COAChing for Better Science

Lessons Learned from our Toils in the Trenches

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What is COACh?

A grass-roots organization formed in 1997 that has been working on a national level to increase the numbers and success of women scientists and engineers in academia.

Website: http://coach.uoregon.edu
Sponsors: NSF, NIH, DOE
COACH Projects

Developing programs that can be broadly used in higher education to enable all scientists - both men and women - to achieve their career goals.
COACH

• Highest impact project: development and implementation of professional skills workshops for scientists and engineers, initially for women, increasingly for men also.

• Over 2000 women faculty, graduate students and postdoctoral associates in science and engineering have participated in these workshops across the country at professional meetings and home institutions - including many ADVANCE sites.

• Our research demonstrates the high impact of these workshops on the personal and professional lives of these women and their institutions.
COACH Workshops

• Workshops provide basic and advanced training in:

  Effective Communication

  Persuasive Negotiation

  Innovative Leadership

• Workshops provide a forum for networking and mentoring with other women in STEM fields.

• Participants: Academic administrators, faculty, postdocs, graduate students, minority groups.
Today’s focus

• Reflections on the stories in the trenches and how such simple skills training has impacted these women’s careers.

• Thoughts on how such activities can be used to increase the productivity and creativity of all participants in the technical areas of our academic institutions.
Science Professional Development Pathway

Undergraduate → Graduate School → First job

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Professional Skills Training
(…what didn’t make the lab manual)

Skills that enhance your ability to:

- Communicate your ideas
- Negotiate effectively
- Reach consensus
- Effect change
- Be a leader
Where do we as scientists and engineers learn about appropriate workplace behavior and effective communication methods in the laboratory environment?

Mostly by example.
Before we begin, I'll read out the minutes from our last meeting when we discussed future faculty hires: “Bang bang, kaboom, muffled whoomph, thrumm, small arms fire, ricochet, rat-tat-tat, thomp....”
And a few of the many stories from the trenches of COACH participants:

• “..my Department chair who repeatedly tells “jokes” with sexual innuendo as part of after dinner comments at official faculty dinner events….”

• “My chairman took away my advising responsibilities, told me I was on too many committees (most assigned by him) and then told to pick out furniture for an instrument room.”

• “I am told that I am crazy, that I am a trouble maker.”

• “He wanted me to break/bend the rules, which I am unwilling to do.”

• “A faculty member came into my laboratory and started screaming obscenities at my graduate students because he couldn’t find me.”
How can we level the playing field if many in the trenches don’t know the ground rules of good professional conduct?

or don’t care to learn them -
or don’t care to follow them?
Professional Skills Training

Both men and women have a vested interest in:

- Communicating ideas
- Negotiating effectively
- Reaching consensus
- Effecting change
- Leading a group

What’s good for the goose is good for the gander!

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Negotiation or Disagreement

Ground Rules for a Productive Dialogue

- Professional exchange - not an emotional fight or game.
- Expectation of “give and take.”
- Desire to reach a “win-win” rather than “winner take all” solution.

COACH
Learning Goals:

- Identify behavior and language that is unproductive or inappropriate.
- Develop skills that reduce the heat rather than flame the fire.
- Learn techniques to help maintain your composure.
- Learn how to keep the dialogue focused on resolving the conflict.
- Know when a mediator is necessary to resolve the issue.
COACH Workshops: Effective Leadership in Science and Technology

Many roles: Teacher, group leader, department head, institute director…

Leadership Learning Goals

- Learn how to effective models and strategies for effecting change.
- Understand how to bring groups to consensus on difficult issues.
- Learn team building strategies.
- Learn strategies effective for women and minorities in leadership roles.
- Know how composure, body language and voice projection can be used effectively.
- Learn the characteristics of good and bad leadership.

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COACH Leadership Workshops for Department/Institute Chairs

Participants learn leadership strategies that can increase the success of their departments, institutes or centers.

- Unique challenges in leading scientists
- Communication skills, including management of conflict
- How to lead faculty through a change process
- How to bring a group to consensus
- Establishing and using allies

Participants apply skills to their own leadership challenges through group strategizing and role-playing.

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COACH Workshops

Key components for success:

- Professional facilitators that have many years of experience in training and coaching in higher education.
- Role playing and group discussions in small group settings.
- Most recent research on effective negotiation, communication and leadership practices.
- Research before and after workshops are conducted to learn the impact of the workshops on participants.
- Extensively beta-tested on scientists and engineers.

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Assessing the Impact of COACh workshops: 2-3 years later

Negotiation: To what extent have you:

- Negotiated for yourself
- Negotiated on behalf of others

[Bar chart showing the percentage of participants who have negotiated often, some, or not at all for themselves and on behalf of others.]
Assessing the Impact of COACH workshops: 2-3 years later

Taking the Impact Home

Over 90% have mentored others in negotiation skills learned in the COACH workshops.
Assessing the Impact of COACH workshops:
2-3 years later

Have used negotiation skills to positively influence:

- Percent

![Bar chart showing the impact of COACH workshops on using negotiation skills to positively influence.](chart.png)
Assessing the Impact of COACCh workshops: 2-3 years later

Skills used most:

- Preparation for negotiation: 76%
- Identifying & meeting mutual interests: 74%
- Providing options for solution: 76%
- Clarification of purpose: 74%
- Avoidance of personalizing: 65%
- Using allies: 61%
- Research Support Data: 59%
- Understanding others position: 46%
Assessing the Impact of COACH workshops: 2-3 years later

How important to hear others discuss their challenges?

- Extremely important: 34%
- Quite important: 41%
- Somewhat important: 23%
- Not important: 4%
Assessing the Impact of COACH workshops: 2-3 years later

Did the skills learned lessen stress?

- Yes: 83%
- No: 13%
- NR: 4%
Recommendations

• Increase dialogue in our community and institutions about the professional elements (beyond technical skills) that contribute to good science, teambuilding and a productive work environment.
Recommendations

• Leaders at all levels of our institutions must lead by example to assure that professionalism and best business practices are the prominent mode of operation in our laboratories and STEM departments.
Recommendations

• Provide training opportunities for all those seeking to develop their professional skills in areas such as leadership, negotiation, professional dialogue, conflict resolution etc.

Make such training a regular part of our graduate curriculum.

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Science Professional Development Pathway

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