

Computing Research Association

Conference at Snowbird 2000



Slides from a workshop
on the topic of
"Reshaping Doctoral Education"

presented by

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Monday July 10, 2000
10:30 am

<http://www.cra.org/Activities/snowbird/00/wk1-2.html>

Reshaping Doctoral Education

A Snowbird 2000 Panel

Panelist:

Dr. Barbara G. Ryder

Rutgers University

Reshaping Doctoral Education

- Present choice of career paths -- **Academia** versus **Industrial Research** -- and strengthen preparation for both
- **Require**
 - Practical training and experience
 - Team research paper
 - Multiple year, two person, contractual funding commitment
- **Train for continuous learning**

Ph.D. - Academia

- **Necessary degree for academic career**
 - **Require Ph.D. students**
 - **To teach a course** (not TA) supervised and evaluated by a faculty member
 - **To prepare a research funding proposal**
 - **To demonstrate skill at technical writing and oral presentation**
 - **To work with at least one other student to produce a publishable research paper**

Ph.D. - Industrial Research

- **Necessary degree for industrial research labs**
 - **Require Ph.D. students**
 - **To participate in a semester-long industrial research internship**
 - **To demonstrate skill at technical writing and oral presentation**
 - **To work with at least one other student to produce a publishable research paper**

Possible Changes to Ph.D.

- **Experiment with allowing a Ph.D. thesis to have dual emphases**
 - **Multiple research explorations in an area rather than one “depth explore”**
 - **Allow joint research (with teammate) as part of thesis**
- **Allow some requirements to be met before the qualifier**
- **Aim to finish Ph.D. studies within 5 years**

Reshaping Doctoral Education

Reshaping the Graduate Education of Scientists and Engineers,
National Academy of Sciences and Engineering Committee on
Science, Eng'g, and Public Policy, 1995 report

- **Findings**

- **New kind of Ph.D. emphasizing adaptability, versatility, technical proficiency**
- **Original research component valued**
- **Less time to degree**
- **Better career choice information needed**
- **Emphasis should be on educational needs of students, not just research goals of faculty**