

Contents

Preface	vii
Acknowledgments	xi
Chapter 1 Introduction	1
Excellent scientific presentations are marked by content, passion, and a keen sense of the audience	3
When speaking, you should seize upon the advantages of presentations and downplay the disadvantages	4
Analyzing presentations from different stylistic perspectives is important to improving your presentations	10
Chapter 2 Speech: The Words You Say	15
<i>Critical Error 1: Giving the Wrong Speech</i>	17
In analyzing an audience, you assess what they know, why they are there, and what biases they hold	18
The purposes of presentations are often a blend of informing and persuading—and sometimes inspiring	27
Occasion, although often overlooked, can greatly affect the way you present	32
<i>Critical Error 2: Boring Your Audience</i>	35
Stories can be engaging and memorable	36
Examples and analogies can help audiences understand unfamiliar concepts	39

Making a personal connection is a way to connect with the emotions of audiences	41
Humor, when appropriate, can energize an audience	43
Chapter 3 Structure: The Strategy You Choose	49
Organization is the path up the mountain of your work	52
Transitions keep the audience on the trail	54
Emphasis tells the audience when to appreciate the view	56
<i>Critical Error 3: Trying to Cover Too Much</i>	59
Many talks fail because the scope is too broad	61
Many talks fail because the depth is too deep	63
<i>Critical Error 4: Losing the Audience from the Start</i>	69
The beginning should identify the boundaries of the subject	71
The beginning should show the importance	74
The beginning should provide needed background and establish credibility	75
The beginning should memorably map the talk	77
<i>Critical Error 5: Losing the Audience on the Trail</i>	79
The speaker has to choose a destination that the audience can reach	80
The speaker has to signal changes in direction	83
<i>Critical Error 6: Not Anticipating the Audience's Bias</i>	89
An audience is more likely to believe your argument if they know and appreciate the assertions	91
An effective argument provides ample evidence for the assertions	95

With an antagonistic audience, building credibility is crucial	100
Chapter 4 Visual Aids: Your Supporting Cast	105
In designing slides, most speakers do not assess the necessity, purpose, or effect	106
PowerPoint's defaults lead to a topic-subtopic structure, which is ineffective for scientific presentations	108
Assertion-evidence slides lead to much higher comprehension of complex concepts	117
Assertion-evidence slides lead to more focused talks and more engaging deliveries	119
<i>Critical Error 7: Following the Defaults of PowerPoint</i>	129
An assertion-evidence slide calls for a succinct sentence headline that states the slide's main assertion	132
An assertion-evidence slide calls for supporting the headline with visual evidence, not bulleted lists	140
For slides to be effective, the format must rise above PowerPoint's defaults	154
<i>Critical Error 8: Following the Common Practices of PowerPoint Talks</i>	171
Title slides should orient, outline slides should map, and concluding slides should emphasize	172
The TED slide structure is effective for communicating to the general public	184
An evidence-assertion order, <i>pecha kucha</i> , the Lessig style, and Prezi can be effective at sequencing slides	187
Effective slide structures exist for the wide variety of presentations	197

<i>Critical Error 9: Not Accounting for Murphy's Law</i>	203
To reduce occurrences of Murphy's Law, you should weigh the risks of incorporating visual aids	206
To minimize the effect of Murphy's Law, you should rehearse	207
To troubleshoot problems arising from Murphy's Law, you should arrive early to the room	207
With presentations, you should prepare for the worst	209
Chapter 5 Delivery: You, the Room, and the Audience	213
The appropriate delivery depends on the speaker and the situation	214
You can significantly improve your delivery with practice and reflection	216
<i>Critical Error 10: Not Preparing Enough</i>	221
Before opening the computer, you should decide upon the story of the talk	222
Once you have your story, you are in position to create your visual aids	222
In addition to preparing visual aids, you should prepare yourself to speak	223
Speaking in a second language requires additional preparation	225
<i>Critical Error 11: Drawing Words from the Wrong Well</i>	229
For most scientific presentations, a practiced extemporaneous talk is the best overall strategy	231
While not the approach to choose for a planned talk, impromptu speaking is an important skill	235
Memorizing can be effective for short portions of talks such as first and last sentences	237
Reading is sometimes necessary when the audience will scrutinize your every word	238

Contents	xix
<i>Critical Error 12: Not Paying Attention</i>	243
Pay attention to the room	243
Pay attention to yourself	246
Pay attention to the audience	251
Pay attention to the time	254
<i>Critical Error 13: Losing Composure</i>	259
Preparing, thinking positively, and having the proper focus are keys to handling nervousness	260
In handling a question, you should understand what was asked, think about that question, and answer honestly	264
Passion fuels preparation, which leads to confidence	268
Chapter 6 Conclusion	273
Appendix: Critique Sheet for Scientific Presentations	277
Index	279

<http://www.springer.com/978-1-4419-8278-0>

The Craft of Scientific Presentations

Critical Steps to Succeed and Critical Errors to Avoid

Alley, M.

2013, XIX, 286 p. 59 illus., 53 illus. in color., Softcover

ISBN: 978-1-4419-8278-0