The Craft of Scientific Presentations

(Feynman) developed into an accomplished and inspiring teacher and lecturer, who gave virtuoso performances full of showmanship, humor, with his own inimitable brilliance, style, and manner.

Jagdish Mehra

Because presentations are expensive, one should consider whether a presentation is truly needed.

Cost in salaries of audience

Cost in time for presentation

Cost in time to prepare presentation

Presentations can be viewed from three stylistic perspectives

Structure and Speech

Visual Aids

Delivery

One critical error of structure is giving the wrong speech
You begin preparing a scientific presentation by analyzing your constraints

- who are they?
- what do they know?
- why are they here?
- what biases do they have?

**Audience**

**Purpose**
- to inform
- to persuade
- to inspire
- to teach

**Occasion**
- formality
- size
- time

The purpose affects how you support assertions

- Annual rainfall > 48 inches
- More than 120 freezing days
- High relief and mountains
- High seismic hazard
- Limits of glaciation

A proposal presents a statement of the need, often called a problem statement

- New methods are needed to detect plastic explosives in airline baggage

Another critical error of structure is leaving the audience at the dock
Beginnings prepare the audience for the work to be presented

- Defines work
- Shows importance
- Gives background
- Maps presentation

Work = A + B

The middle presents the work in a logical order

- pre-combustion methods
- combustion methods
- post-combustion methods

In the middle, you make smooth transitions between major points

The ending summarizes main points and places those results in the context of the big picture

- point 1
- point 2
- point 3
- point 4
- point 5
- point 6
- point 7
- point 8

Summary

Big Picture