

2.7

Oral Presentation

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Oral presentation is an important professional communication skill for engineering students, both in educational settings and in future engineering practice. This chapter approaches oral presentations as rhetorical, situational communicative events. It first defines the skill and its main characteristics by drawing on classical and modern rhetoric. It then explains why oral presentation matters in engineering education, particularly as a learning and assessment activity. The final sections translate these insights into educational design principles, discussing how presentation skills can be taught, practised, assessed, and scaffolded across an engineering curriculum.

1 Definition: what is oral presentation?

1.1 Classical and modern rhetoric as the foundation of oral presentation

Oral presentation is historically rooted in the tradition of classical rhetoric, a discipline that emerged in ancient Greece and Rome to describe the art of speaking persuasively in public. When discussing oral presentation from a rhetorical point of view, we use classical rhetorical terminology as an analytical and practical framework. These terms allow for a level of analytical precision that is suited to describing the conceptual complexity of rhetorical practice. An influential starting point for this framework is provided by the work of the ancient Roman author Quintilian.

Quintilian (c. 35 - c. 100 AD), in his *Institutio Oratoria* (trans. Russell, 2002), outlines a complete rhetorical approach consisting of five stages: invention (*inventio*), arrangement (*dispositio*), style (*elocutio*), memorisation (*memoria*) and delivery (*actio*) (Kennedy, 1994). This structure formed the core of what would become the Western tradition of public speaking.

In classical rhetorical education, learning public speaking was conceived as a structured progression through four stages of increasing complexity (Kennedy, 1994). The first step, *grammatica*, focused on learning and mastering the language, which formed the linguistic foundation for rhetorical training. This was followed by the *progymnasmata*, a series of written and stylistic exercises — such as fables, comparisons, and maxims — designed to build basic rhetorical skills. Next came the *declamatio*, in which students practised oral delivery in simulated situations, often involving persuasive or judicial speech scenarios. Finally, the most advanced stage was the *practica oratoria*, where learners engaged in the actual professional practice of rhetoric, such as public debate, legal pleading, or ceremonial speech. From this perspective, we position the teaching of oral presentation to engineering students in controlled educational settings as a modern equivalent of the classical *declamatio* stage.

Modern interpretations of classical rhetoric often emphasise the three means of persuasion defined by Aristotle in his *Rhetoric*: *logos* (appeal to reason), *ethos* (credibility of the speaker), and *pathos* (emotional appeal). These remain present in academic and professional oral presentation situations (Braet, 2007), where speakers often not just aim to inform but also to persuade. We consider the Aristotelian means of persuasion to be a helpful tool for speakers to analyse communication situations: to what extent does the situation require an emphasis on argumentation, what is the relationship between speaker and audience, and what emotions and values are involved that need to be addressed?

These classical roots accentuate our idea that presentations are rhetorical, situational communicative events. Drawing on Bitzer's (1968) notion of the rhetorical situation, we understand a presentation as a response to a specific exigence, audience, and set of constraints. There is a demand for communication to bring about an effect or change (exigence), an audience to respond to such a message, and constraints, including beliefs and attitudes, but also location (type of event, shared space, or

mediated event), and time of day. An effective presentation is therefore not merely clear or confidently delivered in general, but functions as a fitting response to its communicative situation. This situational awareness provides a solid basis for presentation education, preparing students to communicate across different settings, genres, and disciplines (Threadgill & Paulson, 2018).

1.2 Oral presentations in educational contexts

In educational settings, an oral presentation is commonly defined as a structured, pre-prepared verbal delivery of content to an audience, often accompanied by visual aids (PowerPoint-slides) and followed by a Q&A session (van Ginkel et al., 2015). In the context of this handbook, we use the glossary definition: presentation skills are the ability to give a clear, organised and logical speech and answer questions adequately and with elaboration (Leandro Cruz & Saunders-Smiths, 2019).

Oral presentations in higher education typically serve as both a learning activity and an assessment format. They require students to explain, argue, or reflect on content in their own words. Unlike everyday informal speaking, they are often evaluated based on clarity, structure, audience adaptation, and delivery (Carless & Boud, 2018). We consider strong oral presentations to reflect both information literacy skills and interpersonal communication skills, including adaptability, active listening, and audience awareness (Leandro Cruz & Saunders-Smiths, 2019). Didactically, oral presentations are valued because they engage students in self-directed learning and promote active knowledge construction (Garrison, 1997). Students must often make deliberate choices about content selection, audience adaptation, and rhetorical strategy. These processes foster autonomous motivation (Ryan & Deci, 2000) and strengthen self-regulation (Zimmerman, 2002). In contrast to written assignments, the speaker cannot hide behind text, but must perform understanding in real time, often in interaction with peers or experts. This performative aspect emphasises the presentation method itself: the way in which content is staged using voice, visuals, posture, and timing.

The didactical value of oral presentations has contributed to their increasing use as an assessment method since the emergence of generative AI tools in higher education (Stephenson et al., 2025). To tackle the challenges of academic integrity and knowledge processing raised by GenAI, oral assessment is considered to promote authenticity and critical thinking skills (Corbin et al., 2025). However, relying on oral assessments such as presentations comes with its own challenges: students' performance may be influenced by a possible anxiety for speaking in public (Stephenson et al., 2025), and it may lead to assessing different learning outcomes (Corbin et al., 2025). These considerations underline why we believe that effective instruction in oral presentation skills should not only prepare students for their professional careers but also support valid assessment of content knowledge and skills.

2 The relevance of presentation skills for engineers

In interdisciplinary work environments, engineers often engage in persuasive communication to make decisions with various stakeholders, which requires awareness of the shared situation, emotional engagement, and credibility of those involved (Coso Strong et al., 2021). Although engineering presentations that were evaluated as successful included rhetorical techniques and audience adaptation strategies (Dannels, 2009), introductions of speeches about engineering in practice contain few techniques to draw attention or establish rapport with the audience (Van de Mierop et al., 2008). We believe that awareness of such rhetorical aspects should be woven into engineering curricula, for example by introducing students to Aristotle's means of persuasion (Rakedzon & Hazzan, 2025) — both in explicit oral presentation training and by applying oral presentations as teaching and assessment methods throughout the curriculum.

Universities increasingly recognise the value of structured presentation training and education by giving it a more central role in STEM programmes (De Grez et al., 2012; Van Ginkel et al., 2017). Structured presentation training can enhance students' communication competence and strengthen their confidence (van Ginkel et al., 2017). Moreover, De Grez et al. (2012) show that such training improves students' ability to tailor content to the audience and context. This way, higher education brings together rhetorical training and personal development to prepare for professional practice.

3 Forms of implementation

What are effective ways to integrate oral presentation skills in engineering education? To answer this question, we first explain approaches to include oral presentation skills on a curriculum level (3.1), touching on the progression of students throughout a study programme and scaffolding practices. Next, we describe approaches to design a presentation skills module (3.2), followed by an overview of challenges and opportunities for developing presentation skills (3.3).

3.1 Integrating oral presentation skills into engineering curricula

As engineering students need to be prepared for various presentation situations and genres, we argue that it is important for students to progressively develop and practise the skill throughout an engineering curriculum. This means using scaffolded instruction within a curriculum in which presentation learning outcomes become increasingly demanding. This section first distinguishes between fundamental and more advanced presentation skills, before discussing approaches and practices to integrate such skills into a curriculum.

From fundamental to advanced presentation skills

At an undergraduate (bachelor) level, we recommend that engineering students first acquire the fundamentals of effective presentations. This involves practising delivery skills to ensure that audiences are able to process information: adopting an appropriate posture (Steehouder et al., 2012), using natural gestures (Andeweg & Baars, 2019), establishing eye contact (van der Laaken & van der Laaken, 2013), and

applying clear and attractive voice use (Steehouder et al., 2012). In addition, bachelor students benefit from learning to structure their presentation according to the introduction-body-conclusion format: a concise introduction to state the presentation aim and main points, a logically ordered body, and a conclusion that recaps the key message and signals closure. Furthermore, students should practise designing clear, supporting, and non-distracting visuals (slides), for which Mayer's multimedia learning theory (1989) offers useful guidelines. Finally, students should be trained to handle Q&A sessions by listening attentively to questions and responding in a structured and concise manner.

At the advanced stages of their studies (end of bachelor level or master level), students are expected to further refine their professional presentation skills to negotiate the nuances of more complex presentation situations and apply rhetorical techniques (Dannels, 2009). Challenges at the advanced level include presenting to a mixed audience (Coffelt et al., 2024), for example simultaneously addressing peers, laypersons, managers, and legal professionals, and presenting across different genres. Research indicates that a one-size-fits-all approach is insufficient in such cases (Jariwala et al., 2024). For instance, (professional) speakers vary their use of ethos, pathos, and logos, vocabulary, and rhetorical techniques when they address similar topics in different settings, such as TED talks in contrast to conference presentations (Scotto di Carlo, 2014; Wackers, 2021). More advanced situations also involve managing a demanding Q&A session, such as moderating a panel discussion.

A particular advanced presenting skill for engineering students is to incorporate a technical demonstration into their presentation, as it combines logistical and communicative skills. Although empirical evidence on the effectiveness of technical demonstrations in engineering presentations is limited, related research suggests that demonstrations can enhance audience engagement (Bobbe et al., 2023) and are most effective in combination with audience interaction (Sharma et al., 2010). From a rhetorical perspective, a demonstration can strengthen logos (by making a theoretical claim observable), pathos (by doing something that is likely to spark attention and curiosity) and ethos (by demonstrating skill and competence in performing the technical demonstration).

Example 1. How can you coach students in giving an effective demonstration?

We recommend introducing students to the following steps, which can be used both as guidelines for preparing a demonstration and focus points for teacher and peer feedback:

- 1. Conducting a safety and feasibility check before the presentation, meaning that presenters should verify whether the demonstration can be safely performed under the available conditions (e.g., checking whether the audience is at a proper distance for demonstrating a prototype, or verifying whether protective clothing is required for audience members who volunteer to assist);*
- 2. Stating the purpose of the demonstration and how it relates to the central claim of the presentation (logos);*

3. *Inviting the audience to formulate a prediction or hypothesis;*
4. *Performing the demonstration with clear visibility and, if required, guiding explanation;*
5. *Inviting the audience to discuss their interpretation of the demonstration ("what did you observe?", "how does that compare to your expectations?");*
6. *Explicitly synthesising the outcome with the theoretical or technical argument developed in the presentation.*

From integration into a content-based module to a learning trajectory

To develop students' oral communication skills, oral presentation is often included as part of a content-based module or project. Embedding communication tasks within content-rich contexts can strengthen students' communicative competencies, particularly when such tasks are meaningfully aligned with disciplinary learning goals (Cochrane, 2009; De Grez et al., 2009). Carlsson et al. (2010) emphasise the importance of clearly defined roles for both subject-matter experts and communication experts: effective collaboration between these parties facilitates presentation assignments with well-articulated learning outcomes that go beyond the abstract instruction to *'give a good presentation'*.

Example 2. Oral presentations at Delft University of Technology

At Delft University of Technology most faculties offer an integrated module in oral presentation as part of the undergraduate curriculum. Typically, this module is compulsory and embedded within a project-based setting, requiring students to present about the content of their project. Ideally, learning goals and presentation assignments are not only adapted to module content, but also to the students' level: first-year undergraduate students prepare presentations to peers and instructors, whereas master students and PhD students are often challenged to gear their talks to various audiences.

Rather than providing a one-off module, we believe that a more durable approach is to scaffold oral presentation skills across the curriculum via a learning trajectory. Such an approach allows students to repeatedly practise and extend their speaking skills from the first year through graduation. Apart from integrated presentation skills modules, you are recommended to include other interventions across the curriculum to help develop presentation skills, such as presentation assignments with feedback moments and follow-up consultations by (skills) lecturers — moving from intensive teacher guidance to student-led, question-driven consults.

To develop an effective learning trajectory, you should keep in mind several design principles. First, using similar evaluation criteria for presentations across different modules provides continuity and clarifies expectations. Second, develop or use materials about presentation skills, such as feedback forms, instructional videos, or assessment rubrics. Make these available to both students and teaching staff, to reinforce shared standards. Third, use a consistent feedback vocabulary (e.g.,

audience awareness, structure, delivery) to foster shared understanding and help students track their own progress more effectively. Example 3 shows how a presentation skills learning trajectory is included at Delft University of Technology. Table 2.7.1 shows example criteria and competence levels from two different categories in the presentation skills rubric that can be used (and extended) throughout a learning line.

Table 2.7.1: TU Delft Centre for Languages and Academic Skills rubric for presentation, showing two examples of criteria to evaluate fundamental and advanced presentation skills. The first row represents the fundamental delivery criterion 'volume and tempo'; the second row represents the more advanced criterion 'language and interaction' from the category 'audience adaptation'. Descriptions of observed speaker behaviour are distributed over four competence levels: 'poor', 'mediocre', 'sufficient' and 'good'. Note that the overall rubric contains more categories and criteria, and that the evaluator's interpretation of speaker behaviour depends on the presentation situation (e.g., module type and assignment).

<i>Criterion (evaluation category)</i>	<i>Poor</i>	<i>Mediocre</i>	<i>Sufficient</i>	<i>Good</i>
<i>Volume and tempo (delivery: fundamental)</i>	Speaker speaks too loudly, too quietly, too slowly or too quickly	Speaker sometimes speaks too loudly, too quietly, too slowly, or too quickly	Speaker uses effective volume and tempo	+ Speaker uses pauses effectively to maintain the audience's attention
<i>Language and interaction (audience adaptation: advanced)</i>	Audience is never addressed directly (if relevant) Or: language is unprofessional	Audience is only addressed sporadically (if relevant) Or: language can be unprofessional at times	Audience is addressed frequently and effectively (if relevant) And: language is usually correct and professional	+ Speakers engage the audience in the presentation effectively + Speakers connect with audience's perceptions and experiences

Example 3. Integration of presentation skills as a learning trajectory

In the curriculum for Applied Physics at TU Delft, first-year undergraduate students get acquainted with fundamental presentation skills. In a design project, they follow a self-guided online instruction on presentation elements such as delivery and basic presentation structure and record a video of their presentation. A skills lecturer gives feedback on this video, after which students process this feedback and prepare a live presentation to their peers and project instructor, who then provide (peer) feedback. Feedback is limited to fundamental presentation skills, such as delivery. Table 2.7.1 provides an excerpt of the rubric that skills lecturers, peers, and project instructors use to give formative feedback. The upper row shows an example of one delivery criterion (volume and tempo).

In the second year of the bachelor curriculum, a more intensive presentation skills module is integrated into an interdisciplinary project in which Applied Physics students collaborate with Business Management students. Building on their first-year fundamental presentation skills, students are guided in preparing presentations for mixed audiences of stakeholders and peers. Students are invited to reflect on their progress compared to the first-year presentation. Rubrics introduced in the first year are extended with categories such as audience adaptation. The second row in Table 2.7.1 provides an example of an evaluation criterion for more advanced presentation assignments to mixed audiences. Furthermore, second-year students manage a more challenging Q&A session in which they can expect questions from various stakeholder perspectives and need to respond to opposing or conflicting ideas.

3.2 Module design principles and teaching methods

The design of a dedicated oral presentation module depends on factors such as the module's position in the curriculum, students' prior knowledge, and potential connections with other subjects. While these contextual elements shape the implementation, we believe that several didactical *building blocks* are consistently present in oral presentation modules: 1) defining learning outcomes; 2) engaging with rhetorical and presentation theory; 3) practising through authentic tasks and targeted exercises; 4) providing and receiving feedback; and 5) engaging in structured reflection.

Formulating learning outcomes

When you formulate learning objectives for an oral presentation module, we recommend aligning them with the module's position in the curriculum and with students' developing expertise. Less experienced students usually need more explicit scaffolding to construct a fitting response to the rhetorical situation. You can offer this support across the classical rhetorical canons: helping students select relevant content (*inventio*), organise it coherently (*dispositio*), formulate it appropriately and design supporting visuals (*elocutio*), rehearse and prepare for delivery (*memoria*), and perform the presentation effectively (*actio*). More advanced students, by contrast,

should gradually take greater responsibility for making these choices themselves. We do not see this as a strict distinction between basic and advanced skills, but as a continuum of increasing expertise.

Cognitive load theory can help you decide how much scaffolding students need at a particular stage in that continuum (Sweller et al., 2019). Support should be sufficient to make the presentation task manageable but should gradually be reduced as students become more capable of analysing the situation and adapting their presentation choices independently. This scaffolded approach differs from a purely incremental sequence in which students practise one isolated competence after another. Instead, intermediate tasks function as guided approximations of increasingly complex presentation situations. Research suggests that such scaffolding can enhance contextual transferability: students become better able to adapt what they have learned to different audiences, genres and rhetorical situations (van Ginkel et al., 2015).

Practising with the theory: flipping the classroom

We recommend using class time primarily for practice, feedback, and guided application. The flipped classroom is a widely adopted didactic strategy to do this (Irianti et al., 2024). Following this approach, students read and watch (often digital) materials prior to class and apply the prepared theory in class via practical assignments and exercises. This increases time-on-task, helps students connect theory with delivery, and allows you to provide individualized, scaffolded support during practice (Bishop & Verleger, 2013; Chen et al., 2014; van Alten et al., 2019).

For oral presentation skills, flipping the classroom is particularly suitable because presentations are inherently performative: knowledge of rhetorical theory alone is insufficient unless enacted. By engaging with theory before class, students arrive prepared to apply concepts immediately in authentic practice situations. Moreover, evidence suggests that flipped presentation modules foster higher student engagement and self-efficacy, as learners take greater responsibility for their preparation and performance (Thai et al., 2017).

Research on skills education in higher education highlights the importance of authentic learning tasks: tasks that closely resemble the communicative situations students will encounter in professional contexts (Gulikens et al., 2006). In oral presentation modules, this implies designing assignments that go beyond “classroom performances” and instead simulate realistic settings such as a pitch for a client, a conference presentation, or a team briefing. Authentic tasks have been shown to increase intrinsic motivation (Herrington et al., 2010) and improve transfer of learning, as students can more readily apply the competencies they develop in other contexts (Smith & Frymier, 2006).

Practising with presentation exercises

Beyond full presentations, you can include short, targeted in-class presentation exercises. These resemble the progymnasmata in classical rhetoric, which foster stepwise mastery of rhetorical tasks and provide a didactical blueprint. Early exercises

might include brief self-introductions, paraphrasing of existing texts, or describing visual material such as an object in class or taken from their own bag, which strengthen *inventio* and *elocutio*. As students advance, you can introduce exercises with increased rhetorical complexity, such as defending a position in a short debate (focusing on structure), delivering a prepared persuasive speech (delivery), or improvising responses to audience questions (integrating multiple tasks). Improvisation exercises can enhance spontaneity, adaptability, and communicative confidence; see Phelps et al. (2021) for examples of exercises.

Feedback on presentations

In our view, feedback remains a cornerstone of effective oral presentation instruction. Both instructor feedback and peer feedback serve distinct functions. While instructor feedback has been shown to be more effective in improving performance (van Ginkel et al., 2017), peer feedback provides metacognitive benefits for the giver, enhancing their own internalisation of assessment criteria.

Because oral presentations involve personal exposure, feedback is often perceived as more direct and personal than feedback on written work (Agricola et al., 2020). This heightened sensitivity can affect students' receptiveness: criticism of a performance may be interpreted as criticism of the person. To safeguard a psychologically safe learning climate, lecturers should employ constructive communication strategies sensitive of students' self-perception. Research on feedback in communication education confirms that the tone, specificity, and delivery of comments strongly influence whether feedback is experienced as constructive or threatening (Smith & King, 2004; Trees et al., 2009). Therefore, we recommend the step-by-step feedback approach explained in Example 4.

Example 4. How to guide the peer feedback process in a presentation class

- *Dedicate a specific moment in class to discuss effective feedback strategies.*
- *Introduce students to specific feedback criteria (as described in Table 2.7.1) in an early stage of the module to help them develop a more precise feedback vocabulary.*
- *Enable students to first practise giving feedback on a particular category or criterion before extending this to multiple evaluation aspects.*
- *Ask speakers to reflect on their own presentation first, as an initial response and opportunity to release possible tension they built up.*
- *Invite the audience to respond with their general impression before moving into the more detailed and specific feedback, so that the audience can attune their feedback to the speakers' initial reflection.*

Reflecting on presentations

Reflection consolidates learning by fostering critical awareness of strengths and areas for improvement (Sterling et al., 2016). Research indicates that students tend to overestimate their own presentation competencies, in comparison to the evaluations of instructors (De Grez et al., 2012). As a result, unguided self-assessment may

provide an inflated view of performance, which underscores the importance of structured reflection guided by theoretical frameworks or external feedback.

Although reflection is one of the building blocks for a module on oral presentations, its educational value diminishes when it is narrowly tied to the formal assessment criteria of the final performance. Studies on assessment practise caution that such a focus may encourage students to treat reflection primarily as a strategic exercise to maximise grades, rather than as an authentic process of self-examination and growth (Boud & Falchikov, 2007; Sadler, 2005). In this scenario, students engage in what Sadler describes as strategic compliance: they focus on aligning their reflections with the stated criteria to satisfy evaluators, rather than on developing a deeper understanding of what constitutes effective presentation. As a result, reflection risks becoming instrumental rather than developmental, which undermines its potential to foster genuine improvement. To avoid this, reflection activities should be framed as opportunities for developmental learning rather than as mechanisms for demonstrating compliance with assessment criteria. Models such as Kolb's Experiential Learning Cycle (1984) and Gibbs' Reflective Cycle (1988) can help achieve this by guiding students toward systematic, theory-informed self-analysis that extends beyond the immediate assessment task.

3.3 Challenges for developing oral presentation skills

In this section we discuss three challenges that integrating oral presentation skills into engineering brings about; the first two are related to classroom practice of teaching this skill, the third pertains to skills implementation on an institutional level.

Dealing with public speaking anxiety

Public speaking anxiety is a well-known barrier for students in presentation classes and public speaking assessments, and the increased stress levels involved can negatively influence students' experience of higher education in general (Grieve et al., 2021). Depending on the severity of public speaking anxiety, you can apply different remedial approaches. According to Bodie (2009), a combination of remedial techniques usually is most effective. Students who heavily suffer from public speaking anxiety are not likely to be helped by skills training alone and may require (psychological) treatment by a professional first. However, other students can benefit from classroom interventions and exercises at home.

In the classroom, you are encouraged to create conditions for a safe space and address the issue of public speaking anxiety. It may be helpful for students to acknowledge that they are not the only ones facing this challenge. As not all students feel comfortable speaking up about this topic, you can provide students with the opportunity to address the matter individually to you or in a small peer group. You can share exercises or develop a step-by-step plan with individual students; start with small, manageable tasks such as adopting an effective posture. In class, some other common approaches are: practising in small groups of students who are familiar with each other, giving (peer) feedback on specific actionable aspects of delivery or performance (such as gestures or eye contact), incremental progression (one

competence at a time), and explicitly acknowledging students' qualities. Beyond the classroom, you can encourage students to practise visualising their presentation as a successful event (Bodie, 2009). You can agree with the student to evaluate such interventions before and after each in-class presentation. Although time-consuming, it is critical and worthwhile to build a relationship of trust with students with public speaking anxiety.

Adapting to varying levels of experience in a presentation class

Another challenge in teaching presentation skills is adapting to different levels of experience and mastery of presenting skills within a cohort or class of students. This issue typically occurs in postgraduate degree programmes, which are open to students from a range of undergraduate programmes. Some students have had little experience with presenting in their former education (secondary school and undergraduate programme), whereas other students have followed study programmes that heavily emphasise presenting. Such a variation in presentation experience in a presentation class can affect student motivation; in particular, more experienced students can feel a lack of purpose and progression. Furthermore, variation in experience can impact student performance in presentations that are part of content or knowledge-based assessments in the curriculum, which requires consideration in a (project) module and curriculum assessment plan.

To tackle this, there are various ways you can differentiate within a module or class. A first approach is to compose groups based on experience and gear feedback, assignments, and exercises to the level of the class. Drawbacks of this approach are that it is time-consuming for teachers to determine the students' entry level, that students may find it challenging to self-assess their level of presentation skills, and that such a set-up would not allow students who need to start at a more basic level to learn from high-performing peers. A second way to tackle a possible lack of motivation is to design more complex formative presentation assignments for high-performing students. You can invite students to formulate their personal learning outcomes that exceed the module's basic learning outcomes, challenge them to include rhetorical strategies (compelling narratives or stylistic devices, for example), and invite them to fulfil the role of moderator in a group discussion. Finally, you can introduce presentation skills electives that aim for a more advanced level or specific presentation genres (e.g., popular scientific presentations, speeches, or TED talks), geared to experienced or high-performing students who wish to further develop their skills beyond the programme outcomes.

Allocating sufficient resources to presentation skills

Acquiring effective presentation skills requires practice, feedback, and self-reflection. In an engineering curriculum that is expected to contain content-based knowledge and a range of academic skills, allocating sufficient resources and credits to presentation skills it is often not prioritised. A combination of recommendations discussed in sections 3.1 and 3.2 could be resource-efficient when applied simultaneously: integrating presentation skills into content-based modules, ensuring

the application of similar presentation evaluation criteria and access to (online) materials and exercises throughout the curriculum, including presentation skills at the start of a new curriculum design, and scaffolding presentation skills so that students can progressively develop presentation competencies and skills. This way, institutions and study programmes avoid a one-module-fits-all approach and instead carefully consider students' progression in developing presentation skills.

4 Conclusion and recommendations

Oral presentation skills develop through deliberate, repeated practice. Give students multiple opportunities to present throughout the curriculum, rather than concentrating presentation training in a single assignment or module. These opportunities can take different forms: presentations embedded in disciplinary modules, a stand-alone module on oral presentation, or consultation sessions with communication experts. Whatever the format, make core presentation theory available to students and teaching staff, use comparable feedback criteria across modules, and develop a shared vocabulary for discussing presentation performance.

When assessing presentations, use a manageable set of criteria. Within an individual module, you should scaffold students' development. Across the curriculum, you should increase the complexity of presentation tasks. In introductory modules, address core components such as delivery, structure, visualisation, and Q&A. For more advanced modules, you might challenge your students to respond to a more demanding rhetorical situation, speak to mixed audiences, and manage more complex forms of presentation formats and more complex forms of interaction.

If you design a dedicated oral presentation module, include five building blocks. First, formulate learning objectives that match students' level and fit the programme's learning trajectory. Second, provide students with relevant theoretical foundations, preferably outside of class in a flipped-classroom format. Third, use contact time for practice: students should enact, test, and refine the theory through prepared assignments and shorter targeted exercises. Fourth, provide systematic feedback, combining instructor feedback with structured peer feedback. Fifth, guide students in reflecting critically on their performance and development, so that reflection supports future improvement rather than merely documenting what happened.

At programme level, safeguard the coherence of the presentation learning trajectory. Students usually present in several modules, often taught by different instructors. Designate coordinators who monitor whether assignments become progressively more challenging, whether assessment criteria remain broadly consistent, and whether instructors use compatible terminology. Make foundational presentation theory readily available to both staff and students, for example through a shared handbook or learning management system. In combination, curricular recurrence, coherent standards, accessible theory, practice, feedback, and reflection create the conditions for cumulative, scaffolded growth in oral presentation skills.

Finally, in addition to the literature referenced in this chapter, we also recommend *Classical rhetoric for the modern student* by Corbett and Connors (1999).

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AI statement

During the preparation of this work the authors did not make use of any AI tools.

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