

Teaching and Assessing Multimedia-Based Oral Presentations

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AT NANYANG Technological University in Singapore, we expect our students to be trained specifically in professional presentation skills. The multimedia presentations prepared by these students generally suffer from some of the following problems:

1. An overuse of the available effects, colours, and sounds
2. Lack of coordination between the chosen effect and the intended meaning
3. Inability to alter the style to suit the nature of the message and composition of the audience

We devote a complete module (8 hours) for teaching presentations to our students, who come mainly from the School of Computer Engineering. To focus our discussion we selected two aspects—colour and animation—from among the many we might address. The short course included a lecture, two assignments, and three assessment sessions. I designed the lecture to enhance students' awareness of the changing nature of presentation media and to provide direction for students to seek answers to their particular problems. The assignments provided hands-on experience with the media and an opportunity to develop a professional critique of the media-based presentations. The assessment comprised a substantial part of the course and was used as a teaching method.

Editor's note: Please visit our Website (www.bcq.theabc.org) for an extensive look at the author's presentation mentioned in this article.

Tasks and Assignments

Before starting the actual assignments, students did two preliminary tasks (see Appendix A). The first task gave them an opportunity to think about the appropriateness of media according to the purpose and the audience. The second task was meant to initiate discussion on the visual form of a message. After doing the preliminary tasks, the students began the major assignments.

The first assignment asked the students to develop a self-running presentation in PowerPoint or similar software on a professional topic of their choice. They were then asked to write a brief description of the challenges faced while developing the presentation and to describe these challenges to the class.

Students noted various challenges and agreed that the overuse of effects was a general problem. Some students felt it was very difficult to decide how much was “enough” when it came to using font and colour variations and animation effects. At this point, I mentioned that even researchers did not agree among themselves on the topic of thresholds of effectiveness (Keyes, 1993).

Researchers have explored questions such as

- How many colours can be used to achieve the right effect and avoid distraction?
- What is the maximum number of font variations a reader can effectively process?
- What limits mark visual overload?

The answers are far from being consistent or concrete. More important, considering the guidelines regarding font, colour, and animation in isolation can be confusing and frustrating. It must be remembered that all of them *together* produce an integrated effect. We then agreed to look at some of these guidelines with this understanding. I provided them general guidelines put forward by Keyes (1993) and Jones (1997), a summary of which is provided in Table 1.

In the second assignment the students downloaded a presentation from the Web (www.ntu.edu.sg/home/asalpathak/listening/index.htm). Working in groups of four, they tried to improve the

Table 1
Guidelines on Using Colour

1. Use colour to
 - Emphasize key points
 - Highlight important information
 - Group similar items
 - Create a mood
 - Provide continuity
 - Increase reading speed and learning
 2. Factors that produce the effect
 - Visibility: Coloured type is more visible than uncoloured (black) type. However, for effective differentiation the type must be coloured *and* bold.
 - Legibility: Legibility suffers if the coloured type is not dark in value. Highly saturated colour combinations (with colours such as magenta, cyan, high-value green, and violet) are less legible than combinations of dark red, green, blue, and violet.
 - Differentiation: Colour is frequently used to highlight type. Colour value and area affect the degree of contrast between coloured and black type.
 3. Tips and Techniques
 - Use colour as an additional means for relaying a piece of information. (e.g. The word 'Warning' in red).
 - Avoid using colours in ways that could create problems such as requiring the reader to make a critical distinction between reds or greens.
-

presentation style to make it more effective. Emphasis was placed on noting the techniques used to improve the effectiveness of the presentation. These techniques were later discussed as a way to create a pool of practical tips. We focused on the peculiar nature of Web-based presentations.

I encouraged the students to discover by themselves various aspects of presentation media while working on the presentation. No specifications were provided initially, but the learning was consolidated at the end of the exploration. This approach to teaching seems more workable since we are still far away from creating a solid body of knowledge in this area and since this situation continues to increase in complexity due to the power of the available presentation software. Since the students were quite comfortable

with exploring software, they were encouraged to do so and were asked to apply various features meaningfully to the presentation situation. We tried to consolidate this learning in the debriefing session. I advised the students to concentrate on the functions that visuals perform and provided them a summary of various attempts to catalogue these functions. The categorisation is based on Williams (1993) and considers the following functions:

- **Attention:** Visuals can, in general, attract and direct attention.
- **Representation:** Some visuals convey directly what some object in the real world looks like.
- **Organisation:** Visuals may provide an organisational framework or context for information provided textually.
- **Interpretation:** Some visuals are intended to clarify hard-to-understand text.
- **Retention:** Visuals influence the memorability of information.
- **Compensation:** Visuals compensate for poor reading skills.

Assessment Task

I used the system of peer evaluation because it allows for multiplicity, plurality, and independent choice. Such evaluation also keeps students engaged in a learning experience. Feedback is usually given in the terms that the presenter is in a position to appreciate and more closely parallels the student's own level of development. Peer evaluation also seems to be valuable in terms of its backwash effect. However, since it was used as a formal assessment strategy, ensuring validity and reliability of this instrument was important.

Ensuring Validity

Even though the teaching-tutoring was done specifically in the area of presentation media, the assessment did not narrowly focus on just the media. It more realistically encompassed oral presentation skills in general. Students were, however, encouraged to use the presentation software, and marks were specifically allocated

for the use of this media. Secondly, I conducted a content analysis of the presentation task and prepared a list of impact factors. This was later used to prepare the assessment checklist. Finally, the choice of topics was narrowed down to professional areas.

Ensuring Reliability

A rather elaborate 40-point scale was used to mark the overall presentation (see Appendix B). Impact factors were broken down into sub-factors, and assessors were extensively briefed. An important part of the assessment was appointment and briefing of student assessors. I asked them to form panels of four or five assessors, and I specifically briefed them on the following four aspects:

1. **Focus of analysis:** I advised them to avoid an overt emphasis on the correctness of language, while at the same time to look specifically for the relationship between the meaning intended and the effect produced.
2. **Use of terminology:** We discussed the terms used in the checklists and reached a consensus regarding their meaning.
3. **Comments and feedback:** I advised the students to write their comments on the feedback sheet so that the whole exercise should be more of an instructional activity.
4. **Consistency:** I advised them to check their notes frequently and achieve inter-rater consistency.

Final Comments

I concluded the course with a discussion about the differences between texts and visuals. Williams's 1993 article, *What's So Different About Visuals*, provided a framework for this discussion. The article states five aspects in which visual images and text differ from one another. They are

1. The extent to which they resemble the referents
2. The kinds of concepts they evoke
3. The precision with which they evoke them
4. The kinds of structures they impose on the information they convey

5. The degree to which that information can be interpreted by perceptual, as opposed to higher level cognitive, processes.

I asked students to view the text as well as the visuals they used in their presentations against these aspects. Students emerged from the discussion with strong individual realizations about text and visuals. The activities thus attained at least one of the set objectives.

References

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Appendix A

Detailed Tasks and Assignments

Assignment Objectives

At the end of this assignment you should be able to:

1. Choose appropriate media for your professional presentation
2. Prepare *self-running* and *interactive* computer-aided presentations
3. Explain your choice of media and techniques to colleagues

Preliminary Task 1

Make groups of four. Discuss which visual aid you will choose in each of the following situations. Give reasons for your choice.

- You are making a group presentation on the effects of the economic downturn. Your audience is NTU students.
- As a part of your research project, you are making a presentation for the residents of a small town in Indonesia.
- You wish to demonstrate how hand movements and eyeball movements while using a computer bring in fatigue and stress.
- You wish to present a summary of your final year project. The presentation will be in the laboratory for a small group of professionals.
- You are going to tell a group of factory workers about a new training programme.

Preliminary Task 2

Prepare a transparency visual using the content in the following frame. Imagine that the presentation is meant for prospective customers of a travel agency.

***We won't treat you like sheep on our
New Zealand packages!***

Ultimate flexibility
Unbeatable value

Take-it easy holidays

Price includes airfare, airport transfers, room and board
S\$ 1429 for 6 days and 5 nights

Land Modules

3 days and 2 nights	Bay of Islands	S\$666
	Accommodation	
	Per Person	S\$81
Car Rental (per day)		S\$81

Coach Holidays

Price includes accommodation and sight seeing		
6 days	Scenic Sights	S\$2722
15 days	wanderer	S\$2769

***Q and M Holidays—Package Holidays for People
Who Hate Being Packaged*****Assignment 1**

In a group of four, develop a self-running presentation in PowerPoint on any topic of your choice. The presentation must be appropriate to the audience you have in mind. Write a brief description of the challenges you faced while developing the presentation and appoint a spokesperson for the group who will describe these challenges to the class.

Assignment 2

Download a presentation using the following link. Working in groups of four, write a critique of the presentation style. Note down the techniques that you would use to improve the effectiveness of the presentation. Appoint a spokesperson for the group who will describe these techniques to the class.

www.ntu.edu.sg/home/asalpathak/listening/index.htm

Appendix B

The Assessment Tool

Subject Matter	Prescribed Range*	Delivery	Prescribed Range
<i>Exposition (10)</i>	3-7	<i>Gestures (10)</i>	3-7
Attention getting			
Establishing credibility			
Preview of presentation			
<i>Relevance (5)</i>	2-4	<i>Eye contact (10)</i>	3-7
Choice of topic		Establishing rapport	
Choice of points		Covering the entire audience	
Choice of matter			
Choice of examples			
<i>Credibility (5)</i>	2-4	<i>Voice and pronunciation (5)</i>	2-4
Evidence		Use of voice energy	
Support/Substantiation		Proper volume	
		Tone variations	
<i>Logical order (10)</i>	3-7	<i>Language (5)</i>	2-4
		Accuracy	
		Appropriate	
<i>Smooth progression (10)</i>	3-7	<i>Presentation media (15)</i>	5-11
Links		Choice/suitability	
Unity		Effective use	
<i>Summary/conclusion (10)</i>	3-7	<i>Appearance (5)</i>	2-4
Review			
Ending			

*Note: *Prescribed Range*: Assessors can only award marks within the range given in this column. This means that the best presentation could only get 73 marks, and the weakest presentation will still get 33 marks. The tool draws on the advantages of using the familiar 100-point scale, but narrows it down to 40 points (33-73) to avoid significant marking differences among raters.

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