracy—multiple dimensions at once. Students can practice as many times as they want without queuing up for the teacher. In a class of sixty or more, that's no small advantage. Virtual simulations? They can stage all kinds of professional scenarios: a product pitch, a contract negotiation, a conference Q&A. Students get to rehearse in settings that feel reasonably authentic. So yes, all these technologies give us more room to manoeuvre—we can tailor instruction, embed language in real-world contexts, and track progress over time. Technology isn't some magic wand. Whether it actually delivers depends on how thoughtfully we weave it into our pedagogy—and, frankly, on how well we train our colleagues to use it.

2.3 Major Challenges in Current Practice

We can't ignore the persistent difficulties. One concerns content. Most listening-speaking courses still stick heavily to everyday topics, which bear little relation to the language students will actually need in academic or professional milieus. This mismatch leaves them unprepared for what awaits after graduation. Another problem is the shallow use of technology. Multimedia gear and online platforms are ubiquitous, yet they often function as little more than digital whiteboards or video players. Their capacity to reshape teaching, interaction, or assessment remains largely dormant, many instructors fall back on routines because they are safe and familiar. A third headache is the excessive weight placed on final exams. Summative assessment looms large in grading schemes, while systematic observation and formative feedback are sidelined. This imbalance, doesn't exactly encourage regular, sustained effort. Students cram before exams, rather than improving bit by bit, and that kind of cramming undermines the very purposes of language education. Sorting out these problems calls for a fundamental reappraisal of course design, teacher roles, and assessment practices.

3. LITERATURE REVIEW: ESP THEORY AND ICT-ENHANCED INSTRUCTION

3.1 ESP Theory and Its Core Propositions

ESP is built on a straightforward but potent idea: the curriculum ought to be driven by what learners actually need to do with the language, not by what textbook publishers happen to be selling. As Hutchinson and Waters (1987) put it, needs analysis should stand at the very center of course design. Content and activities, they argued, must spring from real-world requirements, not from a pre-determined list of grammar points. So what really separates ESP from general English? The latter tends to stick with a fixed syllabus, organized around grammar and structures, no matter what learners actually need. Stevens (1988) drew a clearer line between the two. He pointed to four differences: ESP's objectives come from learner needs; its materials are tied to a specific field; its language analysis zeroes in on context-sensitive patterns; and its assessment looks different from what you'd find in general courses. In our view, they offer enough reason to treat ESP as its own curricular territory—not just EGP with a few technical terms thrown in. Over in China, Zeng Wenxiong (2005) took a different angle. He asked how task-based teaching might fit into ESP classrooms. What he found was that authentic tasks really matter. They give students a taste of what professionals actually do. Since then, others have built on his work, bringing in genre perspectives and corpus data. Still, you could raise a legitimate concern here. Doesn't all this focus on needs analysis risk crowding out broader educational aims—personal growth, intercultural understanding, that sort of thing? But we don't think it undermines the central point: relevance is crucial. You can't teach language in a vacuum and expect students to use it later.

3.2 Theoretical Foundations of ICT-enhanced Language Instruction

We can look at this through three different lenses. Each one sheds light on a different piece of the puzzle. Constructivism, to start with, treats learners as active builders of meaning. Not empty containers waiting to be filled up. Knowledge, from this angle, grows out of the interaction between what students already know and what they're encountering for the first time. That makes learning inherently personal—and heavily dependent on

context. The role shifts. You're no longer just passing along information. You're guiding, supporting, creating conditions for discovery. Still, this view does justify giving students access to online materials and encouraging them to explore on their own. Then there's blended learning. This one pushes for a sensible balance between classroom teaching and digital self-study. Why? Because each mode has strengths the other lacks. For ESP, this hybrid approach makes a lot of sense. Language skills and subject knowledge have to move forward together. Online modules handle input and basic drills, which frees up class time for messier, more demanding work—debates, role-plays, project presentations. The third lens is multimodal discourse analysis. This one reminds us that meaning doesn't come through language alone. It often depends on multiple channels working at once—visual, auditory, even tactile. Technology gives us the means to tap into all of these. Video, audio, graphics, text—we can mix them to create a learning environment that feels closer to real communication. Admittedly, these theories don't all point in the same direction. That said, they do converge on a basic principle: learning is most effective when it's active, grounded in context, and backed by tools that fit the task. Still, having these frameworks gives us at least some sense of where we're heading.

3.3 Chinese and International Research Developments

Empirical work on this topic has piled up over the last five years or so. Most of it points in a positive direction. Take Li and Wang (2023), for instance. They ran a quasi-experiment with an online flipped format in an ESP listening-speaking course at a Chinese university. They collected both platform data and student self-reports. The results? Significant gains in behavioral and cognitive engagement. Flipping the classroom seemed to push students toward deeper processing. Other Chinese researchers have reported similar patterns. Guo and Fu (2022) designed a mobile-based blended system for a "News English" course. They mixed in regular quizzes and discussion forums to keep learners engaged. Before and after comparisons showed clear improvements in interest, autonomy, and listening scores. Shi (2024) took a different tack. He piloted a "Rain Classroom" model at a local applied university, using live polling and instant feedback during lectures. After a full year, the experimental group came out ahead—both in final exams and in self-regulated learning

measures. Then there's He and Li (2024), who worked with medical English. They built a micro-lecture flipped classroom around four principles: needs-driven, content-specialized, task-authentic, and assessment-diverse. An interesting outcome emerged: this design reduced repetitive grading and sped up feedback. Simulation tools have also been getting attention. Corpus tools, meanwhile, help instructors pull out frequent vocabulary and typical collocations from specialized databases—making input more authentic and, at the same time, more pedagogically usable. We'd say technology can indeed enhance ESP instruction. But the degree of benefit seems to depend a lot on how well it's implemented and what the local conditions are. Context, in other words, is not a minor detail—it's central.

4. IMPLEMENTATION PATHWAYS

4.1 Needs Analysis: Calibrating Objectives Precisely

Needs analysis isn't something you do once and forget about. It runs through everything—every stage of teaching, every decision we make. At the start of the semester, we give out questionnaires. But questionnaires have their limits. People tick boxes; they don't always tell you what's really going on. So we also sit down with a small group of students—different levels, different backgrounds—for semi-structured interviews. That's where we start to pick up the frustrations, the anxieties, the motivations that a survey would just glide over. Three types of information. The first is about what students will have to do with English once they leave us. Call that target-situation needs. Then there's the gap between where they are now and where they need to be. That's learning needs. It's not just vocabulary and grammar; it's strategies too. The third piece is more personal. Individual interests, learning styles, career aspirations. And these can vary wildly, even among students sitting in the same classroom. Now, the real trick is to cross-check all three. You put them side by side, see where they overlap, where they diverge. That's how you set objectives that actually make sense—not just for the job market, but for the people sitting in front of you.

4.2 Resource Development: Building a Teaching Resource Bank

Materials matter. Good ones can make a course sing; bad ones can sink it, no matter how carefully

you've planned everything else. So when we put together a resource bank, we try to keep a few things in mind. First, authenticity. Students need to hear real language—the kind that actually gets used in the profession they're heading into. Second, gradation. Materials need to be ordered in a progressive sequence—easier stuff first, then gradually building up to more demanding content. Third, contextualization. Language shouldn't be taught in isolation. If you present it within professional scenarios, students pick up not just the words but also when and how to use them appropriately. For a Business English course, you might collect negotiation clips, product launch audio, customer service calls—and then tag them by business phase: opening, proposing, bargaining, closing. For English for Academic Purposes, recorded lectures, thesis defenses, discipline-specific podcasts—all good sources. Corpus tools can add another layer. They let you pull out frequency-based word lists and common collocations from specialized databases, which helps ensure that what you're teaching is both authentic and manageable for learners. It saves prep time, keeps things consistent across sections, and when you've got multiple instructors sharing the same course—that's a lifesaver.

4.3 Innovative Teaching Methods

The idea is to keep things varied, keep things learner-centered, keep students on their toes. One format that's gotten a lot of buzz recently is the flipped classroom. Before class, teachers send out micro-lecture videos and preparatory readings through mobile platforms. Students pick up the basic vocabulary, key structures, background knowledge on their own time. We don't go over that stuff again. Instead, we jump straight into application activities—case discussions, debates, simulated presentations. They don't have to be teacher-produced all the time. Sometimes we turn them into student projects. Groups get assigned a specialized topic and have to produce their own short video. That pushes them to gather information, synthesize content, produce language, handle basic tech tools—all in one go. It's a holistic kind of assignment, and students often come away with a much better sense of how English actually works in practice. Another approach worth considering is scenario-based simulation combined with task-based learning. Students have to identify key points, organize their thoughts, respond on the spot—all within a set time. These exercises are demanding, no question about it. But over time, they do tend to

boost participation and adaptability. And if you mix in role-play, problem-solving tasks, peer review now and then—you keep the variety going, and students stay interested through the whole term.

Teachers' professional development and ethical awareness remain crucial in higher education, and both have a bearing on ESP outcomes in ways we sometimes overlook. Students are not information-processing machines; their involvement in class and effort outside it are heavily colored by their feelings about the course, the teacher, and themselves. When learners feel a connection with their instructor, they tend to participate more, persist longer through difficulties, and take more responsibility for their own learning. In tech-supported environments, keeping in touch with students outside class through online channels becomes especially important, as it extends the learning community beyond the classroom walls. Discussion forums, messaging tools, and feedback sections all offer opportunities for interaction that would otherwise be missing. A timely reply or a word of encouragement can make a real difference when a student is wrestling with tough content or flagging confidence—sometimes a brief supportive note is all it takes to keep someone going. Teachers' own emotional states matter just as much, yet this dimension often gets neglected in professional development. Emotions are contagious; if an instructor walks in looking frustrated or exhausted, students pick it up through tone, posture, and facial expression, often without realizing it. The classroom atmosphere can turn sour, and learning may suffer as a result—a risk we can't afford. Keeping a calm, positive demeanor is therefore a basic professional duty, not an optional extra. What's more, teachers should regularly reflect on their practice and seek collegial support to avoid burnout, which is a real danger in demanding reform contexts where expectations run high and resources are often tight.

5. ASSESSMENT FRAMEWORK

The assessment system needs to pull off two things at once: track learning as it happens and certify what has been achieved at the end. A blend of formative and summative elements is therefore well suited to this double duty. The final examination should itself evolve to reflect changing course priorities. So how do we test what students can actually do with the language? Oral tests, for one thing. But not just any oral tests. We're talking about tasks built around real professional scenarios,

with clear scoring rubrics that everyone can understand. The idea is to measure communicative ability in context—not just memorized phrases or grammar rules. That way, we shift the balance away from written exams that test knowledge in isolation, and toward authentic competence that students can actually use beyond the classroom. And here's another thing: we need to make sure the assessment tasks match what we said we were teaching. Students should know the criteria ahead of time. No one likes unpleasant surprises when grades come out.

5.1 *Process-oriented Assessment*

That means keeping track of what students do day in, day out. Under our proposed model, we look at three broad areas. First, online learning engagement. Are they finishing the micro-lectures? Making thoughtful contributions to discussions? Submitting preview work on time? Then there's classroom interaction performance. How active are they in simulations? Is their oral expression clear and coherent? Do they collaborate well in group tasks? And finally, after-class assignment completion. We pool all these components using pre-specified percentages, and that generates a continuous assessment mark. We also fold in credits for practical, project-based work—mock conferences, industry visits, that sort of thing. We blend formative and summative results in a 6:4 ratio. Students learn to take every class seriously, not just cram for the final.

5.2 *Summative Assessment*

That includes an oral test and a written exam. Unlike traditional exams that test isolated grammar points or vocabulary items, ours emphasize application. The oral test uses authentic or highly realistic scenarios. We score along four dimensions: content coverage, linguistic accuracy, fluency of delivery, and adaptability to unexpected turns. The written exam targets specialized listening comprehension and technical vocabulary use. Audio comes from authentic sources.

5.3 *Evaluation of Teaching Process and Instructional Effectiveness*

We don't think a single student-rating number cuts it. You need a more rounded picture. One that looks at teaching dedication, course design, classroom execution, student outcomes, after-class support, and contributions to pedagogical

innovation. In technology-rich settings, digital competence has to be part of the conversation too. Technology is only as good as the teacher using it. So what do we look at? The quality and quantity of self-developed digital materials. How effectively they organize and moderate online activities. Whether they can adjust teaching strategies based on what the platform data tells them. And how confidently they use tech-based assessment tools. It encourages teachers to grow in several directions at once—pedagogical thinking, technological know-how, scholarly reflection.

6. CONCLUSION

A learner-centered approach, combined with process-oriented assessment, does seem to make a difference. College English listening-speaking courses appear to benefit, at least based on what we've seen so far. Early classroom data and teacher feedback point to measurable progress in students' ESP oral and aural skills.

Now, on the question of values education. We think there are roughly three directions worth pursuing, each tied to a different phase of teaching. On the materials front, we should prioritize professional cases that highlight Chinese perspectives and real contributions. These materials do more than teach language—they foster a sense of national pride and global awareness at the same time. Then there's activity design. This is where we can cultivate professional integrity and disciplinary standards. They're integral to professional competence, not optional extras. And finally, assessment. We should give credit where it's due—students' collaborative spirit, their sense of responsibility, their intercultural awareness as demonstrated in interactive tasks. All of that deserves recognition. So evaluation criteria need to factor in value orientations alongside linguistic skills. What we measure should reflect what we actually value. This kind of holistic approach sits well with the broader goals of Chinese higher education, which is about developing well-rounded professionals, not narrow technicians.

Through this framework and its practical application, we've tried to offer a workable path for college English reform—one that brings together language objectives, technological tools, and educational values. Future research could test the model with larger samples and longer timelines, to see whether it travels well across different contexts. But in the end, we have to be realistic about this. No model, however elegant, will deliver results

without three things: committed teachers, supportive institutions, and students who actually want to participate.

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