



Lens on Learning Theory



“Imagine a widely used and expensive prescription drug that promised to make us beautiful but didn’t. Instead the drug had frequent, serious side effects: It induced stupidity, turned everyone into bores, wasted time, and degraded the q and credibility of communication. These side effects would rightly lead to a worldwide product recall....[PowerPoint] slideware may help speakers outline their talks but convenience for the speaker can be punishing content and audience.” (Tuft)

Using PowerPoint effectively entails more than just knowing how to use a piece of software. To avoid PowerPoint presentations that have no power, and no point, you must consider the pedagogical principles that relate to its use.

PowerPoint is a powerful tool for things such as:

- Organizing ideas, information, and activities
- Presenting information visually
- Incorporating multimedia

However, PowerPoint is **just one tool** of many (chalk, flipchart paper, index cards, paper, video, discussion, case studies, problems, challenges, mind maps, etc.). Effective teachers continuously vary the tools they use depending on the learning goals.

PowerPoint has a very negative affect on the learning process when it:

- Takes the place of meaningful dialogue
- Reduces content to a series of bullet points
- Prevents critical thinking and interaction
- Directs instead of supports teaching

It is important to recognize that information is not instruction, and talking is not teaching. We don’t want our students experiencing “Death by PowerPoint” or “PowerPoint Paralysis”. In this pedagoggle, we reflect on how teachers can use PowerPoint interactively to achieve learning goals for each of **Gagne’s Nine Events of Instruction**.

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|------------------------------|----------------------------|-----------------------------------|
| 1. Gain Attention | 4. Construct New Knowledge | 7. Provide Feedback |
| 2. Communicate Objectives | 5. Guide Learning Process | 8. Assess Performance |
| 3. Stimulate Prior Knowledge | 6. Elicit Performance | 9. Promote Retention and Transfer |

Reflection on Practice

1. What are the **learning goals** for your course and what role does the PowerPoint presentation play in helping you and your students achieve those goals?
2. How can PowerPoint be used in a way that **enhances the teaching and learning process** and addresses the needs of various learning styles?
3. What are your objectives, expectations, and limitations (**time, skills, resources**) related to using PowerPoint in your classroom?

If you determine that PowerPoint is the most appropriate tool for achieving your teaching goals, consider the **best practices described in the next section**.

Expanding Your Teaching Toolkit

Gain Attention: Connect course topics to the learners' world; make learning relevant; answer the question, "So What?" for your learners.

- Insert images, cartoons, or other media into slides to create interest in the topic. Have students interact in some way with any media you spend time preparing.
- Pose a reflective or controversial question on the screen as students enter the classroom.

Communicate Objectives: State what you hope learners will know or be able to do

- Provide students with PowerPoint handouts in advance as a framework for note taking. Leave blanks to complete during class (examples, metaphors, applications). Leave out slides for in-class activities.
- **Limit the number of words and points on a screen** (6 X 6 rule). Put only key words (not complete sentences) on the slides. **Do not read off the slide.** Stick to a font size of 24 pt or greater.

Stimulate Prior Knowledge: Find out what learners already know; uncover questions/misconceptions

- Set up short game-type activities using PowerPoint templates
- Present interactive questions (i.e. Matching, Fill in the Blank) on the PowerPoint slides.
- Have instructions for activities come on to the slide one at a time.
- Plan and insert questions regularly during your presentation that require predicting, hypothesizing, reflecting, and making connections.

Construct New Knowledge: Engage students in exploring new concepts, ideas, experiences, perspectives, etc. related to the topic.

- Determine your teaching strategies first, and **only use PowerPoint if it will enhance instruction.**
- **Use PowerPoint to prompt, not to tell.** Limit the number of slides and the text on each slide.
- Make connections between what you are saying and what's on the screen.
- Use visuals in your presentation to stimulate dialogue about a concept (i.e. graphs, charts, images). Make sure images add to the learning and do not distract from it.
- Build complex graphics or develop complex solutions one element at a time using animations features
- Insert a series of web links to create a "Virtual Fieldtrip". Give students an active focus at each "stop".
- Select design features (colours, backgrounds, fonts) to help communicate the structure of the information (i.e. main topics, subtopics, examples, etc.). **Create distinct contrast between the font and the background** to ensure readability for everyone. Avoid red and green fonts.

Guide Learning Process, Elicit Performance, and Provide Feedback: Help students organize, apply, connect, and use new ideas in a meaningful way; structure opportunities to dialogue, problem-solve, and work with new information.

- Outline timelines for various steps in a learning activity on the screen to guide students.
- Provide additional resources (links, tutorials, etc) as part of the PowerPoint handout that students can view and/or use as scaffolding for assignments.

More Information and Ideas

On the Web

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Tufte, E. (2003). PowerPoint is evil: Power corrupts, PowerPoint corrupts absolutely. Wired Magazine Vol. 11 No. 9. Retrieved April 7, 2004 from <http://www.wired.com/wired/archive/11.09/ppt2.html>

Wahl, A. (2003). Countering death by PowerPoint. Toronto Star. Retrieved April 7, 2004 from <http://people.senecac.on.ca/selia.karsten/MRK/Death.html>

In the Centre for Teaching and Learning

Atkinson, C. (2009). *Beyond Bullet Points: Using Microsoft PowerPoint to Create Presentations that Inform, Motivate, and Inspire*. Microsoft Press. Available in the CTL library.