Globalization in Engineering Education: Advances in Teaching Presentation Skills
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Abstract: - With the advent of globalization, high quality presentation skills have become increasingly demanded in many fields: industry, business education, social and cultural life. Mastering them is a prerequisite of most activities in all walks of life. This article focuses on the topic of delivering discourses by students, explaining the teaching effort, its purpose, and enumerating possible speech structures. Special attention is paid to the speaker’s role and to the steps that must be taken for achieving an effective, elegant and enjoyable talk. Sharing experience and best teaching practice is necessary, so that future engineers might be able to present information with confidence, whether individually or as part of a team.

Key-Words: - discourse; speaker; structures; materials; presentation skills; student objectives; evaluation grid;

1 Introduction
For engineers in general, be they still students, or already professionals - embarking on the difficult and time consuming task of life-long learning - , acquiring and perfecting presentation skills have turned into a must imposed by our modern society and by the labour market development nowadays. The field of engineering is among the first to implement scientific progress, and the concept that governs all activities is effectiveness. Hence, a clear need emerges for documentation standardization, permanent skills training, and a tendency towards homogeneous approaches to similar tasks around the world.

Under such circumstances, the teachers’ aim can never be purely theoretical (acquiring information about presentations), but instead it has to be accompanied by the need that students should constantly practise public speaking according to specific and rigorous criteria, alongside with practising other skills as well, such as note-taking, reading for gist or detail, networking, sharing knowledge and instruments, etc.

Students’ mobility among universities all over the world, research exchanges, and the migration of professionals in search of better, more challenging jobs, require both foreign language fluency and a unified approach to communication tasks.

In order to achieve a good presentation, the educational effort should be directed toward the following key issues: the speech, the speaker, the materials (their design, relevancy and use), conference room management, rehearsal strategies, taking responsibility for imperfections, avoiding real obstacles emerging throughout the discourse, self reflection, and improvement by means of teamwork.

2 Problem Formulation

The diagram above suggests the wide variety of professional and day-to-day contexts that demand functional presentation skills, which leads us to defining the following objectives for our students:

1. To become able to conceive clear, elegant and effective presentations, so as to clearly communicate information or
instructions, and persuade an audience
2. To compare and interpret data according to standards and formal models
3. To minutely evaluate the group of listeners in order to address their interests and needs during the presentation
4. To resort to practical algorithms for organising information
5. To demonstrate awareness of the necessity to address the audience using formal language
6. To resort to relevant and meaningful materials
7. To practise and enhance note-taking skills
8. To stimulate creative and original approaches to given topics
9. To stimulate the interest in reading
10. To diminish the number of prejudices and increase the frequency of open-minded, constructive attitudes when dealing with cross-cultural and intercultural issues
11. To cultivate the respect for genuine values and responsible work
12. To stimulate cooperation and constructive criticism in providing feed-back after presentations
13. To encourage reflection on personal talent and future career
14. To transfer presentation skills to various other fields of activity

The professor should also encourage peer learning/correction/assessment, as he/she is both provider and facilitator in the process of developing presentation skills. The didactic strategies used will include: explanation, controlled practice drills, demonstration, guided observation conversation, and independent work.

Among the auxiliary materials used to convey the meaning of the talk, the following can be enumerated: OHP transparencies, video/audio recordings, pictures, posters, full size instruments/devices with their operating instructions, diagrams, flow charts, pie charts, check lists, books on display, bibliography and webbibliography to encourage further documentation and clarification.

2.1 The Speech

Students ought to be encouraged to write their own presentations, using a variety of up-to-date sources, but also their own perspective and words. Warnings against plagiarism must be accompanied with teaching proper citation procedures and. Not a thing, however small and insignificant, but built on theft, can ever last and bring satisfaction.

Furthermore, learners should always bear in mind that they are responsible for:
1. Content (correct and state of the art information, new perspectives, original, modern and effective approaches)
2. Bibliography (rigorous and helpful)
3. Clarity (in demonstrations and descriptions)
4. Consequent attitudes their audience will manifest

Especially during the first and second years of study, students are tempted to improvise and push their luck so as to compensate for lack in experience or preparation. The teacher’s role is to identify such problems and make the training speakers show respect for their audience.

On numerous occasions, especially when faced with mixed ability groups of young trainees, the professor realizes that the students lack basic skills in intellectual work, so the following steps required for achieving a clear presentation must be explained or revised:
1. Collect information connected with the topic (one box) ideas, articles from newspaper and magazines, pictures, quotations, anecdotes, objects, relevant statistics
2. Organise the material (several files, no more than seven, but preferably three or five)
3. Group the items of the collection according to themes
4. Select a key theme
5. Write the first draft
6. Eliminate redundant ideas

Here are some possible final structures that have proved to be effective in my didactic work:
1. objectives → presentation → accomplishment of objectives
2. introduction → story → conclusion (narration style)
3. situation → difficulties → solutions (problem solving)
4. focusing attention → importance of the topic → main message → presentation of details and mechanisms → examples → summary (description style)

Alternating activities is good advice, both for authors while elaborating their own presentations, and for talking to audiences who are actively trying
to manage the amount of data provided to them. In doing this, a too specialized or pompous language needs to be avoided. Instead, the speech ought to be clear and coherent, suitable for note-taking. The students are encouraged to alternate rigorous scientific presentations with captivating details, information and attitude.

2.2 The Speaker

For first year trainees, attention should be paid to replacing colloquial speech patterns, teenage attitudes and casual dress with their respective formal, more elegant, effective and practical correspondents, as part of a process of becoming more mature and acquiring a new status, defined by increased responsibility.

Self reflection tasks are monitored by the teacher, as the discourse authors and deliverers must constantly aim to know themselves better, be themselves and courageously use their talents. Reflecting upon previous performance and future intentions has as immediate consequence finding effective ways of improvement.

Personal life experience, opinions and attitudes can alter the message students convey to the public. Therefore, they should present things they know and they believe in, as nothing seems to be more powerful than the truth in direct oral communication.

After delivering the speech, the author ought to ask for feedback and not avoid team work. Good results stem from reading a lot, from getting constant moral support, and, mainly, from not imitating a certain model thoroughly.

Presentations should neither be recited or learnt by heart. On the contrary, they should be built together with the audience, in a common effort of negotiating meaning, clarifying concepts and sharing the same perspective on the topic at hand. The speaker is not a mere actor on duty, but a communicator attempting at speaking his mind about the subject he chose. In this case, the focus is on key words, images and logical demonstrations, which could be written on cards and kept at hand. The speaker could visualise a big comprehensive picture of what he is going to say.

Reading word by word is not a solution, either, as it distracts everybody and shows lack of confidence, competence maybe, and preparation, most certainly. Furthermore, it distorts the student’s personal style, whose discovery and cultivation the teacher must encourage. If there are small sections to be read (quotations, statistical data, etc.), a marker is used to highlight the most important parts

The voice needs to be used creatively, conveying a clear and loud speech, varying in intonation and volume, so as to emphasise ideas and create a pleasant atmosphere.

Non-verbal communication should convey the same message as the verbal one. Students have to make sure that there is harmony between them, the message and their image (clothes, hair style, keys or money ‘talking’ in pockets). A good idea is to smile and use some neutral jokes or some self irony, if appropriate, but such things ought to be avoided when the presentation is being translated in another language, since it might confuse the categories of public having a different cultural tradition, sense of humour, sensitivity or prejudices, and, of course, it delays the translation, probably impacting on its quality.

Redundancy and useless talk can be avoided if students are instructed on how to study their audience in advance, in point of number, social category, cultural background, expectations, needs, interests, probable questions they might raise, previous / next issues and speakers, or prejudices.

2.3 Materials

Relevancy is a condition sine qua non. They must be able to focus attention and to point to the purpose of the presentation. They must also be elegant in form, visible, audible and sufficient in number for everybody.

‘I see and I forget, I do and I remember’ is a saying that applies both to classroom activities and to students’ presentations. In order to increase efficiency, the speaker could provide check lists for guiding the audience’s observation of the materials displayed. One basic requirement is to allow enough time for each item to be perceived and understood.

The teacher’s main role is to point out that materials are just some auxiliaries and they should not be turned into protagonists: emphasis lies on communication. If unfortunate situations should occur (a power cut or an unexpected incident), the speaker has to be prepared with alternative solutions (paper handouts, printed visuals).

Mentioning the source of information and materials has twofold purpose: avoiding suspicion of plagiarism and indicating further study resources.

2.4 The conference room

A simple visit a day before and half an hour prior to the presentation proves very useful, indeed. The speaker might choose to rearrange the furniture
to better serve his communication intentions. Attending somebody else’s conference taking place in the same space could provide effective insight into making the most of the allotted space and time interval. The lights, the technical support and the acoustics need to be double checked. A little rehearsal on the spot, in order to get used to the scenery, is welcome.

2.5 Rehearsal

This term refers to the repetition of the key ideas and possible text in the speaker’s mind, and also in a loud voice, looking in the mirror, prior to the public presentation. It is a good way of identifying potential problems, practising and improving the speech. Students should try to get feedback and guidance after the rehearsal (but they ought to avoid being interrupted).

2.6 There are no excuses for unsuccessful presentations

Public speakers are given tremendous credibility and support when they take the floor. It is the fault of the speaker, not of the audience, when things go wrong.

Students hide behind excuses such as: ‘The audience was not interested’, ‘They criticized my opinions’, ‘The public wouldn’t listen to my speech, demanding diagrams, examples, samples or pictures’, ‘The supposed board of directions never liked me anyway’, ‘The time was too short’, ‘I wasn’t given the chance to prepare the presentation properly’, or the emotional ‘Nobody wanted to know the whole truth’. They might also argue that ‘There should have been a microphone, an overhead projector, a screen, a video …’, or ‘What can one expect from a presentation which is scheduled right after lunch?’. It is, again, the professor’s role to help them become aware of their errors in judgment and instruct them to:

⇒ express a positive attitude and turn negative circumstances into advantages
⇒ focus on the quality of your work
⇒ show a high sense of responsibility (it is the speaker’s fault if people do not pay attention)

Nevertheless, there are real obstacles in delivering presentations, such as: too many notes or visual aids, understatements, inadequate body language, meaningless talk.

3 Problem Solution

In accordance with the Common European Framework self assessment grid, the students we work with during the first year of study in university should meet the requirements of levels B2-C1, as a result of their high school learning accompanied by the Baccalaureate exam. Unfortunately, this is not always the case, as, for various reasons, the professors are faced with many mixed ability student groups, not only teaching the current issues in the university curriculum, but also trying to make up for the knowledge the trainees missed previously.

The above mentioned levels stipulate that:

1. Reading: B2 – reading articles and reports on contemporary problems understanding the authors’ attitudes and viewpoints. C1 – understanding long and complex factual and literary texts, appreciating distinctions of style, and working with specialized writing and longer technical instructions.

2. Writing: B2 – formulate clear detailed texts on many topics, (essays, reports, and letters) passing on information, defining pros and cons on a particular point of view, highlighting the significance of events and experiences. C1 – expressing personal lengthy viewpoints in clear, well structured texts, letters, essays or reports, emphasizing the meaningful issues, and selecting a style appropriate to the intended readership.

3. Listening: B2 – following extended speech and complex but clear lines of argument on familiar topics, TV news and films. C1 – understanding extended speech, even unstructured, with relationships only implied and not signaled explicitly, TV and films, without effort.

4. Speaking: B2 – actively interacting with others in familiar contexts, showing certain fluency and spontaneity; presenting clear, detailed descriptions, advantages and disadvantages of various options. C1 – fluent and spontaneous expression, without obviously searching for words; flexible and effective use of language for social and professional purposes, formulating ideas and opinions in relation to what the interlocutors mentioned; presenting complex subjects, integrating sub-themes, developing points and drawing conclusions.

Over the last six years, analysing student presentations from the Faculty of Power Engineering in the Polytechnic University of Bucharest, according to a check list derived from The Common European Framework and The Linguistic Passport, I have derived the following
evaluation grid, which has proved to help speakers monitor and increase their progress:

Preparation
1. skimming and scanning source texts
2. summarising skills
3. prioritizing ideas and logical flow design
4. anticipating and meeting audience’s needs
5. adequate degree of complexity and relevance in the content and its message
6. integration of effectively designed visuals

Discourse delivery
1. fluent, clear and accurate speech
2. wide range of grammar and vocabulary, in complex sentences, with diverse functions
3. debating relevant and appropriate issues
4. development of a logical and plausible argument
5. supporting reasons and examples without over-generalizations
6. adequate use of discourse text markers
7. effective time management of the allotted slot
8. adjustment to the audience and their requirements
9. voice management: volume, intonation, rhythm, variety, stress, pause
10. eye contact, body language and posture
11. concluding by reporting the main ideas and modeling future attitudes

Handling questions and answers, interruptions, comments, sharing experience
1. constant focus of attention / expanding attention span
2. use of further questions for clarification
3. managing relationships between questions
4. planning the answer
5. rephrasing

What I had in mind was to achieve target C2 in the Common European Framework, which contains the following requirements:

1. Reading: easily comprehending all forms of written language, complex in structure or expression, such as manuals, abstract texts, specialized articles, and literary works.

2. Writing: create clear and fluent text, in adequate style (complex letters, reports and articles), presenting a case with an effective logical structure; write summaries and reviews of professional or literary work.

3. Listening: no difficulty in understanding any kind of spoken language, live or broadcast, at normal native speed, being familiar with the accent.

4. Speaking: effortless participation in conversation, fluent expression, conveying fine shades of meaning precisely; restructuring the discourse around any personal difficulty, so that the interlocutors might hardly notice it; presenting clear and fluent descriptions and arguments, in a style appropriate to the context; logical structure which helps the recipient remember significant points.

4 Conclusion
The stages in elaborating a valuable presentation by the students, taking into account the social and cultural context in which it is being delivered, could be defined as follows:

1. Purpose: to provide instructions, to describe tools, processes, situations or products, to explain or interpret the data in a report, to raise awareness about important issues, to convince audiences / clients / potential buyers, to influence decisions (company policy, purchases, implementation of modern / efficient solutions), to facilitate team work, to maintain or enhance the level of interest on a specific issue.

2. Preparation: study the audience, prepare the presentation, organise the technical support, check the conference room, rehearse.

3. Personal expression: involvement, dynamism, personal attitude and point of view, capacity of relating to the others and of opening new communication channels.

References: