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Bringing The Outside World In

Using Mixed Panel Assessment Of Oral Presentations With Electrical And Electronic Engineering Students

"Engineers must be prepared to speak to a wide range of non-technical audiences, for which they need a variety of translation skills." [2]

"Any person unable to explain a concept or subject in their field to a lay audience doesn't know the field well." [1]

"Oral presentations skills are one of the best "career enhancers" that a student can add to his/her collection of marketable qualities." [4]

"Today's engineers need to be not only technically strong but also creative and able to work well in teams, communicate effectively, and create products that are useful in the 'real world'." [7]

Oral presentations are an important skill for engineering students to master. As well as helping develop oral fluency, presentations provide an opportunity for students to explain their work in a clear and meaningful manner. A mixed panel of assessors was used – a group consisting of engineering lecturers, business lecturers and language experts - because when engineers enter the workplace, they will have to communicate with a wide variety of stakeholders. Students have to consider how to explain complex ideas in a way that technical and non-technical audience members can understand.

"Engineers who are adept at communications have a considerable advantage over those who are not." [5]

"For the individual interested in career advancement, the ability to give a formal presentation is essential." [2]

"Oral presentation skills are important because they enable students to demonstrate higher levels of cognitive thinking and development." [3]

"Although today's fast-paced, competitive workplace requires engineers to convey technical information quickly to diverse audiences, the overwhelming evidence shows that graduating engineers are inadequately equipped to meet this need." [6]

The Assignment Assessment

For the assessed presentation, students had to design and implement a circuit and were asked to create a possible application/product for the circuit. They were told that there would be a business person and other non-technical members in the audience and to expect questions related to the product. As well as encouraging them to consider the business application aspect of engineering, it also forced them to take a holistic view of their project as opposed to simply focusing on the component level, which had been a perceived problem. The presentations were assessed on:

Presentations Skills (20%)

- Structure and Linking Points
- Eye Contact and Body Language
- Visual Aids and Reference to Visual Aids
- Holding Audience Attention

Language Skills (15%)

- Language Use (Grammar & Vocabulary)
- Fluency, Pace, and Volume
- Pronunciation (Clarity, Stress and Intonation)

Content & Mastery of Subject (50%)

- Content (Research and Delivery)
- Referencing and Citations
- Questions and Closing

Business Contextualisation (15%)

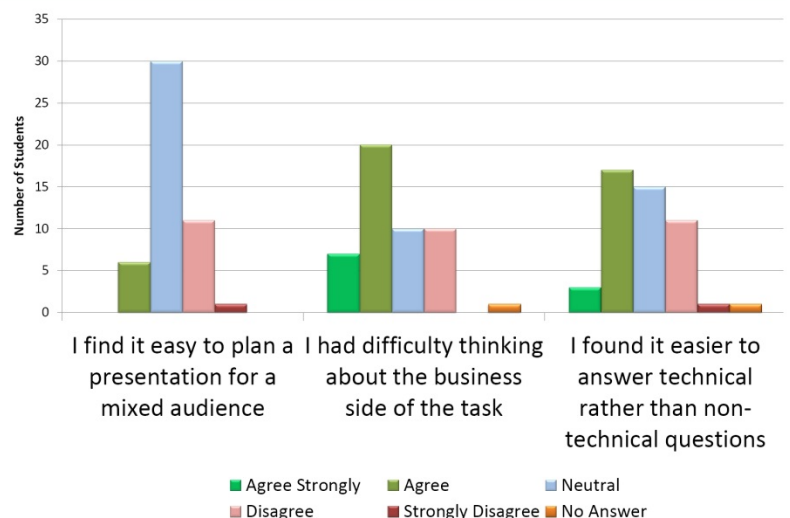
- Innovativeness
- Ease of Commercialization
- Technical Feasibility
- Economic Feasibility

Student Feedback

"It is a really hard task, to combine the business field with the technical field in a presentation."

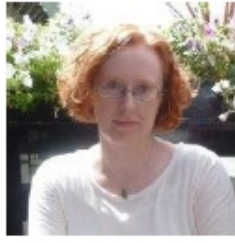
"The type of audience definitely serves as an impetus to shift the focus of the presentation."

"For those non-specialists, it is hard to determine to what extent they can understand."

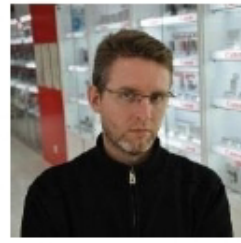




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