"Science" of Science Considerations

- Generally work independently
- Make your own decisions
- Plan your own program
- Return on investment
- Knowledge
- Publications
- Speaking invitations
- Complete your PhD
- Get a job (preferably, "permanently")

What about the Business of Science?

Two Rules of Business (USA)

- By definition, a business must make a profit. The tax code requires a profit status. Investors require a profit status.
- A business must constantly compete globally and improve its products and services as well as productivity standards: revenue per employee, return on capital deployed, new drug success rate, ...

Results in seeking employees with technical as well as business skills.

You are one part of a process

"Business" of Science Roles

- Research biologists
- Chemists
- Animal handlers
- Production-scaleup specialists
- Clinical Researchers
- Project managers
- Marketing
- Legal experts
- Regulatory experts
- Sales
- Physicians
- Patients

Business Requires Cooperation

- Many Roles
- Many Responsibilities
- Tight Coordination
- Tight Communication

Teamwork is essential to success!!

... and therefore requires additional skills

Leadership Skills for Successful Scientists (Source: Management Research Group®)

- Authority
- Communication
- Convincing
- Conservative
- Control
- Cooperation
- Delegation
- Dominant
- Empathy
- Excitement
- Feedback
- Innovative
- Management Focus
- Coaching
- Persuasive
- Production
- Restrain
- Self
- Strategic
- Structuring
- Tactical
- Technical

Critical Skills

www.mrg.com/education-resources/articles-findings/
Bring Out Your Brain!

Communications Competencies

Stages of Development:
• Technical Literacy
• Emotional Intelligence
• Social Intelligence

Communications Competencies

Technical Literacy

Group A: Prepare a 10 sec description of your recent research in the most technical, jargon based and exclusive language possible.

Group B: Prepare a description of your recent research in 7 Words for Grandma

Key to Technical Literacy

• In time allotted and at audience technical level, answer technical questions in the social context of what is important to the audience

• In short – how do you add value in the world of the audience!!!!!!!!!!!

Technical Literacy Exercise

<table>
<thead>
<tr>
<th>Chief Science Officer (PhD Physics)</th>
<th>10 sec</th>
<th>20 sec</th>
<th>45 sec</th>
<th>1 min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member of Board – Owner of 5 Sports Teams (BA History)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lawyer – Contracts (Finance MBA)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineer – Manufacturing (BA Math)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Communication Biases

• We all have them:
  • Mostly unconscious
  • Reinforced neural networks
  • Heuristic decisions
  • Limbic system default

Write your name
ALL COMMUNICATION HAS 3 DIMENSIONS
1. Words, Content, Technical Stuff, Data, Information ...
2. Affective, Emotional & Nonverbal Content
3. Social meaning of 1 & 2 based on Social Relationship (Role)

3 Social Relationship Roles
1. Institutional
2. Professional
3. Personal

Science Communication Rules
• All science is both content and social impact
• All science is content and relationship oriented
• All science is both personal and global
• All science is either advocacy or nonadvocacy in its purpose

Advocacy vs. Nonadvocacy
• Advocacy
  • Definition: success when you agree with me
  • Tell, Sell, Persuade
  • Expert
• Nonadvocacy
  • Definition: as helping you make decision with due process and no evaluation on my part
  • Facilitate, Learn, Coach, Support
  • Trusted nonadvocate communicator

Basic References for Reading
• Working with Emotional Intelligence Paperback – Jan 4 2000 by Daniel Goleman (Author)
• Thinking, Fast and Slow Paperback – Apr 2 2013 by Daniel Kahneman (Author)

The most difficult communication skill for an expert to perform is?
NOT TO ANSWER A QUESTION TO WHICH YOU KNOW THE ANSWER!!

How do adults learn new communication competencies??
This is NOT a COGNITIVE EXERCISE
• Knowing is not performing!
• Neural patterns should be leveraged
• Neural patterns will need around 21 – 64 days to become unconsciously competent

*Answers have power!!
– Matt Hourde

3/16/2016
The most difficult communication skill for an expert to perform is?

**NOT TO ANSWER A QUESTION TO WHICH YOU KNOW THE ANSWER!!**

---

### 3 M&M Content Technique

1. ONCE per day, do not answer a question as an EXPERT
2. Shift to being a LEARNER
3. Ask 3 open ended questions
4. THEN Answer the question

---

### Content Focus

3 M&M Content Technique
1. Place 3 M&Ms on your desk etc… look at them!
2. Pick up and eat one M&M with your 1st question
3. Listen to answer and eat 2nd M&M with your 2nd question
4. Listen to answer and eat 3rd M&M with your 3rd question
5. Now answer question

---

### Process Focus

**Shift Your Social Role**
1. ONCE a day, do not answer a question in your default social role
2. Shift to one of the 3 roles you always are playing
   - Institutional
   - Professional
   - Personal

3 M&M Technique
1. ONCE a Day!!
2. Place 3 M&Ms on your desk etc… look at them!
3. Pick up and eat one M&M with your first social role shift
4. Repeat until M&M are gone...

---

### Social Role Exercise

“I’m thinking about doing a Postdoc with your PI. What do you suggest?”

- For our communication purposes – the answer is 3 major categories:
  1. Institutional
  2. Professional
  3. Personal

### How many social roles do you play?

- How many social roles do you play?
- For our communication purposes – the answer is 3 major categories:
  1. Institutional
  2. Professional
  3. Personal

---

### How to use your new communication skills?

Based on the Value of a Building Relationships
- New relationship – such as networking, interview ...
- Minimum relationship – occasional interaction ...
- Improving relationship – needed dependency
- Strong relationship – must keep, reinforce ...

---

### Basic References for Reading

- Working with Emotional Intelligence Paperback – Jan 4 2000 by Daniel Goleman (Author)
- Thinking, Fast and Slow Paperback – Apr 2 2013 by Daniel Kahneman (Author)