

Developing Sounding Competence in an online EMI Public Speaking Course for Medical Students.

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Abstract

English plays a central role in contemporary medical education; however, students studying through English-medium instruction often struggle to speak with clarity, credibility, and professional presence, even when their general English proficiency is relatively high. This article presents preliminary findings from an ongoing PhD research project examining a semester-long online public speaking course for first-year medical students at Sechenov University. The study conceptualises sounding competence as a multidimensional construct comprising intelligibility, vocal control, rhetorical organisation, and professional self-presentation. Preliminary analysis of recorded performances, rubric-based assessment, and reflective writing indicates early gains in pacing, clarity, and students' awareness of voice as a professional resource. These findings suggest that EMI pedagogy should address not only linguistic accuracy, but also the vocal and rhetorical enactment of professional communication.

Keywords: *English-medium instruction; public speaking; sounding competence; task-based language teaching; medical education; online learning.*

1. Introduction

English-medium instruction (EMI) has become an increasingly prominent feature of higher education and is widely associated with internationalisation, access to global knowledge, and academic mobility (Dearden, 2015; Macaro, 2018). In medical education, this development is especially significant because students are expected not only to understand disciplinary content, but also to communicate it effectively in English. Yet successful EMI performance depends on more than general language proficiency. It also requires the ability to speak clearly, organise ideas coherently, and project professional credibility in spoken academic and professional settings.

This challenge becomes particularly visible in online environments, where spoken performance is mediated by technology and vocal delivery often becomes more salient. Students may understand scientific content well yet still struggle to sound confident, intelligible, and professionally credible when presenting it orally. In this sense, the issue is not simply one of language knowledge, but of how disciplinary knowledge is enacted through speech.

This article presents preliminary findings from the first cycle of an ongoing PhD research project that addresses this gap through the concept of sounding competence, understood as the capacity to project meaning, clarity, and professional presence through spoken academic performance. The broader doctoral project investigates how task-based pedagogy can support the development of scientific public speaking in online EMI medical education. The present paper focuses on the initial semester-long implementation cycle and reports work in progress rather than final outcomes.

Accordingly, the article has two aims: first, to conceptualise sounding competence in the context of online EMI public speaking for medical students; and second, to examine the kinds of early changes that emerge during a voice-sensitive, task-based intervention. The study is guided by the following research questions:

1. How can sounding competence be conceptualised in the context of online EMI public speaking for medical students?
2. What preliminary changes in delivery and self-perceived professional voice emerge during a semester-long voice-focused intervention?

2. Conceptual background

2.1. EMI and spoken academic performance

Although EMI has expanded rapidly, research suggests that learning through English does not automatically lead to strong spoken communicative competence (Dearden, 2015; Macaro, 2018). EMI programmes often prioritise content learning, while oral performance receives comparatively limited explicit support. More recent work has further shown that EMI must be understood as a complex educational ecology in which language, disciplinary practices, institutional conditions, and participant backgrounds interact dynamically rather than as a simple matter of delivering subject content in English (Dafouz & Smit, 2020). As a result, students may understand disciplinary material yet still struggle to present ideas fluently, structure spoken discourse effectively, and manage the affective demands of public speaking.

This limitation is especially relevant in online settings, where interactional cues are reduced and vocal delivery carries greater communicative weight. In medical education, the problem is particularly acute because future doctors must explain findings, justify decisions, and project

authority in ways that are both scientifically accurate and socially credible. Spoken academic performance in EMI should therefore be understood not as an automatic by-product of content instruction, but as a domain requiring explicit pedagogical attention.

2.2. Sounding competence as a multidimensional construct

To address this issue, the present study uses the concept of sounding competence. In this article, sounding competence refers to a multidimensional capacity that includes intelligibility, vocal control, rhetorical organisation, and professional self-presentation. It therefore extends beyond narrow understandings of speaking ability based solely on pronunciation, fluency, or grammatical accuracy.

Intelligibility concerns whether the speaker can be readily understood by the audience. Vocal control includes pacing, pausing, modulation, articulation, and the management of speech as an embodied communicative resource. Rhetorical organisation refers to the ability to structure ideas coherently and communicate them in ways that are accessible and persuasive for an academic audience (Swales, 2004). Professional self-presentation captures the extent to which the speaker can project authority, credibility, and an emerging professional identity through speech (Norton, 2013).

Taken together, these dimensions position sounding competence not merely as a linguistic skill, but as a professional and pedagogical construct. In online EMI public speaking, students are not simply transmitting information; they are also enacting disciplinary belonging and professional legitimacy through voice.

2.3. TBLT as a pedagogical response

Task-based language teaching (TBLT) provides a productive framework for addressing this challenge because it places meaningful communication at the centre of learning (Ellis, 2003; Long, 2015). Rather than treating language as an abstract system to be mastered in isolation, TBLT engages learners in purposeful tasks that require them to use language to achieve communicative outcomes. The pre-task, task, and post-task cycle also offers a clear pedagogical structure for scaffolding speaking development and reflection (Willis & Willis, 2007).

Within online EMI public-speaking instruction, a task-based approach is particularly valuable because it allows students to rehearse and refine authentic disciplinary performances in a structured way. Recent research on technology-mediated TBLT suggests that digital task environments can support learner engagement, interaction, and productive language use, especially in speaking-oriented activities, although longitudinal evidence remains limited and gains in fluency do not always correspond to equivalent gains in linguistic accuracy (Bhandari et al., 2025). At the same time, EMI research indicates that affective factors remain central: students may experience heightened anxiety even when authentic communication and

supportive teaching practices also generate enjoyment and participation (Sun & Yang, 2025). For this reason, a voice-sensitive, task-based approach is especially relevant in online EMI contexts, where speaking development must address both performance and affect.

3. Methodology

This article reports preliminary findings from the first implementation cycle of an ongoing PhD research project. The broader doctoral study adopts a mixed-methods, design-informed approach to examining the development of scientific public speaking in online EMI medical education. The present paper, however, focuses specifically on the initial semester-long cycle and reports the early trends that informed the wider doctoral design.

3.1. Context and participants

The study was conducted at Sechenov University within a compulsory online EMI public speaking course for first-year medical students. The preliminary phase reported here involved approximately 60 non-native English-speaking students with upper-B2 to C1 levels of English proficiency. The course formed part of an internationalised medical programme in which Russian-speaking students constituted the majority, alongside students from other linguistic and cultural backgrounds. Female students also represented the majority of the wider course population, reflecting broader trends in medical education.

Participants were included in the analytic sample if they were enrolled in the course, had the required upper-B2 to C1 proficiency profile, and generated usable performance and reflection data during the reported cycle. Students who did not produce sufficient course-based data for analysis were not included in the analytic dataset. Because the study draws on an intact educational cohort from a single institutional setting, the findings should be interpreted as exploratory and context-bound rather than statistically representative.

3.2. Pedagogical intervention

The intervention was implemented over one academic semester through weekly 90-minute synchronous online sessions supported by asynchronous work. Live sessions were conducted on Zoom, while task distribution, submissions, and reflective work were supported through digital course platforms, including Google Drive and Nearpod, within the wider doctoral design.

The course followed a recurring task-based sequence of pre-task scaffolding, task performance, and post-task feedback. In the pre-task phase, students received conceptual and linguistic scaffolding, including key vocabulary, discourse structures, and model performances. In the task phase, they engaged in authentic disciplinary speaking tasks such as clinical case presentations, scientific explanations, and discussion or debate activities. In the post-task phase, teacher and peer feedback focused on clarity, structure, and communicative effectiveness. This

cycle was designed to support not only language production, but also the vocal and rhetorical dimensions of sounding competence.

In procedural terms, data collection was staged across the semester. Before the main intervention, students' initial speaking profiles were established through placement-related data and baseline speaking performance. During the course, students completed guided speaking tasks and weekly reflective writing. Mid-course performance was captured through group-presentational activity, and end-of-course performance through an individual academic speech. Within the broader doctoral project, later stages also include interviews and focus groups; however, the present article reports only the preliminary performance and reflection data available from the first cycle.

3.3. Data sources and analysis

The preliminary analysis reported in this article draws on three main sources of data: recorded oral performances, analytic rubric scores, and reflective written texts. The rubric focused on delivery-related and discourse-related dimensions, including clarity, pacing, modulation, structure, and overall oral effectiveness, rather than on grammar or vocabulary in isolation. In addition, simple speech measures such as speech rate and pausing patterns were used to support descriptive analysis of delivery.

Qualitative analysis was applied to reflective writing in order to identify recurring themes related to voice awareness, confidence, and professional self-presentation. The purpose of this analytic combination was not to claim definitive causal effects, but to trace early developmental tendencies in how students performed and interpreted professional spoken English in an online EMI setting.

3.4. Ethical considerations

The study follows standard ethical principles for educational research. Participation in the course formed part of the curriculum, while the use of course-generated data for research purposes was handled in accordance with institutional ethical procedures and informed consent practices.

4. Preliminary findings

Although the study is still in progress, the initial findings suggest several emerging patterns.

First, the performance data indicate modest but consistent improvement in delivery-related measures. Across the early recordings, students generally demonstrated better pacing and greater control over pauses while maintaining intelligibility. In several cases, speech rate

increased without a corresponding loss of clarity, suggesting more controlled and purposeful delivery rather than mere acceleration.

Second, rubric-based assessment points to gradual development in clarity, vocal modulation, and overall oral effectiveness. Improvement was not uniform across all students; however, the overall pattern suggests that repeated task-based speaking practice supported a more stable and purposeful spoken delivery. Students appeared increasingly able to shape information for oral communication rather than simply transfer written formulations into speech.

Third, the reflective texts indicate a shift in how students understood voice. Rather than treating delivery as a superficial matter of style, many began to perceive pausing, pacing, and vocal control as part of how they present themselves academically and professionally. In this sense, the intervention appears to support not only performance development, but also a developing awareness of voice as a professional resource.

Taken together, these preliminary findings suggest that sounding competence may be both pedagogically relevant and developmentally observable within an online EMI context.

5. Discussion

The findings provide initial support for both research questions. With regard to the first question, the study suggests that sounding competence can be productively conceptualised as a multidimensional construct encompassing intelligibility, vocal control, rhetorical organisation, and professional self-presentation. This framing moves beyond narrow understandings of speaking proficiency focused primarily on pronunciation, grammar, or general fluency. Instead, it highlights that effective spoken performance in EMI involves the integrated enactment of voice, structure, and professional identity.

With regard to the second question, the preliminary findings indicate that a task-based online intervention may support the early development of sounding competence. The recurring cycle of preparation, performance, and feedback appears to create conditions in which students can rehearse professional speaking in a purposeful and scaffolded way. This interpretation is consistent with research suggesting that TBLT supports oral proficiency and more authentic communication by shifting attention from isolated language forms to meaningful task completion (Ellis, 2003; Long, 2015; Willis & Willis, 2007; Zhang, 2025).

The present findings also align with recent work on technology-mediated TBLT. Bhandari et al. (2025) argue that digital task environments can enhance engagement, interaction, and productive language use, particularly in speaking-oriented activities. This is compatible with the current results, where the online task cycle appeared to support gradual development in pacing, clarity, and oral effectiveness. At the same time, the review by Bhandari et al. (2025) cautions that gains in fluency do not automatically produce equivalent gains in accuracy and

that more longitudinal evidence is needed. This caution is directly relevant here: the current article reports only preliminary descriptive trends from the first cycle of a broader doctoral project.

Affective factors are equally important. Sun and Yang (2025) show that EMI may significantly increase learner anxiety even when authentic communication, peer interaction, and instructor support also generate enjoyment and participation. The present study reflects this tension. Students' reflections suggest that sounding competence develops not only through repeated task performance, but also through learners' growing capacity to manage the affective demands of speaking publicly in English. In this sense, the study supports the communicative potential of online TBLT while also reinforcing the need to address confidence, audience awareness, and emotional pressure as integral dimensions of EMI speaking development.

6. Conclusions

This article has presented preliminary findings from the first cycle of an ongoing PhD research project on sounding competence in online EMI public speaking for medical students. The study argues that effective spoken performance in EMI should be understood not only in terms of linguistic accuracy, but also in relation to intelligibility, vocal control, rhetorical organisation, and professional self-presentation.

On this basis, the article makes three contributions. Conceptually, it proposes sounding competence as a useful framework for analysing spoken academic performance in EMI. Pedagogically, it outlines a voice-sensitive, task-based model for supporting public speaking in online medical education. Empirically, it offers early descriptive evidence that such an approach may contribute to improvement in delivery and to a stronger awareness of voice as a professional resource.

Because the doctoral research is still ongoing, these conclusions remain provisional. Subsequent stages of the project will examine sounding competence across a broader dataset and over a longer developmental period, including staged performance assessment and additional qualitative data. Future research should also test the framework in other EMI settings and disciplinary contexts. Practically, the study suggests that online EMI courses in medical education should incorporate explicit voice-sensitive, task-based speaking support rather than assuming that professional oral performance will emerge automatically from content learning alone.

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