Research talk 101

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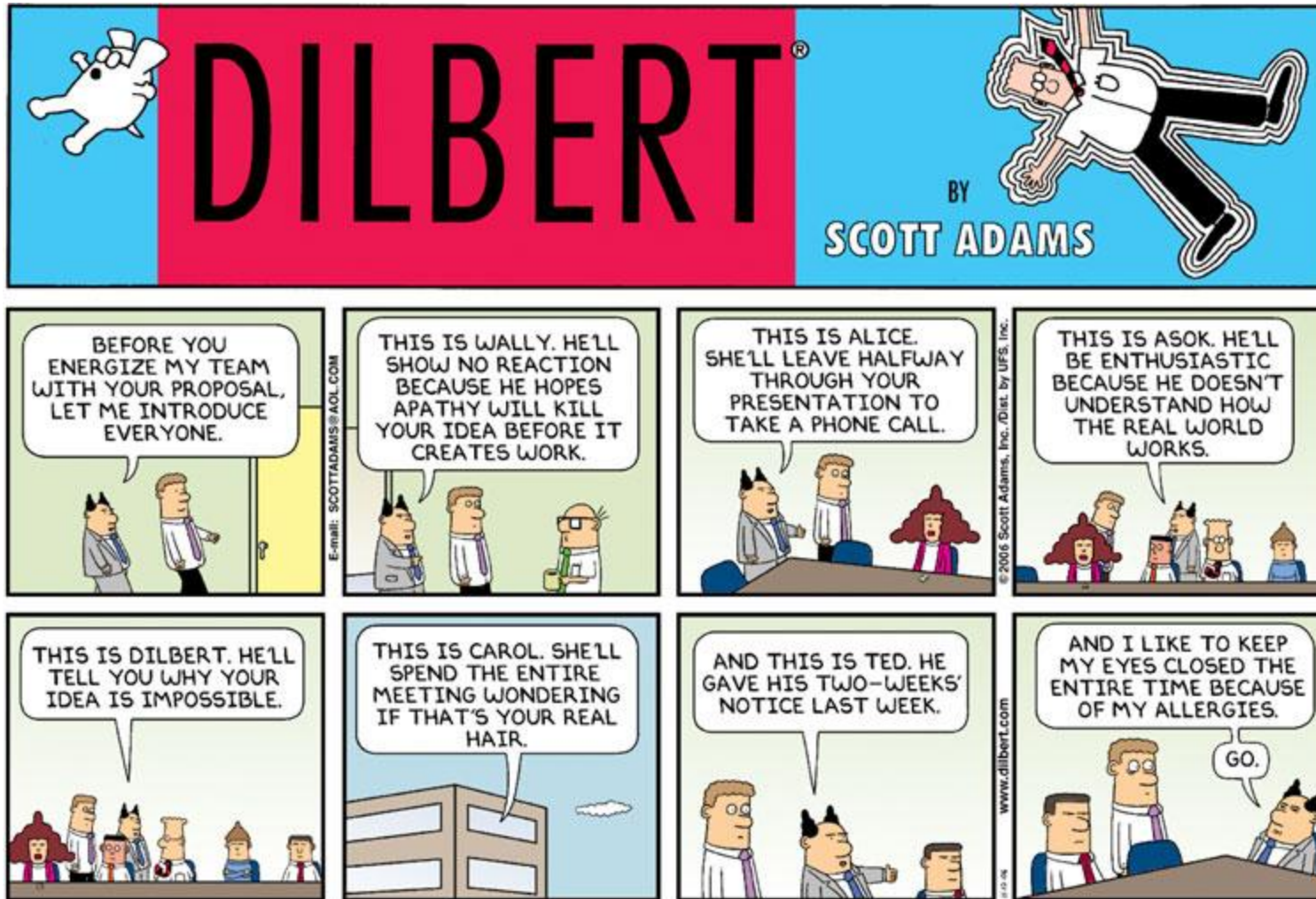DePaul University
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Purpose of a research talk

Is not to

- Impress the audience
- Tell them all you know about a subject
- Present every little detail of your work

Is to

- Give the audience a sense of what your idea/work is
- Make them want to read your paper
- Get feedback on your work

Know your audience

Know your audience

- Who would be there?
  - ☐ Scientists expert in your field
  - ☐ Scientists not expert in your field
  - ☐ Students
  - ☐ Non experts
  - ☐ Who knows?

Most likely a mix so have something for all

Know your audience

- **Keep in mind**
  - □ They might be tired
  - □ They can read ☺
  - □ They are thinking "Why should I listen?"
  - □ Non-experts will tune off within 2 minutes
  - □ Experts after 5 minutes
- **What can you do?**

What can you do?

- **Early motivation** - at the beginning of your talk motivate your research with easy to understand examples

- **Spoil the punch line** - State your results early and in simple terms

- **Visuals** – Illustrate your idea with images and diagrams

Leave them with these thoughts

- I understood what the problem was and why it was important

- I have an idea of what her solution was and how it was different/better than others

- She knows the literature (i.e. quoted my work ☺) and we might collaborate on this aspect of her research

Use examples

Examples are your weapon to

- ☐ Motivate your work
- ☐ Illustrate the basic intuition
- ☐ Show your solution in action (baby problem)
- ☐ Highlight extreme cases or shortcomings

If you are running out of time cut the general case not the example

Where were you?

- People will get lost during your talk, even those who are listening
  - □ have a running outline of the main steps of your idea (more than the talk itself)
  - □ use visual clue to highlight where you are in the process
  - □ present it at the beginning of each step

Related work

- Be familiar with all related work
- Don't list each paper you read
- Mainly talk about results that are immediately related to what you did
- References at the end of the talk or better in the paper itself
- Acknowledge co-authors (title slide)

Technical details: in or out?

A fine line

- Present specific aspect that show the "meat" of your work

- Leave the rest out. If you were convincing they will read your paper

- Don't fill up your slides with lots of equations

- Prepare back-up slides to answer questions. Leave them at the end of the presentation

The skeleton

- What is the problem
- Motivation and goals
- Relevant state of the art
- What is your key idea/contribution
- Why is your approach good/better
- What I just said and what I want to do next

Preparing the presentation

- Less is more. Fill in with narration not words
- Use animation sparingly
- Use color to emphasize some points but limit to 2 or 3
- Be consistent! In the choice and use of color font size/type etc
- Use slide real estate appropriately

Slide layout - Bad

- This page contains too many words for a presentation slide. It is not written in point form, making it difficult both for your audience to read and for you to present each point. Although there are exactly the same number of points on this slide as the previous slide, it looks much more complicated. In short, your audience will spend too much time trying to read this paragraph instead of listening to you.

Slide layout – Good

- Show one point at a time:
  - Will help audience concentrate on what you are saying
  - Will prevent audience from reading ahead
  - Will help you keep your presentation focused

Fonts - Good

- Use a decent font size
- Use different size fonts for main points and secondary points
  - this font is 24-point, the main point font is 32-point, and the title font is 44-point
- Use a standard font like Times New Roman or Arial

Fonts - Bad

- If you use a small font, your audience won't be able to read what you have written

- CAPITALIZE ONLY WHEN NECESSARY. IT IS DIFFICULT TO READ

- **Don't use a complicated font**

Color - Good

- Use font color that contrasts sharply with the background
  - Blue font on white background
- Use color to reinforce the logic of your structure
  - Ex: light blue title and dark blue text
- Use color to emphasize a point
  - But only use this occasionally

Color - Bad

- Using a font color that does not contrast with the background color is hard to read
- Using color for decoration is distracting and annoying.
- Using a different color for each point is unnecessary
    - Same for secondary points
- Trying to be creative can also be bad

Background - Good

- Use backgrounds such as this one that are attractive but simple

- Use backgrounds which are light

- Use the same background consistently throughout your presentation

Background – Bad

- Avoid backgrounds that are distracting or difficult to read from
- Always be consistent with the background that you use

Graphs - Good

- Use graphs rather than just charts and words
  - Data in graphs is easier to comprehend & retain than is raw data
  - Trends are easier to visualize in graph form

- Always title your graphs

Graphs - Bad

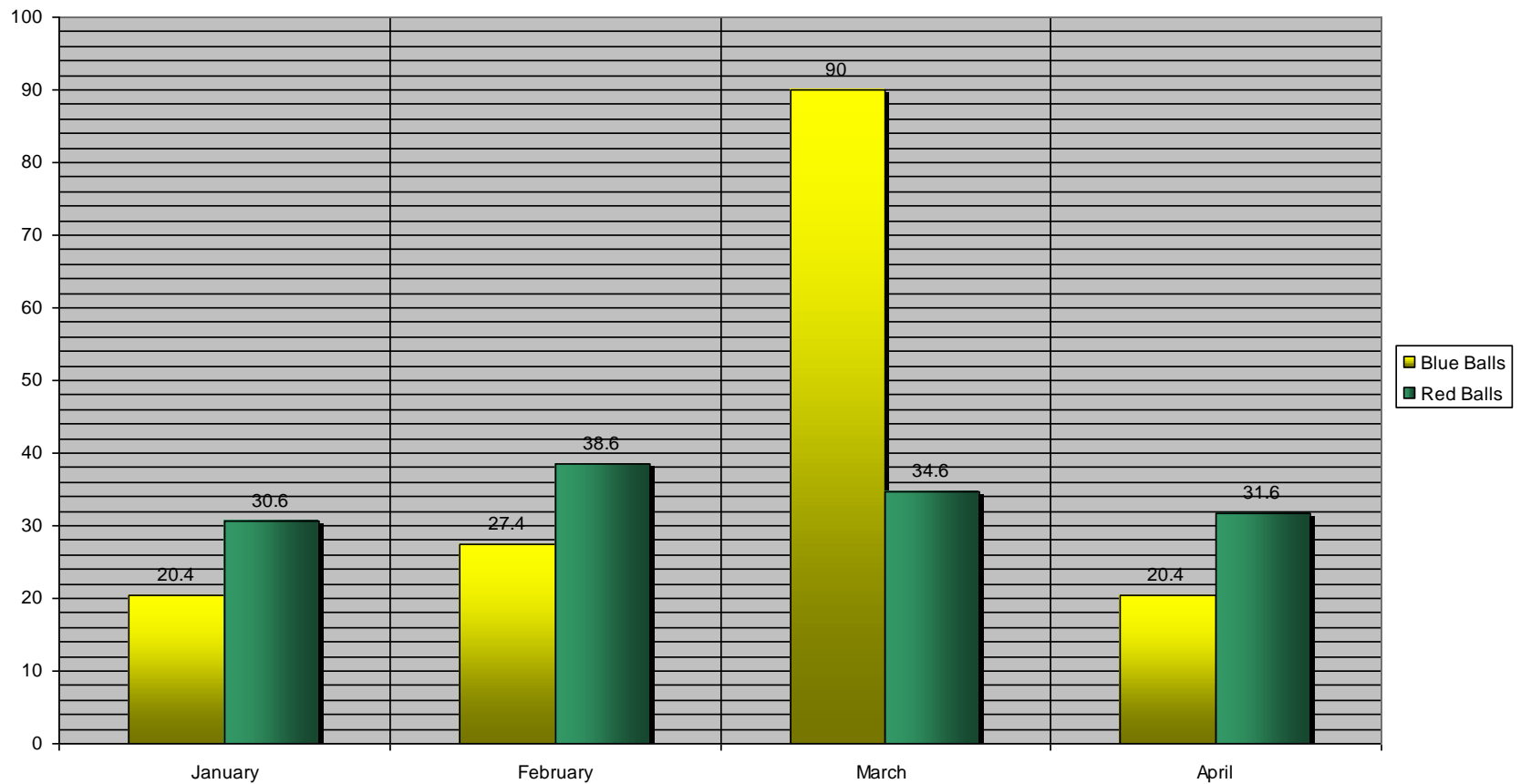|	January	February	March	April
Blue Balls	20.4	27.4	90	20.4
Red Balls	30.6	38.6	34.6	31.6

Graphs - Good

Items Sold in First Quarter of 2002
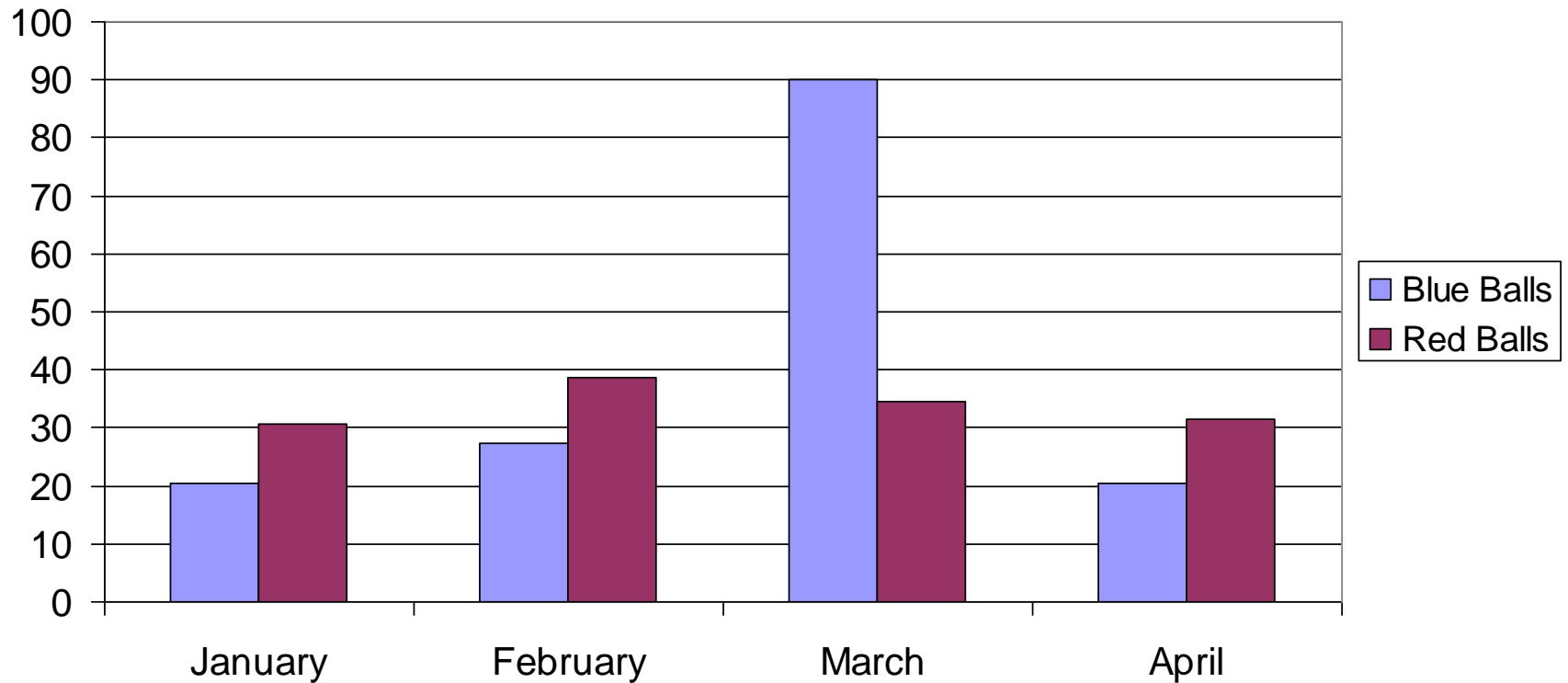
Graphs - Bad

Graphs - Bad

- Minor gridlines are unnecessary
- Font is too small
- Colors are illogical
- Title is missing
- Shading is distracting

Preparing the presentation

- Prepare the slides in advance
- Show them to friends
- When you think you are done read them again
- Check all animations with the sound on ☺

Preparing the presentation

- Practice, practice, practice
  - ☐ Give a practice talk to a general audience
  - ☐ Give a practice talk to an audience of expert
  - ☐ Time your presentation (allow for speed up effect caused by nervousness)
- Always assume technology will fail you. Have backups.

Delivering the talk

- Be enthusiastic! If you aren't why should the audience be?
- Make eye contact with the audience
- Identify a few "nodders" and speak to them
- Watch for questions. Be prepare to digress or brush off when irrelevant

Delivering the talk

- Point at the screen not the computer
- Do not read directly from the PPT or your notes
- Have the "spill" for the first couple of slides memorized in case you go blank
- Finish in time

Handling questions

- Different types – handle accordingly
  - Need clarification
  - Suggest something helpful
  - Want to engage in research dialog
  - Show that he/she is better than you
- Anticipate questions (additional slides)
- Don't let them highjack the talk (postpone)

How can I get better?

- Practice every chance you can
- Observe others
  - ☐ Steal good presentation ideas
  - ☐ Notice all the things that turned you off
- Seek comments from friends and mentors

Some resources

- http://research.microsoft.com/~simonpj/papers/giving-a-talk/writing-a-paper-slides.pdf

- http://wit.tuwien.ac.at/research/tips/good_research_talk_slides.pdf

- http://research.microsoft.com/~simonpj/papers/giving-a-talk/giving-a-talk-html.html

Some resources

- http://www.cse.buffalo.edu/~rapaport/howtowrite.html
- http://www.iasted.org/conferences/formatting/Presentations-Tips.ppt