

1-1-2009

# Role-Play Scenarios for Teaching Responsible Conduct of Research

Bradley J. Brummel

*University of Illinois at Urbana-Champaign*

C. K. Gunsalus

*University of Illinois at Urbana-Champaign*

Kerri L. Kristich

*University of Illinois at Urbana-Champaign*

Michael C. Loui

*University of Illinois at Urbana-Champaign*

Stephanie N. Seiler

*University of Illinois at Urbana-Champaign*

Follow this and additional works at: <http://scholarworks.umass.edu/esence>

 Part of the [Engineering Commons](#), [Life Sciences Commons](#), [Medicine and Health Sciences Commons](#), [Physical Sciences and Mathematics Commons](#), and the [Social and Behavioral Sciences Commons](#)

---

## Recommended Citation

Brummel, Bradley J.; Gunsalus, C. K.; Kristich, Kerri L.; Loui, Michael C.; and Seiler, Stephanie N., "Role-Play Scenarios for Teaching Responsible Conduct of Research" (2009). *Ethics in Science and Engineering National Clearinghouse*. 276.  
<http://scholarworks.umass.edu/esence/276>

This Presentation is brought to you for free and open access by the Science, Technology and Society Initiative at ScholarWorks@UMass Amherst. It has been accepted for inclusion in Ethics in Science and Engineering National Clearinghouse by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact [scholarworks@library.umass.edu](mailto:scholarworks@library.umass.edu).

# Role-Play Scenarios for Teaching Responsible Conduct of Research

Bradley J. Brummel, C. K. Gunsalus, Kerri L. Kristich, Michael C. Loui, Stephanie N. Seiler  
University of Illinois at Urbana-Champaign



## Research Questions

How effective are role-play scenarios in teaching the responsible conduct of research?

Can role-plays help students identify ethical issues in research and negotiate workable solutions?

## Method

### Role-Play Scenario Development

We developed nine role-play scenarios: *Authorship, Conflict of Interest, Mentoring, Peer Review*; compliance with regulations on *Human Participants, Animal Subjects, and Hazardous Substances*; and potential whistle-blowing situations *Professional Relationships* and *Data Management*

### Formative Assessment

Survey to assess participant reactions:  
576 participants in 14 depts/groups

### Summative Assessment

Interviews to assess long-term reactions

Case analyses to assess learning

Subjects read a case and then did “think aloud” to identify issues, describe perspectives, and propose solutions

Ability to analyze cases measured with behaviorally-anchored rating scales

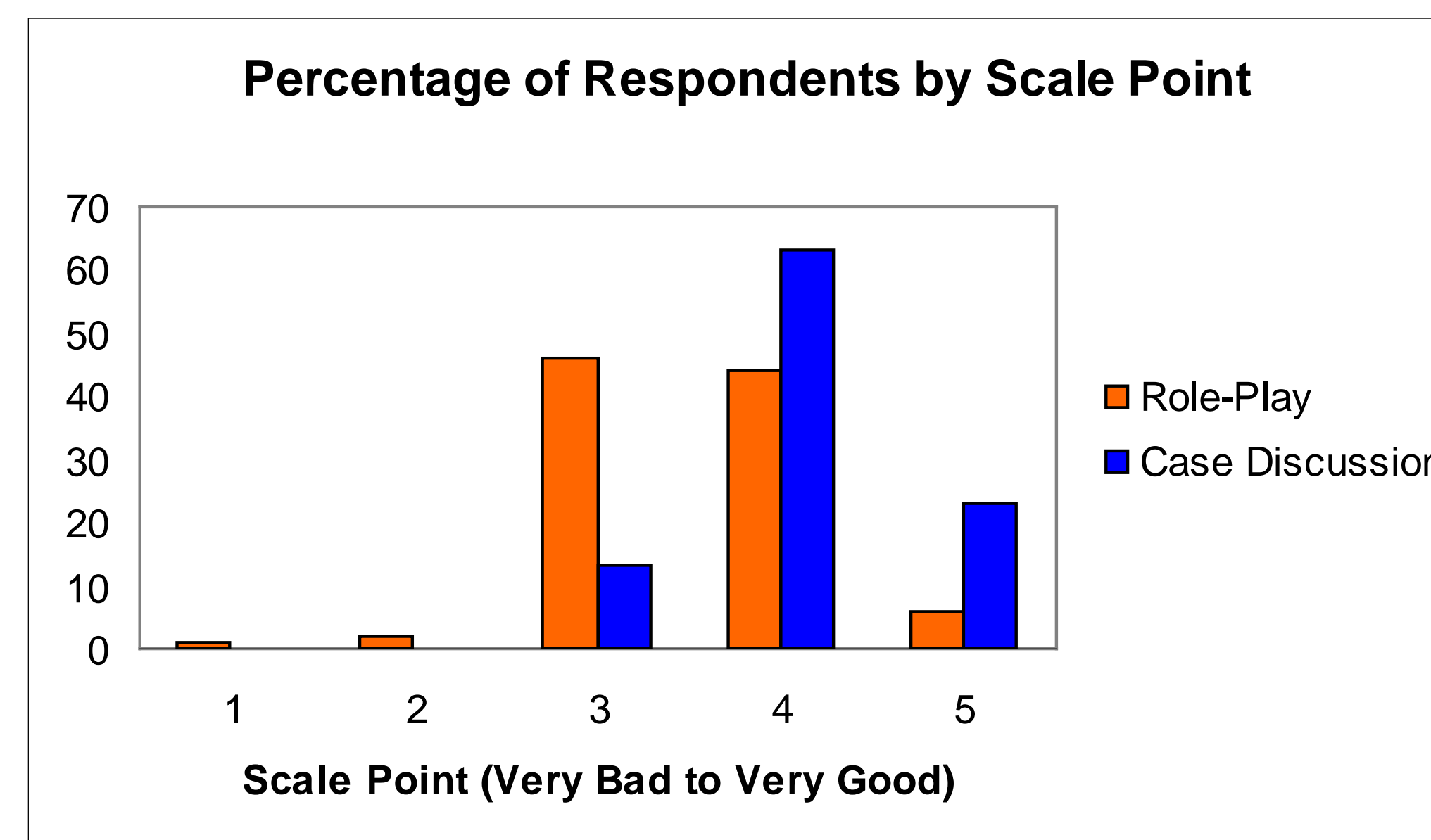
## Formative Assessment

Reactions to role-play and case discussion formats (electrical engineering students only)

Overall experience, 1 (v. bad) to 5 (v. good)

Role-play mean = 3.5 (N = 97)

Case discussion mean = 4.1 (N = 28)



Students valued communication and negotiation skills more than RCR content

*It seems like “ethics training” could be subsumed by good assertiveness training plus a set of ethical guidelines. The biggest problem people will have is not identifying unethical situations but dealing with others who perhaps have power or influence over them and do not act ethically.*

Reported advantages of role-play

Captures attention; provides motivation and experiential learning; improves the depth of understanding; shows different perspectives

Reported disadvantages of role-play

Students feel awkward; lack of prior experience to play roles; some resist participating; covers fewer issues than lecture in same time

## Summative Assessment

### Long-Term Reactions

*It's easier to take part in, instead of watching a 45-slide PowerPoint about how I shouldn't steal.*

*I had trouble really identifying with the role play I was supposed to do, because I really couldn't even imagine myself in that situation.*

### Case Analyses

Identify Moral Issues: Low Score

*The professor ... tells the journal not to accept the article ... I think it's normal that the professor shares new knowledge with the student. I think it's very hard to judge if it's ethical or not.*

Understand Perspectives: High Score

*They're concerned it isn't right not to attribute credit where credit's due and are concerned about the quality of the [rival lab's] work and their own work. [The rival lab is] concerned about getting biased reviews; they're concerned about getting credit for their work.*

## Conclusions

Reactions to role-plays are generally positive; students value motivation and building communication skills, rather than compliance with rules

Long-term outcomes from role-plays might extend beyond the ability to understand and analyze only a specific RCR topic