



## How to Design Effective Multimedia Presentations

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### Abstract

Multimedia has now become the norm wherever presentation of content is to be made such as in lectures, conferences and corporate Continuing Education (CE) sessions. Currently, most universities and schools are equipped with technologies to teach using multimedia. To facilitate creation of multimedia presentations, computer application developers have produced tools with several powerful and user-friendly features. However, encouraging and training teachers to effectively use these tools is an important challenge facing educators. Evidence from several research studies indicates that teachers are not sufficiently using technology devices and computer applications in their teaching. It seems that mere accessibility of technologies and simplification of tools for user-friendly operation are not enough to guarantee creation of effective multimedia presentations. Indeed, a cursory review of existing presentation contents shows that most lecturers and presenters make their presentation with nothing more than words. Even among those presenters who are well experienced, most seem to be using different techniques in their presentations only to make it interesting and not necessarily effective. Since multimedia presentations have been widely accepted as a useful learning tool, it is important to investigate the factors that influence effectiveness of multimedia presentations. Accordingly, this paper attempts to explain some important characteristics of successful multimedia presentations and also provide a practical guidance for presenters in general and teachers in particular to design and create simple but effective presentations to enhance teaching and learning.

Keywords: Effective, Presentation, Teaching with technology, Effective Multimedia

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## **Introduction**

Wherever there is a need to communicate information in an impactful manner, be it to students in a classroom, co-workers in a meeting, or prospective clients for marketing, the most preferred medium is a multimedia presentation. This is because a richer communication is possible by simultaneously engaging both the auditory and visual faculties of the audience. It not only results in increased attention levels and meaningful absorption of the information presented, but also in better retention of the information by the audience.

For instance, in a classroom, a well made multimedia presentation can help students to learn abstract and difficult concepts more easily. Further, such presentations also increase interest levels of the students and encourage them to learn. Some teachers utilize multimedia presentations as a learning tool to increase interaction of students with content to be learnt. These interactions may include clicking on an icon to play a speech, rolling the mouse pointer over a picture to see it in detail, or clicking on a hyperlink that connects to further relevant material or content of greater depth. Further, in the area of distance learning, online learning, blended learning and e-learning, multimedia presentations have an important role to facilitate communication between students and teachers.

Besides, the use of multimedia presentations has become usual in modern companies for conducting Continuing Education (CE) sessions and delivering information in internal and external meetings. For example, an attractive multimedia presentation enables a team leader to share information with team members in such a way so as to motivate them. Also, some large companies, which have many branches located in distant offices, utilize online presentations for their clients and employees. Using such presentations helps them to share their information effectively and train their employee regardless of distance between them.

Moreover, multimedia presentations are widely used and much required by speakers in seminars and conferences who need to exhibit complex ideas and information such as statistical data to huge audiences in an effective way. It helps the presenters to supplement their talk and discussion by displaying relevant supporting information. Further, today presenters are looking to reach a global audience through web conferences in real-time where multimedia presentations allow information to be delivered in a rich form resulting in improved experience for the audience.

## **Challenges in Using Multimedia Presentation**

Recognizing the importance of multimedia presentations, many presentation tools such as PowerPoint<sup>TM</sup> have been developed to facilitate creation of interesting presentations. These programs enable presenters to present their ideas in the form of slides utilizing text, sound, pictures and video. However, in the field of education, many studies have acknowledged that such technology tools are not utilized to their full potential (Hocutt, Wright, Hartman, & Ray, 2004; McKinney, 2007; Sic, 2008). Particularly, one study has highlighted the failure of effectively using a presentation tool in teaching. Adib (2010), after interviewing with 12 students in the nursing field, found the inadequate use of a presentation tool not only did not enhance teaching and learning but also made students bored and distracted. He explains the lack of interaction between students and lecturers as the reason for the failure of effectively using this

tool in the class. Similarly, Bartsch and Cobern (2003) from their study concluded that a presentation can have a negative impact on students' learning when the presenter uses technical features/effects that are not suitable to the presentation.

Overall, research indicates that students prefer presentations over traditional lectures (Cassady, 1998; Perry & Perry, 1998; Susskind & Gurien, 1999; West, 1997; Quynh Anh, 2011, Adib, 2010; Shallcross and Harrison 2008). However, in order to enhance effectiveness of such presentations it is suggested to use them in combination with other methods to make students more active (Gier & Kreiner, 2009) since the use of a particular medium alone does not ensure improved learning (Nouri & Shahid, 2005).

### **A Practical Guidance to Prepare an Effective Multimedia**

A presenter should be aware of the fact that technology has no value in itself independent of the content that needs to be presented. Use of technology for the sake of technology and assuming the use of different mediums in itself as a goal doesn't promote teaching (McKenzie, 2000). The presenter also needs to evaluate a medium to see how it adds to the content and if the medium enhances presentation of the content. Therefore, this article provides the following steps as a guidance that may help in creating a successful multimedia presentation.

#### **Step One: Make a plan**

One of the biggest mistakes that presenters make while creating a presentation is focusing on technology more than content. As mentioned earlier, you are going to present content and not exhibiting features of the presentation tool. In general, you need to clarify your purpose of presenting, which is effective delivery of information relevant for a course, a business meeting or a seminar.

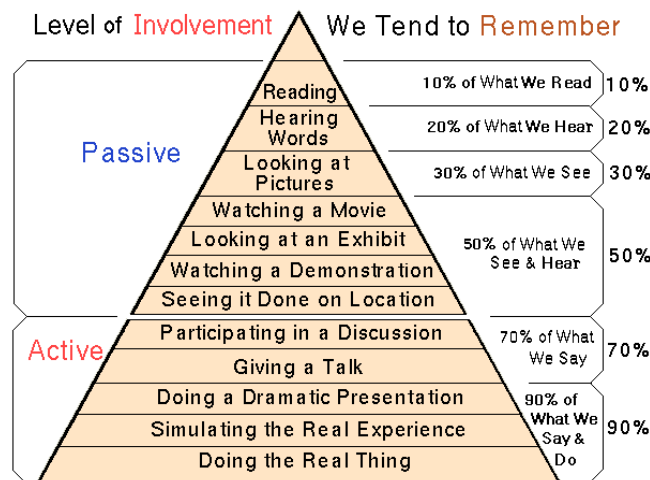
The process of preparing a presentation involves making careful decisions at different steps. Although these steps may follow a sequence, because of their interdependencies, the presenter may sometimes need to go back to a previous step and make some changes.

- *Identify a particular content based on the topic.* The first prerequisite for presenting anything (e.g. about a product or a subject) is to have enough knowledge about it. If you do not know sufficiently about your subject, you cannot make a good presentation on it, no matter how interesting is your presentation. However, it does not mean you should present all your knowledge about a topic in your presentation. You must choose a few important points for the presentation according to the context such as objective of presentation, knowledge level of audience etc. For this purpose, you need to prepare an outline to clarify what concepts you are going to present. Having an outline helps you in several ways. 1) To clarify the boundaries of the content, 2) To define the level of details of the content and 3) To recognize the key concepts of the content. Although selection of content to be presented is primarily driven by the objective, it is helpful to be aware of certain limitations with regard to the type of learning experience to be provided to the audience and the technical features of the presentation tool. Such limitations may influence selection of particular level of details of the content or a particular conceptual perspective that is more suitable to be presented given the context of preparing and delivering the presentation.

- *Be aware of your audience.* Attention to audience’s age, gender, prior knowledge, interests, skills, abilities and experience is necessary to make any decision in relation to pedagogical goals and selection of presentation techniques. Craig & Amernic (2006) cited from Feigenson & Dunn, (2003, p. 112) that the presenter needs to understand the audience’s “perceptual, cognitive, and emotional capabilities, expectations, and habits” and to explore the relationships between the audience and “visual technology” and “manipulations of that technology” in a better fashion. In general, the nature of the audience may influence selection of the level of details of content, pedagogical method to be adopted in presenting it and the type of technical features of the presentation tool used to prepare the presentation.

- *Assume the role of a teacher rather than a transmitter of information.* Identify objective goals of the content based on the audience’s characteristics. The objective goals define the expectations about the changes (in knowledge, thinking, skills, etc.) in the audience resulting from presentation of each concept. In order to identify the objective goals, you need to determine the level of knowledge and skills which are required to learn the particular concept being presented. These objective goals should preferably be precise and particular.

- *Determine a suitable learning experience:* It is very crucial to select a suitable learning experience in order to ensure that the presentation helps you to bring about a pedagogical change that you expect. For example, the Cone of Edgar Dale (Fig. 2) can guide us in making this selection with regard to retention of information presented. As evident from figure 2, a learning experience which involves higher involvement of the audience results in better retention of the information presented. However, the selection of the the type of learning experience to be provided must be done by keeping in mind the limitations of the context in which the presentation is to be made. Particularly, characteristics of the audience, the nature of the content to be presented and technical features of the presentation tool available may determine this selection.



**Figure 1:** Cone of Edgar Dale

More generally, there may be different pedagogical changes that the presenter may wish to bring in the audience as a result of the presentation. These include remembering,

understanding, applying, analyzing, evaluating and creating as defined in the Bloom's taxonomy. According to the kind of learning objective determined by the presenter, a suitable learning experience should be selected. In order to provide the suitable learning experience, appropriate technology tools or technical features present in the presentation tool may be utilized. Fig. 2 shows a technological view of the Bloom's taxonomy that depicts various technology tools suitable for different learning objectives. This can help in the selection of suitable presentation techniques or technology tools according to a decided learning objective.



**Figure 2:** A Technological View of Bloom Taxonomy

### Step Two: Make a Scenario

- *Make a map:* First decide about the content that needs to be imparted to the audience (e.g. students). Wiezel (2006) advocated using PowerPoint to present concept maps. Concept mapping is a teaching method which is a part of constructivism. Concept mapping is a simple graph that presents knowledge concepts in the form of nodes and the relationship between concepts as the branches of a tree. “Mind Mapping” is a simple form of concept mapping that is advised in many learning theories. Wiezel (2006) stated “If the instructor is successful in implementing level two of the second round, the mind map exercise will cover all six levels of learning as presented in Bloom’s taxonomy “. (p. 339)

- *Create a logical sequence of presenting concepts.* The presenter needs to make a logical sequence in which the concepts would be presented according to the concept map and objective goals of the presentation. Make a reasonable set of concepts of the content both horizontally and vertically. Further, it is important to realize the prerequisite concepts.

- *Organize the Content.* In order to properly organize the content in different slides, considering the characteristics of the audience and also the complexity of the content is important. Decide what you are offering in each slide. For this purpose, making a table can be useful. The main concepts may be placed in every cell of table and each slide should be made in a logical manner.

### Step Three: Select the Techniques

A successful multimedia presentation includes good use of audio-visual characteristics.

- *Decide about using the characteristics:* Each multimedia presentation may employ different audio-visual characteristics such as designs, colors, animations and sounds in presenting information. You need to select appropriate characteristics according to the learning objectives or requirements of the content. Applying characteristics (animations, colors, fonts, images, graphics, design etc.) merely for the sake of using them while they may not really be required may distract the audience.

- *Keep a coordinated style:* Start making slides and select presentation techniques according to the style of your multimedia presentation. Walbert defines style as relating to “*the style of the writing and to the appearance of the slides*” (Walbert, <http://www.learnnc.org/lp/pages/647>). A particular style is characterized by the type of layout, design, fonts, images and sounds used in it. All these items should be selected according to the characteristics of the audience, nature of content to be presented and the type of learning experience that the presenter wants to provide to the audience. Keep the slides simple and easy to understand so you do not have to apply another technique for emphasizing the main point. It is important that all elements of the multimedia presentation (animations, colors, fonts, graphics, etc.) should revolve consistently around the theme of the presentation.

- *Engage the mind of the audience:* Some researchers have indicated that the audience remains passive when a presenter is delivering a talk using presentation slides (Craig & Amernic., 2006). To counter this, Gier and Kreiner (2009) have suggested combining the use of content-based questions (CBQs) with traditional presentation slides in order to enhance involvement of audience and thus learning.

- *Make your slides interesting:* A good presentation should not include long texts. Try to use some tables, charts and graphs to summarize the words. However, charts and graphs can be difficult to understand if they include too much information. Some studies have acknowledged that audiences disliked some slides that contained too much material, complicated diagrams or seemingly irrelevant images (Shallcross & Harrison, 2006). Also, using unrelated graphics in a presentation has been found to have a negative effect on the enjoyment and the learning of the material (Bartsch & Cobern, 2003).

Utilize the most suitable option from the different options available in the presentation tool. For example, in PowerPoint, you may select font, design of background, bullet points, transition and animation. You must select each element with awareness and reasonable justification for its selection.

- 1) **Font:** Select the proper font size, colors and style. Choose the font size according to the area of presentation. Select the size such that it is readable by the entire audience. Also, select the font colors such that it strongly contrasts with the background color. It is suggested that in a room with good lighting, you should select dark colors for fonts on light backgrounds. When the room is dark, you can select light color fonts on dark color backgrounds. This combination makes your presentation more attractive and readable. Use the style of font that is usually installed in every computer such as Arial or Times New Roman. Also, avoid selecting fancy fonts. The most important factor in the case of font is "make it easy to read".

2) Design of background: The background design may make your slides more attractive but be sure that this design is not complicating the slide or making it messy. Also, the background should not be distracting to the audience. As mentioned above, the color of background depends on the color of fonts and other materials in the screen.

3) Bullet points: Utilize bullet points when you need to show some subcategories and keep only one idea for each bullet (Craig & Amernic, 2006 cited from Shwom and Keller, 2003). Use bullet points rather than numbers when you do not intend to convey any particular sequence or priority among the points. In providing content in the form of bullet points, follow the 6 x 6 rule. "There should be no more than 6 bulleted items per page. Each bullet should have no more than 6 words in the statement." (<http://questgarden.com>).

4) Transition and animation: Usually transition and animation effects are applied to make a presentation more attractive. Therefore, the presenter must be aware not to make the audience tired by too many unnecessary motions.

#### **Step Four: Practice the Presentation**

The way in which the multimedia presentation is delivered is as much important as the way in which it is created. Therefore, practicing delivery of the multimedia presentation is crucial. During this practice, you may observe some factors (e.g. time taken for presenting) that you may have ignored or some common mistakes. Sometimes, you may find some conceptual gaps between content in subsequent presentation slides. By practicing the presentation, you would get a chance to correct, add or edit your slides before presenting it to the audience. Consider the following factors while you are practicing.

- *Start your presentation interestingly*: You can start your presentation with an interesting question or image. Also, start the presentation when you are sure that the audience is ready to listen to you. You may prepare a short introduction before you start presenting, to get the audiences' attention.

- *Present instead of reading out from the slides*: Reading out from the slides would make your audience bored. When the audience is bored, they may distract you easily by talking to each other or engaging in some other activities. Instead, let the content in the slides supplement your talk. Further, talk interestingly, but not without relevance to your slides. Invite the audience to watch what you have already prepared in the slides.

- *Keep eye contact with individual*: Not only inexperienced speakers but sometimes even experienced speakers may not be comfortable when they are in front of a large audience. Although the use of the multimedia presentation implies that the audience is not going to be looking at you all the time, eye contact with the audience is still required. Many people in the audience prefer to look at the speaker when they are listening. So it is important to look towards the audience while periodically shifting eye-contact among different individuals of the audience.

- *Consider the situation*: Many factors such as room lighting, room size, the direction of light in the room, time of your presentation, amount of participants and so on may affect the effectiveness of your presentation. Review your presentation slides and correct them according to these factors.

- *End the presentation impressively*: It would be good to end your slides by giving a brief summary, or by reiterating the key-points presented or by leaving them with a question as food for thought. Do not abruptly finish your presentation with a “Thank you” slide. Provide a smooth transition towards the end.

In conclusion, in order to prepare and present a multimedia presentation effectively, it is important to realize the complex relationship among content to be presented, type of learning experience intended and kind of presentation techniques used in preparing the presentation. A multimedia presentation can be successful only when an appropriate learning experience is created based on characteristics of the audience by using suitable presentation techniques that are matched to both the content and the intended learning experience.

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