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How to Create “Thriller” PowerPoints® in the Classroom!

Ronald A. Berk

Abstract: PowerPoint® presentations in academia have a reputation for being less than engaging in this era of learner-centered teaching. The Net Generation also presents a formidable challenge to using PowerPoint®. Although the research on the basic elements is rather sparse, the multimedia elements of movement, music, and videos have a stronger evidence base and have the potential to increase learning. That research will be briefly reviewed. Since the use of multimedia as instructional tools has been largely ignored by the major sources on PowerPoint®, this article presents 30 specific practical applications enabling faculty members to improve the effectiveness of their PowerPoint® presentations and to grab and maintain students’ attention and foster deep learning.

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DISCLAIMER: At present, there are an estimated 300 million PowerPoint® users (30 million presentations per day) worldwide (Lowenthal, 2009), give or take five professors on sabbatical. There are numerous books, articles, blogs, and outsourcing businesses that describe the “appropriate uses” of PowerPoint® and extol its virtues. You have probably followed their ubiquitous guidelines for preparing the content on your slides, such as titles, lists, text, and graphics (see Abela, 2008; Altman, 2007; Atkinson, 2008; Cooper, 2009; Duarte, 2008, 2010; Gabrielle, 2010; Paradi, 2000, 2010; Reynolds, 2008; Tufte, 2003b). However, there are also a few articles recommending that every software version of PowerPoint® be blown up with military-grade explosives (see Elwood, 2005; Kapterev, 2008; Tufte, 2003a). Since I have no experience with explosives, I have chosen not to engage in PowerPoint® polemics (e.g., Craig & Amernic, 2006; Doumont, 2005) or evaluate the merits of alternatives, such as Keynote (for Macs), Prezi, IMPRESS, Beamer, and TurningPoint Anywhere. Instead, in this article I focus on three elements of PowerPoint® which are neglected by most sources on the topic, but have a substantial research foundation and the potential to change the impact of any presentation to your students so as to foster deep learning.

The Problem

What’s the problem with PowerPoint®? A June 2011 survey of the U.S. adult population (3.2% margin of error) by IBOPE Zogby International (Allen, 2011) concluded that “death by PowerPoint®” is a national epidemic and called for a presentation revolution. Too much text and boring graphics top the list of frustrating and uninspired features. Can you relate to those findings? PowerPoint® ranks as one of the most dreaded presentation platforms, with respondents claiming they would rather forego sex tonight (24%), do their taxes (21%), go to the dentist (20%), or work on Saturday (18%) than have a close encounter of the PowerPoint® kind. College students have also expressed comparable negative reactions (Mann & Robinson, 2009). So where does the revolution begin to change this reputation of PowerPoint®? Let’s start in the classroom. Hold on to your software. Here we go.

Thriller versus PowerPoint®

Unless you’ve been living in a snowdrift or under a boulder for the past 30 years, you have probably seen Michael Jackson’s music video *Thriller*. Released 27 years ago, it still holds records for the “most successful,” “greatest,” and “most influential” music video of all time. Do you remember the last time you saw it? I do. Remember: YOUR eyeballs were riveted on the video until the zombies started dancing at which time your eyes popped out of their sockets and dangled down to your knees hanging from their optic nerves. Now do you remember? Seeee! Maybe not.

So what does *Thriller* have to do with PowerPoint®? *Thriller* is the perfect (well, maybe not perfect) metaphor for the audio and video impact of media in long-term memory. Why is that music video indelibly stored in your brain core, but most PowerPoint® presentations you have seen aren’t stored anywhere? Those traditional presentations are instantly forgettable. What can we learn from *Thriller* that can help us improve the effectiveness of our PowerPoints®?

Thriller

Maybe a metaphorical autopsy of *Thriller* could help reveal a few key internal organs that render it unforgettable:

<u>Organ</u>	<u>Thriller</u>
Star	MJ (Michael Jackson)
Subject	zombies
Setting	cemetery and street at night
Movement	dancing MJ with zombies
Music	upbeat, catchy music and singing zombies
Video	video of MJ and zombies with costumes, etc.

PowerPoint®

Now how do those organs relate to PowerPoint® and its potential to be unforgettable?

<u>Organ</u>	<u>PowerPoint®</u>
Star	YOU
Subject	dead words on the screen

Setting	darkened room
Movement	transitions and animation (words, letters, and graphics)
Music	upbeat music synchronized with moving slides, words, letters, and graphics
Video	video clips from YouTube, TV, movies, etc.

Postmortem on Thriller and PowerPoint®

These autopsies reveal (1) that graphic metaphors are an effective technique to grab your attention and (2) that the reasons that scenes in *Thriller* are so vivid in our memories today are because of the

- *movement* (MJ and dancing zombies),
- MJ's rendition of the upbeat *Thriller music*,
- and *video images*.

The potential of PowerPoint® slides to produce a strong impact also resides in the movement, music, and video. Unlike most of the other features in PowerPoint®, there is significant research evidence to justify that impact (Berk, 2011b). (*NOTE:* There is also research on the “redundancy principle” that found reading text verbatim on a slide off of the screen decreases learning and retention [Mayer & Johnson, 2008].) You need to go beyond YOU with dead words on the screen in a darkened room.

Discouraged by PowerPoint® Experts

So why are animation, music, and videos virtually disregarded, dismissed, dissed, and even discouraged by PowerPoint® gurus when the technology is readily available? For example, Duarte (2008) and Reynolds (2008) give those media miniscule attention, yet acknowledge the powerful, active cognitive processing effects they can have. They usually caution users, saying “don’t overdo it.”

However, most professors under do it or don’t do it at all. With Net Gener students or other audiences who have minimal patience (Berk, 2009b) and are most likely bored with traditional PowerPoint® presentations (Mann & Robinson, 2009), maybe you need “to do” and, maybe, “over do.” Media can create a cultural and emotional connection with your students unlike any other elements. The best part is that *FREE* software is easily accessible, such as Audacity (music) and Movie Maker (videos), to make those connections happen.

What’s Next?

You may already have slides with bright, saturated colors, flashy templates, and/or dynamite visuals. That’s great, but there still are words on most of your slides. Right? So what are your words doing? If they’re still cadaver-like, text on a screen, you will immediately shift your students into snooze mode from *boring* to *snoring*. Say it with me: “*DEAD WORDS ARE BORING!*”

Why Use Movement, Music, and Videos?

Movement, music, and videos compose a unique triad in PowerPoint®. They can create an emotional connection, engagement, and excitement unlike any other elements in your slides. That can occur from your attention-grabbing opening to your grand finale.

What compelling reasons can be proffered to justify your effort to include the triad in your PowerPoint® presentations? There is a solid foundation of cognitive psychology, learning theory, and physiological research and experience with “rich media” (Ayres, Marcus, Chan, & Qian, 2009; Clark & Paivio, 1991; Höffler & Leutner, 2007; Kirschner, Kester, & Corbalan, 2011; Lane & Wright, 2011; Mayer & Johnson, 2008; Metiri Group, 2008). Including animations, especially in graphics, and media systematically in your slides driven by specific learning outcomes will positively affect just about every aspect of your teaching. In other words, what you do with PowerPoint® can transform dead words into zombie words that walk, sing, and dance.

Although the triad can clearly differentiate you as a teacher and your classroom presentations from those of your peers, this is not about you. Teaching is really ALL about your students. The triad can improve their attention, understanding, memory, and deep learning of the content you’re presenting when compared to what happens with the conventional PowerPoint® alternative (see Berk, 2011b). That’s worthy of your consideration.

So how do you go about integrating those elements into your use of PowerPoint®? I offer specific guidelines and 30 practical applications in this section to provide you with the tools to elevate the effectiveness of your PowerPoint® presentations to another level.

Applications of Movement, Music, and Videos to PowerPoint®

Let’s begin with the preparation of your slides so they will be ready for their transformation. Then 30 applications of movement, music, and video to PowerPoint® will be described. If any slides have been lying dormant or are deceased, the triad is the PowerPoint® “defibrillator”: Grab those paddles, charge 300, stand back, and watch out!

Slide Preparation

There are three major stages in the preparation of your slides so they are primed for the triad transformation. They relate to the “POINT,” “WHAT,” and “HOW.”

Begin with the “POINT.” What’s the point or bottom line of your slides? Your answer is the glue that holds all of the slides together. It should also be clear to your students, right from the get-go. They are thinking: “Get to the point. Don’t waste my time. I have to do my laundry.” If you adopt that *get-to-the-point* mindset throughout your presentation, you will eliminate a lot of the clutter, unnecessary words, noise, and “mumblers” that plague many slides.

Don’t start with the evidence and globs of data in tables and charts. You’ll lose your students. Opening slides should clearly convey the (1) main point and subpoints, (2) the reasons why they’re important, and then (3) the supportive evidence for each point (Gabrielle, 2010). Of course, these elements will vary depending on the type and content of the presentation. (*NOTE:* This article even follows that structure.)

Add the “WHAT.” Now think about the “WHAT,” the content of your message. The rule of thumb is “less is best.” Consider your *slide deck* (aka *briefing deck*) as the “highlight film” with minimal text information and the *handout* (aka *reading deck*) as the detailed content

summary with necessary text information your students can use during the presentation and read for further study later. Make every effort to provide handouts online or in class. Your slides on screen should NOT be the same as your handout. Tailor each for its specific purpose.

As you prepare your titles, lists, and graphics, consider what you're going to do with them during your presentation, such as emphasize particular points, interpret or extend concepts, raise probing questions, generate discussion, or do your zombie imitation. Those thoughts about the purpose and use of each slide may reduce the quantity and increase the quality of the slide material you present. Keep asking: "What's the point of this slide? How does it contribute to the message?" Then make necessary adjustments.

Pay particular attention to your titles. The most common practice is *word* or *phrase* titles. *Au contraire!* According to the research, use *assertion-format*, *full-sentence titles*, where possible, to increase understanding and retention of the slide content, especially with graphic material (Alley & Neeley, 2005; Alley, Schreiber, Ramsdell, & Muffo, 2006; Garner, Alley, Gaudelli, & Zappe, 2009).

Now the "HOW." Once you have a draft of your slide content, shift into "HOW" mode for your delivery. Go back to the beginning, and review all of the slides in "Slide Sorter" format to determine how they can be chunked or grouped into sections, like scenes from a movie or story you are going to tell with your slides. If you know how to use a storyboard, that will help you visualize the scene changes (see Atkinson, 2008). Any slide can be relocated, added, or deleted to tighten the sequence of your deck. There should be a natural flow to your slides, maybe even ebb. Once that is attained, pinpoint possible slides where movement, music, and videos may be meaningful and appropriate.

Movement

Scrutinize each slide for movement options. After chunking, go back to your first slide and ask yourself: "What's chunking again?" WROOONG! Ask: "Self, how can movement enhance this slide? Or, will movement distract from the point being made?" Inspect your chunk-to-chunk or scene-to-scene segues for possible transitions or animation. Every movement added to a slide should have a specific purpose.

Research evidence. Properly designed animations to illustrate concepts and procedures, especially graphics (Höffler & Leutner, 2007; Mayer & Moreno, 2002; McLean, Brown, & Bellamy, 2003; Tversky, Morrison, & Betrancourt, 2002; Yu & Smith, 2008), can generate interest, motivation, and engagement, which can promote deep learning (Lowe, 2001, 2003; Mayer & Anderson, 1991; Ruffini, 2009). Applying outcome-based animations is the simplest technique to pump life into dead words. Otherwise, random, unsystematic movements in your slides will make your students dizzy and mad.

Types of movement. Certain rules apply to slide transitions as well as animations with words, letters, and graphics. Those rules have purpose. The movement should make sense and synchronize with the slide content and story being told.

Movement involves direction, speed, and motion:

1. *Direction.* Direction of movement conveys different feelings:

- left to right—comfortable, similar to reading
- right to left—uncomfortable, unless you’re reading Hebrew
- top to bottom (downward)—follows law of gravity and seems natural
- bottom to top (upward)—resists gravity and seems illogical

2. *Speed.* Fast movement or quick cuts with transitions convey excitement, anticipation, and surprise, which can keep your students on the edges of their seats. Video games operate at “twitch” speed, and so do the minds of many Net Geners. Slow movement creates comfort, ease, and snoozing. Be careful.

3. *Motion.* Motion paths, rotation, and growing/shrinking can be applied to words or objects in graphics to illustrate conceptual points. The motion should be planned carefully to convey the concept simply and not confuse your students (Gillette, 2005).

Applications of movement. With PowerPoint® slides, you have at least four options to defibrillate your words with movement: slide transitions, word animation, letter animation, and graphics animation. Transitions on every slide can be annoying. Use them judiciously. Animation can be used for (a) the entrance of words and letters, (b) the emphasis of words or graphic elements already visible on the slide, (c) exit, and (d) motion paths.

Here are six slide opportunities to insert transitions and animations:

1. opening and closing slides
2. slide titles
3. segue into next section or topic
4. bullet-point lists revealing content incrementally, one point at a time
5. graphic material and illustrations
6. verbal jokes, such as one-liners, multiple-choice format, and top-10s, where the animation creates the set-up and timing of the punch line entrance

Music

When you watch a TV program, movie, YouTube clip, or a commercial, your feelings and emotions, such as excitement, anger, laughter, relaxation, love, whimsy, or even boredom, are often triggered or heightened by the music playing behind the action. These emotions occur reflexively, plus you are responding to the mood created by the music and the scene (see reviews by Berk, 2001, 2002, 2008). The music can have a strong effect on how you react (Levitin, 2006, 2008). A single song or the entire soundtrack is so powerful that you may download it off the Internet so you can listen again and again to relive the experience.

Research evidence. My recent review of the research (Berk, 2011b) indicated that music elicits emotional reactions, sets tone or mood instantaneously, and engages nearly every area of the brain by involving almost every neural subsystem, including the release of the neurochemical dopamine which sends “feel good” signals to the rest of the body (Salimpoor, Benovoy, Larcher, Dagher, & Zatorre, 2011). Instructionally, a catchy melody and fast, up-tempo, major-key music can activate sensory functions that create the emotional connection to excite and snap your students to attention. Music embedded throughout a PowerPoint® presentation can sustain

attention, while slipping the content into long-term memory (Millbower, 2000). Even background “passive” music can increase attention levels, improve retention and memory, extend focused learning time, and expand thinking skills (Brewer, 1995).

Applications of music. How can you make those effects happen in your PowerPoint®? You want to establish an emotional connection from the pre-get-go to the finale. Where do you stick music in a content-driven, “serious” PowerPoint® presentation?

Here are a dozen opportunities to insert music and sound effect clips into your slides:

1. Prelude to your presentation (~5 minutes of catchy music clips from your presentation) as students are getting settled (sets tone and anticipation), leading into introduction or opening
2. Opening (1st slide: 1st violin theatre/concert opening, joke, or parody)
3. Slide titles with animation synchronized with the music
4. Segue into next section or topic (create mood: upbeat, serious, or humorous)
5. Introduction of a video clip with theme music from video
6. Accompanying text animation or bullet points, when appropriate
7. Adding music or sound effects to pictures or graphic material for greater impact
8. Introduction to demonstrations/skits/dramas with student participation (black slide)
9. Accompanying key points in the demonstration, especially with appropriate lyrics
10. Inserting sound effects in jokes, such as top-10 lists, or to create humor (drum roll, tire screech, frog croaking)
11. Introduction and close of Commercial Breaks at critical time points
12. Finale and summary that will close the deal

Videos

Much has been written in the basic PowerPoint® references about the power of visuals in PowerPoint®. Pictures, graphs, charts, diagrams, and a variety of graphic designs can stimulate emotional reactions and increase attention and retention of content more than words alone (Lane & Wright, 2011). Animated visuals and infographics can enhance learning significantly more than static visuals (Höffler & Leutner, 2007; Tversky et al., 2002; Yu & Smith, 2008). The stronger the images, the more powerful the slides, the more effective your presentation will be.

Beyond these visuals are the uses of video clips embedded in PowerPoint® slides (Berk, 2009a) and streaming videos in the presentation (Eddy & Bracken, 2008; Miller, 2009). Since there are few guidelines for videos in the most popular PowerPoint® sources on the topic, this section suggests a dozen applications for infusing videos in presentations.

Research evidence. *Multimedia* refers to the presentation of material in two forms: *words* (spoken or written) and *pictures* (photo, graph, chart, diagram, or video) (Mayer, 2009), such as on-screen text and animation, narration and graph, and video with dialogue or music. *Multimedia in PowerPoint® is learner-centered when it is presented in ways consistent with how the human mind works and research-based principles.* Strategies have included PowerPoint® (Gellevij, Ven Der Meij, De Jong, & Pieters, 2002; Mayer & Johnson, 2008) in a variety of content areas.

My review of the research (Berk, 2011b) on cognitive load, working memory, and dual-coding theories indicated that multimedia learning promotes acquisition, retention, and transfer (application) of information. However, students possess separate channels to process visual and

auditory information and are limited in the amount they can process (Kalyuga, 2011). The latter is defined in terms of particular principles that increase learning by decreasing extraneous information (or overload that exceeds one's cognitive capacity) on each slide, such as three to four bullet points, colors, or bars in a graph. Mayer (2009) conducted research along with others to support five basic principles: (1) coherence, (2) signaling, (3) redundancy, (4) spatial contiguity, and (5) temporal contiguity.

Over the past half century, the research on the effectiveness of videos embedded in multimedia classes or modules support the "dual-coding theory" that more is better: *multimedia auditory/verbal and visual/pictorial stimuli increase comprehension, understanding, memory, and deeper learning more than any single stimulus by itself* (Kirschner et al., 2011). Learning in the pictorial conditions tested (video and audiovisual) was superior to learning in the verbal (audio) conditions. This is consistent with the *picture superiority effect* (Nelson, Reed, & Walling, 1976; Paivio, Rogers, & Smythe, 1968).

Applications of video. So how can videos in your PowerPoint® systematically increase the comprehension and memory of your content message in the minds of your students and draw their attention and engagement (Berk, 2011a)? Here are a dozen opportunities to insert videos into your slides:

1. Opening presentation to set tone or introduce problems, issues, or concepts
2. Exaggeration or emphasis of a point or concept
3. Presenting an opposing viewpoint or debate
4. Providing an example of real-life application
5. Dramatically reinforcing a concept
6. Motivating or inspiring to take action
7. Humorous illustration to alter the mood
8. Background viewing during group exercises
9. Segue into next section or topic
10. Creating a stimulus for discussion (Q & A, small group, etc.)
11. Change of pace as a Commercial Break
12. Finale and summary

Selection of Music and Videos

There are two final points that are critical to your use of music and videos in PowerPoint®: (1) profile your students and (2) set standards for offensiveness.

Profile Your Students

Profile your students' (1) *demographics* (age, gender, ethnicity, nationality, language-dominance, education, socioeconomic level, institutional culture), (2) *geographics* (local, state, regional, national, international), and (3) *psychographics* (interests, preferences, needs, wants, feelings, hot buttons). The last-named component is essential. Survey your students' music and video preferences. Once you've created a profile, pick music and videos with which they can connect in a nanosecond (see Lane, 2011). That is the connection that produces their emotional responses and engagement (Berk, 2011a) and releases the dopamine (Salimpoor et al., 2011).

Do your profile homework well in advance so that your media choices are right on target. Don't take chances with the clips you select. They could backfire and ruin your presentation. Once students are hooked on *their* music and videos, gradually infuse other media selections into your PowerPoint® as the opportunities arise.

Set Standards for Offensiveness

The commercial music and video (TV, movies, YouTube) industries are out of control in terms of “nonprofessional” language and offensive content. The cultural media invariably affects and, in fact, infects our lives. As a professional, you need to draw the line between what is appropriate and inappropriate media in your presentations.

Set standards for offensive material: profanity; obscenity; put-downs or ridicule of gender, racial, and ethnic groups, professions, politicians, and celebrities; sexual content and innuendo; and other offensive content (Berk, 2009c). Make every effort to reject any material that is even borderline or potentially offensive. If you're not sure, ask a couple of wise colleagues or friends who would be sensitive to such issues.

The music and videos are being used to facilitate a positive, informative, memorable, entertaining presentation experience, not impede it. Anyone who is offended will withdraw, turn off, and harbor anger, which are not the emotions you're striving to elicit. The pool of media is sooo large that picking the right stuff should not be a problem. Just take the time to do it.

Epilogue

Well, what do you think? Do movement, music, and/or videos have a place in your PowerPoint® life? There is certainly research on these elements to support their use as legitimate teaching tools. I bet you're thinking, “Why bother? I'm doing fine. It'll take too much time anyway.” Here are five practical reasons to consider the judicious incorporation of multimedia into your PowerPoint® presentations:

- 1. Benefits to students.** This is not about you. The primary recipients of the outcomes of this approach to using PowerPoint® are your students. They will reap the emotional connection, engagement, and learning benefits described throughout this article. Those benefits can be significant in comparison to whatever the alternative PowerPoint® looks like.
- 2. Preparation time.** Let's stop for a moment. TIME OUT! *How much time is really required to add movement, music, and videos?* If you add these elements to your slides in each course gradually, semester after semester, each extract, conversion, and slide insert takes only a few minutes. What's most time consuming is searching for the visuals—appropriate royalty-free images in Creative Commons or Flickr or videos on YouTube. Once you've picked the visual, it can be inserted into a slide and positioned in less than five minutes. What your students can learn and remember from strategically placed still images and videos compared to text on the screen isn't even close.
- 3. Execution time.** Weigh that preparation time against the execution time in class (or online). Preparation time per slide will be measured in minutes; execution time is in seconds. When you add the impact of the media on your students to the mix, can the time be justified? Only you can really answer that question in terms of your time and students. My experience with multimedia PowerPoint® presentations suggests that the triad elements are definitely worth your attention to

facilitate learning in your classroom, workshops, meetings, conferences, or other presentation venues.

4. Life-Changing. One or all three elements will probably change your PowerPoint® life as you now know it, along with your students' learning and memory of your presentations. It might even increase your student evaluation scores, although I'm not aware of any evidence to suggest that reward. The media add a new dimension to "HOW" you communicate your content. Once you begin this adventure, your students will reinforce your preparation efforts.

5. Challenge. So, what is the status of your use of PowerPoint® right now? Can it be improved with any of the 30 applications listed in the preceding sections? Select one part of the triad and slowly incorporate pieces of it into your current or future use of PowerPoint®. Then add more and more elements as you become more comfortable with the changes. Your students' responses should be the pay-off for your efforts.

I hope that the guidelines and applications in this article will propel you to embark on this new journey to test movement, music, and/or videos in your PowerPoint® presentations which can WOW! your students. With your help, perhaps we can stop the spread of "death by PowerPoint®" in academia, one classroom at a time.

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