Effective use of PowerPoint for Teaching and Research

الاستخدام الفعال للبوربوينت في التعليم والبحث العلمي

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Acknowledgment

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Agenda

- Introduction / Why use PowerPoint?
- Areas of Concern
- Tips and Techniques for
  - Designing
  - Learning
  - Presenting
- Summary and Close
Why use PowerPoint?
Areas of Concern

- Teaching and learning principles
- Presentation/lecture design
- Visual design
- Delivery/presentation skills
Visual Design
Identification

- The humpback whale is blackish in color with white underneath and at its sides.
- Its wing-like pectoral fins, or flippers, are mottled on the top and white below.
- A humpback whale’s jaws and flippers often carry large barnacles.
- It’s head, which is broad and round, and lower jaw are spotted with knobby protuberances or tubercles each with a long coarse hair growing from the center.
- There are between 20-50 ventral grooves which extend slightly beyond the navel.
- The tail, or flukes, which can be 18 feet wide, is serrated and pointed at the tips.
- The underside of the tail is white with black patterning which is distinctive to each individual whale.
- Adult males measure 40-48 feet (12.2-14.6 m). Adult females measure 45-50 feet (13.7-15.2 m).
- They weigh 25 to 40 tons (22,680-36,287 kg).
Guideline:

1. Limit amount of text on slide.
   - provide outline not transcript
   - use words and phrases not complete sentences
   - 6 x 6 rule: six lines of text with six words per line
Guideline:

2. Use readable font sizes.
   - titles: 32 or greater
   - body text: 24 or greater

12 point type
16 point type
20 point type
24 point type
28 point type
32 point type
36 point type
40 point type
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Identification

- Blackish with white underneath and at sides
- Flippers (pectoral fins) mottled on top, white below
- Jaws and flippers carry large barnacles
- Knobby protuberances (tubercles) on head and lower jaw; each tubercle has long coarse hair
- 20-50 ventral grooves extend beyond navel
- Tail (flukes) 18 feet wide, serrated, and pointed at tips
Identification (Cont.)

- Tail underside is white with black patterning distinctive to individual
- Length: males 40-48 ft; females 45-50 ft.
- Weight: 25 to 40 tons
Identification

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- Flippers (pectoral fins) mottled on top, white below
  - Jaws and flippers carry large barnacles
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- 20-50 ventral grooves extend beyond navel
  - Tail (flukes) 18 feet wide, serrated, and pointed at tips
Guideline:

3. Use readable font styles.
   - use common, easy-to-read fonts, e.g., Arial, Helvetica, Verdana
   - decorative/fancy fonts are hard to read
   - decorative font may not be available on presentation computer

a. This text is displayed in 24 pt. Verdana.
b. This text is displayed in 24 pt. Allegro.
c. This text is displayed in 24 pt. Times New Roman.
d. This text is displayed in 24 pt. Kaufmann.
Serif Fonts

Times
Georgia
Palatino

Sans-Serif Fonts

Arial
Futura
Verdana
Guideline:

4. Left align all text.
   - difficult to read more than two lines of centered or right aligned text
   - exception: titles may be centered
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**IDENTIFICATION**

- BLACKISH WITH WHITE UNDERNEATH AND AT SIDES
- FLIPPERS *(PECTORAL FINS)* MOTTLED ON TOP, WHITE BELOW
- JAWS AND FLIPPERS CARRY LARGE *BARNACLES*
- KNOBBY PROTUBERANCES *(TUBERCLES)* ON HEAD AND LOWER JAW; EACH TUBERCLE HAS LONG COARSE HAIR
- 20-50 *VENTRAL GROOVES* EXTEND BEYOND NAVAL
- TAIL *(FLUKES)* 18 FEET WIDE, SERRATED, AND POINTED AT TIPS
Guideline:

5. Limit the use of all caps.
   - text in all upper case letters harder to read than lower case or title case
   - reserve use for titles not body text
Guidelines:

6. Limit the number of colors and fonts.
   - maximum of three colors
   - two simple, easy-to-read fonts – one for headings, one for body text

7. Use a consistent look and feel from slide to slide.
   - select a design template and stick with the color scheme and layout
   - don’t vary text size and color
   - don’t vary color and position of background graphics
IDENTIFICATION

- BLACKISH WITH WHITE UNDERNEATH AND AT SIDES
- FLIPPERS (PECTORAL FINS) MOTTLED ON TOP, WHITE BELOW
- JAWS AND FLIPPERS CARRY LARGE BARNACLES
- KNOBBY PROTUBERANCES (TUBERCLES) ON HEAD AND LOWER JAW; EACH TUBERCLE HAS LONG COARSE HAIR
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Guideline:

8. Maximize contrast between the text and background.
   - dark text on light background or light text on dark background
   - light backgrounds provide ambient light
   - cool colors best for backgrounds
   - avoid multi-colored and heavily textured backgrounds
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Guidelines:

9. Limit the flash.
   - avoid “bells and whistles” overload
   - moving text, sound, and elaborate slide transitions can be distracting; add nothing to learning value of presentation
   - use these features with specific, clearly defined learning goal in mind
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Teaching & Learning
Identification

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- Tail (flukes) 18 feet wide, serrated, and pointed at tips
1. Color

- Blackish on top
- White at sides & underneath
2. Flippers (Pectoral fins)

- Mottled on top
- White below
3. Ventral Grooves

20-50 extend from lower jaw to beyond navel
4. Tubercles
5. Barnacles
6. Tail (Flukes)

- Serrated
- Pointed at tips

18 ft.
Identification

- Flukes (tail) 18 feet wide, serrated, and pointed at tips
- Underside of flukes white with black patterning
- Patterning distinctive to each whale
- Patterning used by scientists to identify individual whales
Identification

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Guideline:

1. Strive for balance between verbal and visual information.
   - visual elements can promote communication
   - appeal to visual learners
   - move beyond clip art to photos, charts, diagrams
   - eliminate visual elements that do not support/reinforce content
Visual Continuum

1. Reader
2. Emphasized Reader
3. Reader with Visual Cues
4. Balanced
5. Pictorial with Verbal Cues
6. Emphasized Pictorial
7. Pictorial

Behavior

- **Friendly:**
  - Breach
  - Spy hop
  - Pectoral slap
  - Pectoral stroke

- **Not so Friendly:**
  - Peduncle slap
  - Tail splash
  - Tail slap
  - Tail extension
Behaviour

- WhaleNet Humpback Whale Catalogue, Wheelock College, Boston, MA
- Greenpeace Records Humpback Whales in Southern Ocean, YouTube, added: January 08, 2008, Greenpeace USA
- Humpback song
Guideline:

2. Use PowerPoint’s multimedia and hyperlinking capabilities to enrich or supplement content.
   - images
   - video
   - audio
   - animation
   - hyperlinks
Guideline:

3. Build in interactivity.

Learning takes place through the active behaviour of the student; it is what *he* does that he learns, not what the teacher does.

(Ralph W. Tyler, 1949)
Guideline:

3. Build in interactivity.

(Biggs, 1999)
Guideline:

3. Build in interactivity.
Atlantic Population

- Mid-1800s – 4,000 and 6,000 individuals (Reeves and Mitchell 1982; Breiwick et al. 1983; Whitehead 1987)
- Late 1960s or early 1970s (post-whaling) – between about 800 and 1,300 individuals (Mitchell 1973; Winn et al. 1975)
- West Indies breeding population, 1979-1993 – suggest annual population growth of 3% (Stevick et al. 2001).
- Gulf of maine, mark-recapture estimate from 1992/93 – 652 individuals (CV = 0.15; Waring et al. 2000)
- 1992/93, Eastern Canada – estimate of 2,509 individuals (CV = 0.077)
- 1999, line-transect estimate – 816 individuals (CV = 0.45; Palka 2000).
- 2001 (Stevick et al.) – 11,570 individuals (CV=0.069), for entire North Atlantic (estimate is known to be negatively biased (Anonymous 2001)). No recent basin-wide estimates available.
Guidelines

4. Supply detailed text and data in handouts.
   – difficult to absorb dense/detailed technical data
   – provide only a summary of important results
   – refer to supplied handouts

5. Proof read your slides.
Delivery
Guidelines for Delivery/presentation skills

- Arrive Early.
- Relax, control, enjoy
  - Calming your butterflies, and overcoming any fears you have.
  - Take a few deep slow breaths to make you feel relaxed.
  - Smiling helps to relax you and to keep people involved and enjoying themselves.
Guidelines for Delivery/presentation skills

- Facial expressions, natural and comfortable…smile!
- Dry mouth is a common result of anxiety and fear (drink water).
- Be comfortable with the technology.
- Hide the cursor – Ctrl H (hide), A (appear)
- Number your slides.
Guidelines for Delivery/presentation skills

- Consider a good voice and volume - speak clearly.
- Physical appearance, dress formally.
- Keep eye contact.
- Actively engage the audience.
- Admit you don’t have all the answers.
- Do not make the room too dark.
Guidelines for Delivery/presentation skills

- Body language, use your body movement and position in a proper way!
- Face your audience.
- Watch your pace.
- Do not read from the slides.
- Backup plan!
Annoying PowerPoint Survey (2009)
Top Five Annoyances

5. Overly complex diagrams or charts 27.9%

4. Slides hard to see because of color choice 33.0%

3. Full sentences instead of bullets 48.0%

2. Text so small I couldn’t read it 48.2%

1. Speaker read slide to us 69.2%

Source: David Paradi, *Think outside the slide*. www.thinkoutsidetheslide.com
Annoying PowerPoint Survey

- Speaker reads the slides
- Text too small to read
- Full sentences used
- Poor background color choice
- Moving text or graphics
- Diagrams and charts too complex

2009 (n=548)  2007 (n=604)  2005 (n=688)  2003 (n=159)
References

References


Thank you for your attention