



50 years

*Improving lives
through research*

Developing Students' Communications Skills: What Does the Workplace Need?

Presented by:
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Topics

- My motivation
- In addition to statistical knowledge, what skills do employers need from new graduates?
- Communications
 - Oral
 - Written
- Organizational skills
- Leadership
- Ethical principles

Westat – 50th Anniversary

- Survey research, primarily government customers
- 2000 employees at Rockville Headquarters
- 10,000 temporary field staff
 - In-person interviewing
 - Measurement, including testing
 - Phone interviewing
- Surveys
- Case Control studies, Epidemiological studies, Clinical trials



Westat Statistical Group

- 65 MS & PhD statisticians
- Authors, presenters, instructors
- Areas of expertise:
 - Survey Methodology – reducing total survey error
 - Sample Design/Selection, Weighting, Imputation, Variance Estimation
 - Analysis – Multiple Regression, Survival Analysis, HLM, Propensity Scores
 - Item Response Theory

Why I'm Interested

- Westat
 - Director, Statistical Group
 - Consulted on Quality Improvement
- ASA
- Special Faculty at the Joint Program for Survey Methodology
- GMU Statistics Dept. Advisory Board

We assume...

- Graduates receive
 - Deep and broad statistical knowledge
 - Experience with relevant software
 - Experience solving statistical problems
- What else will they need in the workplace?
 - Can graduate programs provide these skills?
 - Should graduate programs provide these skills?
- We'll explore only the 1st question
 - Leave the next two for other speakers

What do Employers Need?

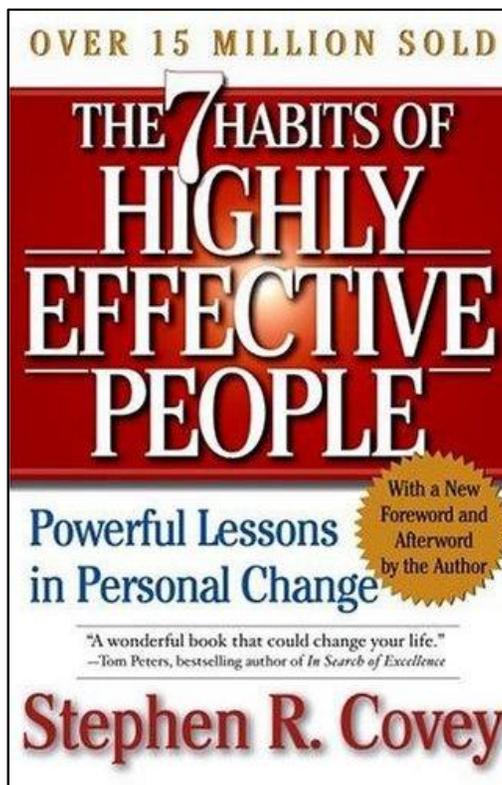
- Communications
 - Oral
 - Written
- Organizational skills
- Leadership training
- Ethical Principles

10 Winning Qualities of Consultants (N. Ramakrishnan)

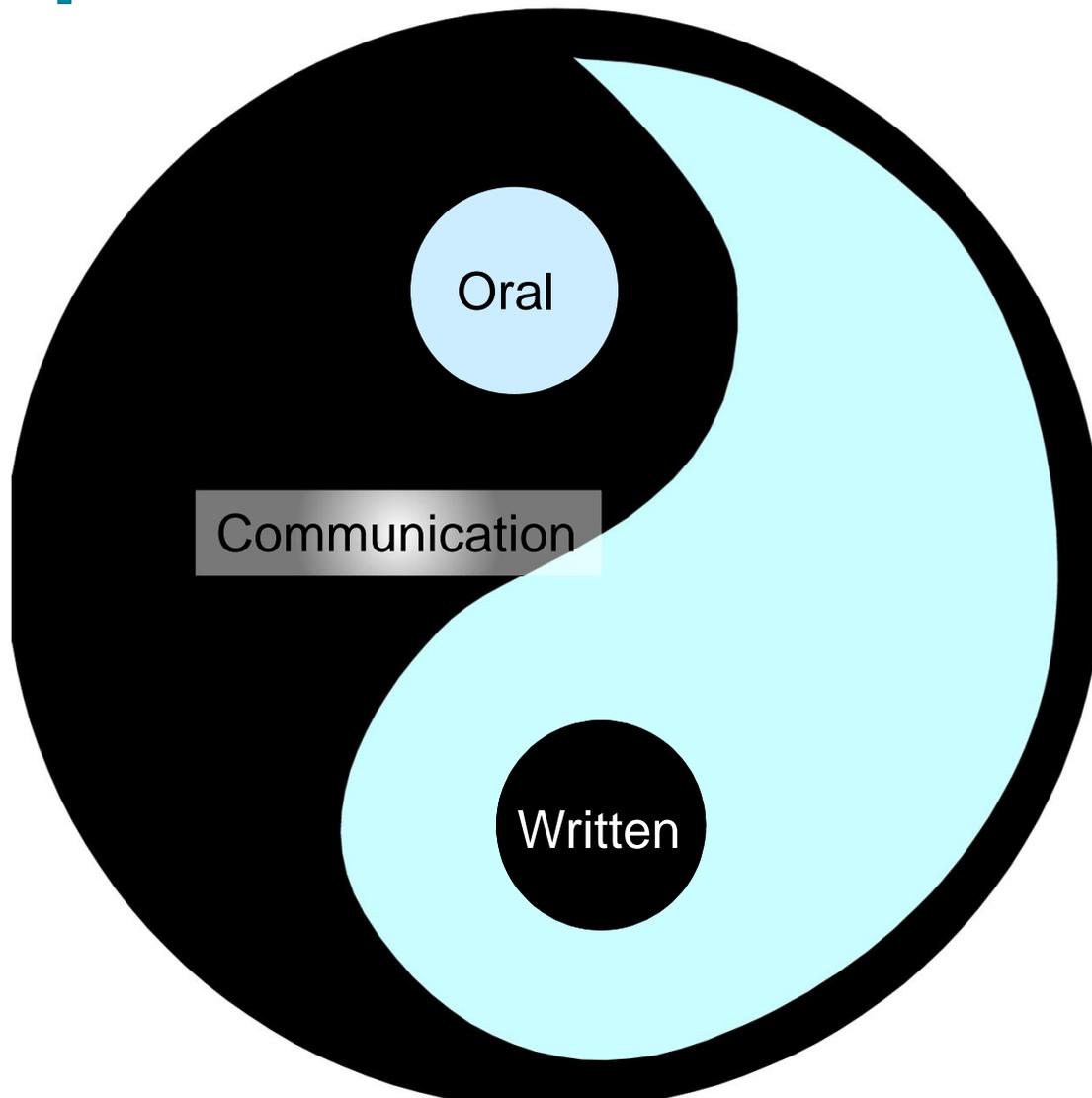
1. Professionalism
2. Time Management
3. Judgment
4. Team Player
5. Good Communication Skills
6. Expert Knowledge
7. Good Listening Skills
8. Roles and Responsibilities
9. Involve Other Consultants
10. Reputation

Habit 5. (Stephen R. Covey)

- Seek first to understand, then to be understood
- Communication is the most important skill in life



Importance of Communication



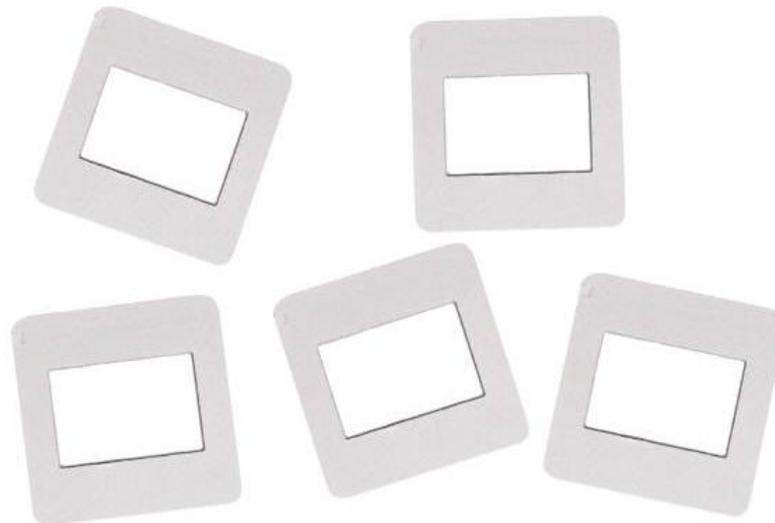
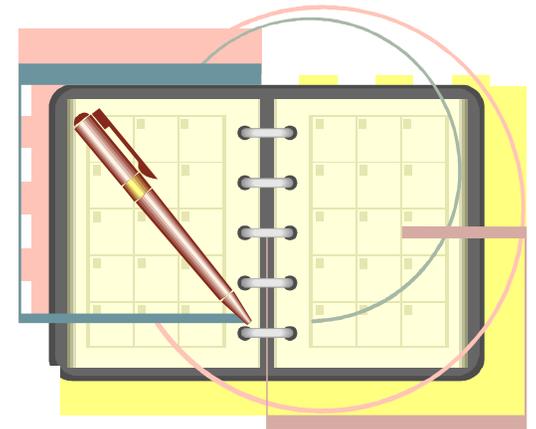
What Does Deming Have to Say About Communications?

- From his 14 points
 - Break down barriers between departments
- “A Lesser Category of Obstacles” includes
 - Relying on technology to solve problems



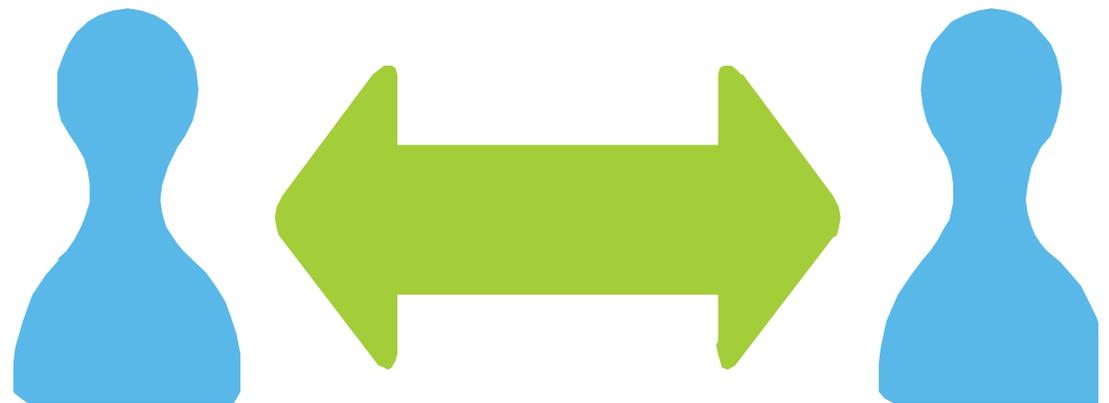
Tools for Improving Communications

- Agendas
- Flowcharts and graphics
 - A picture is worth 1,000 words
- Checklists & timelines
- Outlines
- First drafts
- Feedback
 - Dry run



Various Levels of Communication

- Expert and those less knowledgeable
 - Meetings, reports, presentations
- Management and operations
- Between two departments
- Members of a team
- Process to us
- Presenter to audience
- Author to readers



Basic Communications Questions

- What are we trying to do?
- What have we agreed to do? (and not do?)
- What is due and when?
- Who is responsible for what?
 - What do I need from you?
 - What am I giving you?
- What's the budget?

Getting the Most from Meetings

- Make sure the right people are invited
- Distribute an agenda
- The balance of keeping on track while covering what needs to be addressed
- Follow-up with minutes
 - “I thought we agreed on that before.”
- Summarize with action plans identifying responsibilities and schedules

Who Should Attend a Meeting?

- Performance in a steel mill
- Lots of down time
- Maintenance staff not included
- They had the answer



Presentations

- Who is your audience and what is of interest to them?
- Introduction and summary
- Slides that are clear & readable
 - Not crowded
- How do you get to Carnegie Hall?



Written Products

- Who is your reader?
- What are you willing to assume they know?
- Use an advisor from inception
- Use an outline
- Read aloud



Expert vs. Service

- Your best solution may not be what your client is requesting
- Paradox of what they want vs. what you think “is best”
- When is it your responsibility to do what the clients wants?
 - You can always propose options



Pitfalls

- Not clarifying and communicating assumptions
- Type III error - right answer to wrong question
- Emperor's new clothes
- “If the only tool you have...”



Ethical Principles

- Confidentiality & Privacy
- Informed Consent
 - IRB
- Conflicts of Interest
- Objectivity, Impartiality
- Professional Competence

Summary

- Communications
- Organizational skills
- Leadership training
- Ethical principles