

# Teaching Oral Communication at MIT: The Previous Project Module

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**Abstract**—In this paper, we describe one of the modules that is currently being used in 6.UAT, an oral communications course offered by the Department of Electrical Engineering and Computer Science (EECS) at MIT. This module consists of an oral presentation assignment, coupled with a written assignment and various recitation activities that introduce students to certain ideas such as feedback, verbal punctuation and storyboarding. We describe the module and its component pieces, and then discuss various aspects of the module as a whole. We hope that fellow practitioners will adopt and adapt the module for use in their home institution, and suggest modifications and improvements.

**Index Terms**— communication skills, oral communication, oral presentations, professional skills, soft skills

## I. INTRODUCTION

To fulfill the MIT Communication Requirement, undergraduates must take four communication intensive courses: two from the Humanities and two from the student's major discipline. However, for students majoring in Electrical Engineering and Computer Science (EECS), one of the latter two courses must be a course called 6.UAT.

6.UAT teaches oral presentation skills and other professional skills that students will need in order to be more effective in the workplace, and one of the goals of the course is for each student to improve in some aspect of their presentation ability[1]. The course is offered every semester, and consists of a series of about 15 lectures and about 17 recitations that take place over a 14-week period. Lectures are held in a large lecture hall, and depending on the semester, there are 70-250 students in attendance. These students also meet separately in smaller groups called "recitations" that are limited to 8-9 individuals. Each recitation is led by a recitation instructor (an EECS Faculty member) and a teaching assistant (an EECS graduate student). While the lecture format is suitable for disseminating information and demonstrating material, the recitation is an intimate, interactive and supportive setting that is more conducive to small-group activities. These include in-class exercises that complement and reinforce lecture material, and oral presentations that the students give as part of the course assignments. These presentations range in duration, content and intended audience. (A more detailed overview of the course is given in [1].)

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When we first designed 6.UAT in the Fall of 2003, we knew what the goals were, but we didn't know exactly how to get there, so we experimented with different topics and tried various exercises and assignments. In the beginning, the course was nothing more than a collection of loosely-related independent lectures, recitation activities and assignments. The things that worked were kept and improved, and those that didn't, were overhauled or removed. Over the years, parts of the course have coalesced into three modules, which provide students with a more organized and integrated experience. Each module is centered around one oral presentation, and can include other assignments, related recitation sessions and lecture topics.

In this paper, we focus on the Previous Project Module. We describe the module at a high level, and then we introduce the Previous Project Talk (for which it is named). We then look at the other parts of this module, and lastly comment on the module in its entirety.

## II. THE PREVIOUS PROJECT MODULE

The Previous Project Module is the first of three modules in 6.UAT. By the end of this month-long module, both the staff and the students should have a sense of the students' presentation ability, and the students will have been introduced to a few ideas related to oral presentations that we hope and expect them to apply when they communicate.

To understand the Previous Project Module, we first describe the assignment around which it is built, before describing all of the other parts of the module.

## III. THE PREVIOUS PROJECT TALK

The Previous Project Talk, the centerpiece of the module, is the first assignment in the course. It is an early presentation, occurring during Week 2 of the term, that is done in a highly regimented format to assess each student's baseline ability. Specifically, the details of the talk are as follows:

**Topic** A technical project the student has worked on, e.g. for a class, an internship, an MIT research opportunity, etc.

**Audience** Upperclassmen/peers in EECS.

**Duration** 4 to 5 minutes.

**Visuals** Four slides: a title slide, a context slide, a background slide and a contribution slide.

(Note: If you are interested in a softcopy of the assignments used in this module, please contact the author by email.)

There are really four things a student should take away from this assignment. First, they should understand that a good technical speaker does not immediately jump into the technical details of the talk, but must first supply context and enough background information to help the audience follow the technical piece and appreciate its significance.

Second, students need to be aware of the passage of time and the need to pace oneself. They are required to talk for at least four minutes – if they get nervous and rush through their talk, ending before the four-minute mark is reached, they must continue talking, improvising if they have to. Similarly, they are not allowed to go past five minutes, and are penalized if they do not conclude soon after the allowed time limit is reached.

Third is the notion of an inflection point – this idea was first introduced in 6.UAT by Dr Dedric Carter and it is the point in a talk when an audience member goes from a state of attentiveness to a state of distraction, i.e. when someone gets lost or starts to “phase out”. The reverse is also an inflection point – when an audience member who isn’t paying attention suddenly starts to do so once again. A good technical speaker can both anticipate when these might occur (during the design of the talk) and notice when this has occurred (during the giving of the talk), so that s/he can modify the content and delivery of the talk, either beforehand during preparation or in real-time during execution.

The last take away is largely a pragmatic one – and that is the idea of anticipating problems and minimizing uncertainty. Recitations in which students give talks have to run smoothly, but they involve a fair amount of coordination -- projection and video-recording equipment needs to be setup, laptops need to be ready, slides need to be available for download, everyone needs to arrive on-time, speakers need to stay on schedule, staff need to keep everything moving, etc. If any one of these is out of place, then delays can be introduced. Since there are a number of recitation days involving students giving presentations throughout the semester, it is important for students to know what has to happen so that they can do their part, and can lend a hand if need be.

We end this section by describing the logistics of running the Previous Project Talk recitations.

Because each recitation session is 50 minutes long, and the typical recitation has 8 students, two recitation days are set aside for this assignment allowing half of the students to present on each day. Those who are not presenting on a given day serve as audience members for their classmates. Students submit their slides by the morning of their presentation day, and for this talk only, the TAs are

responsible for downloading the slides and having them ready to project during recitation.

While a student presents, the audience is asked to note: (1) 5 points that they took away from the talk, (2) one thing the presenter did well, (3) one area the presenter could improve in, and (4) an inflection point, if any. These observations are not anonymous, and are later given to the presenter. The recitation instructor and teaching assistant make their own comments as well. Lastly, the teaching assistant video-tapes each presentation, and keeps track of time, giving each presenter a two-minute left and one -minute left warning.

At the conclusion of the talk, the presenter is asked how they thought the talk went, and how nervous they were. Each audience member then shares an observation they made. Finally, the teaching assistant and recitation instructor make any additional remarks before the next student presents.

At the end of the day, the teaching assistant uploads the presentation video-clips onto the course website so that students can access them for the Video Self-Assessment Assignment (described later).

#### IV. RELATED ACTIVITIES

Aside from the Previous Project Talk, there are a number of other activities in the module – namely, one other assignment and several other recitation sessions. We describe each individually, and then discuss how they fit together.

##### A. *Related Assignment: Video Self-Assessment*

There is a companion written assignment in this module – a self-assessment that makes use of the aforementioned video-clip. Most students have never watched a video of themselves present, so for many of them, this is a new, and often uncomfortable, experience. The students watch their own video-clip three times: once as is, once without audio, and once without video. These viewings enable the student to focus on overall impressions, non-verbal cues and verbal cues respectively. In their self-assessment, students answer the following questions:

- What were your initial reactions when watching your video?
- What did you learn from the various reviews of your video?
- What are some things (good or bad) that you do that you were previously unaware of?
- Comment on the content and your delivery - how could they have been improved?
- Explain anything you were hoping/trying to accomplish. What worked? What didn't work?
- What is one goal you can work on for your next talk?

##### B. *Related Recitations*

There are also four recitation topics in this module: Feedback, Verbal Punctuation, Storyboarding, and

Coaching. None of these recitation sessions are videotaped nor graded so that students can experiment freely. We briefly describe each of these topics below.

### 1) Feedback

Since feedback is a large part of the course, the Feedback recitation covers how to give and receive feedback, and the students practice by critiquing the first 6.UAT lecture. Additionally, one or two video-clips of sample Previous Project Talks are shown and critiqued during the recitation hour; this gives students an idea of what will happen when they give their talks, and what we are looking for when we evaluate their talks. This recitation usually precedes the Previous Project Talk recitations.

### 2) Verbal Punctuation

If you were to take the transcript of a good well-organized easy-to-follow technical talk and remove all text directly related to the technical material, the majority of what is left is what we refer to as "verbal punctuation", "signage" or "sign-posting". These are phrases that guide the audience so that they know where they are in the talk and to expect. Such phrases include: "I want to talk about three issues...", "Now that we've looked at how, let's shift our attention to why...", and "In conclusion...". Often students under-value the importance of verbal punctuation to the audience, so in the Verbal Punctuation Recitation, students give a short 2 minute speech (after 10 minutes of preparation) in which they must use signage. (We observed Kristen Curran-Faller, a Senior Coach/Trainer at The Speech Improvement Company, Inc., use this speech exercise, and she has granted permission for its use in 6.UAT.)

### 3) Storyboarding

We wanted students to consider different storyboards(i.e. orderings of ideas/sections) of their talks because the first storyboard they think of may not be the most effective one. We also wanted to emphasize the importance of the verbal commentary, which often serves as the glue, tying together ideas so that the story that a presenter is telling can transition seamlessly from one slide to the next. To practice, students regive their Previous Project Talk, but with the slides in a different order (determined by the teaching assistants). During this reprise, students assume that we have not seen the original talk, and that they are telling a new story. This new story still needs to be a coherent one, and they are given leeway in terms of how they decide to use their slides to support this new story (e.g. they may refer to only a portion of the slide, they may use a slide differently, etc). Again, the point of this exercise is not that any and all random shufflings make sense, but that several plausible storyboards are possible, that some are better than others, and that what you say matters in terms of weaving a new coherent message.

### 4) Coaching

The Coaching Recitation gives students an opportunity to try to improve some aspect of their presentation ability. Prior to the recitation, the recitation instructor and teaching assistant identify possible areas of improvement for each

student based upon what the student has done thus far, including, for example, their performance on the Previous Project Talk and its reordering (during the Storyboarding Recitation) and the student's own remarks and suggestions from their Video Self-Assessment assignment submission. They then decide on exercises that address these areas, and come to recitation prepared with at least one exercise for each student to try individually during the hour. This recitation is run like a "master class" in that the staff "listens to and critiques the performance of individual students, one at a time, while the other students look on"[2].

Having described the various pieces, now we can look at and discuss the module in its entirety.

## V. PUTTING IT ALL TOGETHER

The Previous Project Talk Module currently consists of the two assignments and four recitation sessions that we have already described. Fig. 1 shows how the various activities were combined for the Spring 2009 term. In terms of scheduling, the nature of the various activities already impose a natural ordering – i.e. ideally, a lecture precedes the Feedback Recitation, which precedes the actual Previous Project Talks, which precedes the Video Self-Assessment and Storyboarding Recitations, which in turn precede the Coaching Recitation. The Coaching Recitation is best last as there is more student material to draw from when determining possible areas of improvement. Lastly, the Signage Recitation, which can occur anywhere, was placed before the Coaching Recitation to give the teaching assistants time to process and grade the Video Self-Assessments.

	Mon	Tue	Wed	Thu
Sun <sup>1</sup>	2	3	4	5
	RegistrationDay	R1 Introductions	L1 Beginnings	R2 Feedback
8	9	10	11	12
	L2 Audiences	R3 PrevProjectTalk		R4 PrevProjectTalk
15	16	17	18	19
	Holiday - No Class	L3 Visuals	L4 Explaining	R5 Storyboarding VideoAssessment
22	23	24	25	26
	L5 Delivery	R6 Signage		R7 Coaching

Fig. 1 This is an example of how the various activities in the Previous Project Module might be arranged into a syllabus. This is taken from the Spring 2009 6.UAT course calendar.

Note that students also attend lectures throughout the module. The first six lectures are part of a series that looks at different aspects of oral presentations. One of these

topics, Delivery, is especially relevant to this module. In this lecture, students learn about various non-verbal and verbal cues, and these can then be emphasized and reinforced during the Coaching Recitation.

We've found that the Previous Project Talk works well – it is a straightforward assignment and not technically difficult. Since students choose a project that they are familiar with, the difficulty is not in understanding the content, but in figuring out how to present it, what to cover and in how much detail given the constraints on audience, time and storyboard.

The Previous Project Talk has an immediate application as well. During the interview process (either for a job, internship or thesis search), one commonly-asked question is: "Tell me about [this project that you have listed here on your resume]". Dr Dedric Carter, a Lecturer at MIT and veteran recitation instructor for 6.UAT, pointed out that when a student answers this question, they should be, in essence, giving a Previous Project Talk. Furthermore, it can be a shorter condensed version, even something amounting to just a single sentence per slide.

Giving non-anonymous feedback is an uncomfortable thing to do, but we thought that it would be a good exercise for students to give non-anonymous written feedback for several reasons: (1) it is important to be able to do so in their professional careers, (2) they will be giving non-anonymous verbal feedback to their peers after their peers present throughout the term, (3) they tend to pay attention more, and lastly, (4) they have to give to get -- at the start of the course, students take a survey on their expectations of the course, and several students note that they really want direct and honest feedback; if that's the case, they should also learn to give each other direct and honest feedback.

Students come in to 6.UAT with a wide range of presentation experience, but there are often still areas in which a student can improve. Some commonly observed areas for improvement in their Previous Project Talks include: little or no eye contact, staring at the slides, hard-to-read slides, little or no gesturing, repetitive gesturing, side-to-side shifting of the body, too much jargon, too much detail, use of filler words, a monotone unexciting voice, and little or no conclusion.

One thing to note from the calendar is that this course requires a substantial amount of face time on the part of the teaching staff. From a student's perspective, there are only 3 contact hours per week (1 lecture and 2 recitations, or 2 lectures and 1 recitation); but this is not the case for staff because each staff member is assigned to more than one recitation group. The usual recitation instructor load is four recitations, while the teaching assistant load is four or five. (We often have unequal numbers of Faculty and graduate students involved.) This means that a recitation instructor may have anywhere from six to ten hours of direct contact time per week depending on the week, and each recitation instructor gets to work with at least two teaching assistants

(and vice versa). The high Faculty to student ratio, and the fact that Faculty are assigned to teach recitations requires a fair amount of commitment and dedication on the part of the Department.

In terms of grades, the Previous Project Talk and the Video Self-Assessment are the only graded components of this module. All student talks are evaluated and graded on a scale of 0-4 (where a 2.0 is a C, 3.0 is a B, a 3.5 is borderline A-B, etc) by their recitation instructor and their teaching assistant who then combine their grades (usually an average) to arrive at a single grade that the student receives. The recitation instructor and teaching assistant are encouraged to consult each other when their individual grades for the same talk differ by more than 0.4. Grading is subjective in nature, but as touched upon in [1], we try to promote consistency by doing three things: (1) guidelines and grading rubrics are distributed with each assignment, (2) we watch and discuss the grading of one or two sample video-clips as a group during staff meeting, and (3) the teaching assistants are shared amongst the recitation instructors. The Lecturer in-charge monitors the averages of grades awarded by each staff member and may intervene in certain cases, but usually no further normalization is done.

The Video Self-Assessment is graded entirely by the teaching assistants, who check that the essay is well-written, that the student made insightful observations, and that the student addressed all questions posed in the assignment. This assignment allows students to view their own performances, and often, they discover things that they never realized they did (e.g. the frequency of um's). All student talks are videotaped and available for them to download, enabling them to continue to analyze their efforts throughout the semester.

Of the various activities in this module, students tend to have the most difficulty with the Storyboarding recitation. The main application here is the ability to transition from one idea to another – e.g. you give a talk, get side-tracked by a question, and need to seamlessly transition back to the original storyboard. With four slides, there are only 24 possible reorderings. The teaching assistants try to make sure that the reordering that they've chosen is doable; though they may purposely settle on an unnatural ordering (e.g. title slide is next to last) to challenge a student who did well in the original talk. Sometimes difficulty with the new storyboard can indicate that the slide was poorly designed (the message is unclear, its content is not self-contained, or it simply has the wrong content). Sometimes the audience and presenter will prefer the reordered version to the original.

The teaching staff, on the other hand, has the most difficulty with the Coaching Recitation, mainly because they all have engineering backgrounds, and do not have speech or acting training. They are provided with a list of some common delivery problem areas (including the ones mentioned above) along with some exercises to try. Sometimes they devise and design their own. Cooper Union's CONNECT has a video of a sample session from

their program, and we've obtained permission from Dr John Osburn and Professor Richard Stock to use this DVD as a training video so that the staff can see what a master class is like and how it is run.

## VI. CONCLUSION

In this paper, we described the Previous Project Talk Module and its components, and commented on various aspects of the module – the logistics, execution and challenges. The Previous Project Module works well as the first module in 6.UAT. Not only do we have a sense of how well a student presents, but students are also introduced to some basic presentation ideas (verbal punctuation, inflection points and storyboarding) as well as some professional skills (feedback and minimizing uncertainty) that will hopefully be useful in their professional careers. This module sets the stage for the next two modules in 6.UAT – one on explaining technical ideas to non-technical audiences, and the other on being persuasive.

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## REFERENCES

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