Interactive Education: Improving the Lecture Experience

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Disclosure & Non-Solicitation

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- This material is being offered for informational purposes only.

- No compensation was provided to the presenter.
Overview of Presentation

• Describe best practices for utilizing interactive technology to improve the lecture experience
• Demonstrate a variety of applications and features to enhance teaching effectiveness and learning retention
• Discuss your questions, ideas and suggestions throughout the program
Meet Your Colleagues
Please indicate your gender:

1. Female
2. Male

- Female: 65%
- Male: 35%
Where is your department located?

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Campus</th>
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<tbody>
<tr>
<td>60%</td>
<td>1. Health Sciences Campus</td>
</tr>
<tr>
<td>5%</td>
<td>2. Huntsman Cancer Institute</td>
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<tr>
<td>20%</td>
<td>3. Main Campus</td>
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<td>15%</td>
<td>4. Research Park</td>
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<td>0%</td>
<td>5. PCMC</td>
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<td>0%</td>
<td>6. Park City Extension Campus</td>
</tr>
<tr>
<td>0%</td>
<td>7. Off-Campus</td>
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</tbody>
</table>
What is your primary position?

1. Faculty / PI
2. Senior Administrator
3. Nurse / Research Coordinator
4. Staff Member
5. Postdoctoral / Graduate Student
6. Other

- Faculty / PI: 29%
- Senior Administrator: 5%
- Nurse / Research Coordinator: 5%
- Staff Member: 10%
- Postdoctoral / Graduate Student: 52%
- Other: 0%
How long have you been in your current position?

1. 0 - 2 yrs
2. 3 - 5 yrs
3. 6 - 10 yrs
4. More than 10 yrs
Research Training and Educational Outreach
Research Administration Training Series (RATS):

Goals & Objectives

• to ensure compliance with all federal and university regulations
• to enhance the overall productivity of members of the research community
• to develop a standardized body of knowledge, and
• to support and maintain best practice methodologies in research

www.education.research.utah.edu
What is Research?

The Regulatory Definition:

“A systematic investigation designed to develop or contribute to generalizable knowledge.”

Many forms of research exist …..
Regulatory Resources

- Food and Drug Administration
  - http://www.fda.gov/
- Department of Health and Human Services
  - Office for Human Research Protections
    - http://www.hhs.gov/ohrp/
  - Federal Office of Research Integrity
    - http://ori.dhhs.gov/
  - Public Health Service Policies on Research Misconduct
- Executive Office of the President of the United States
  - Office of Management and Budget
      - www.whitehouse.gov/omb/circulars/index.html
- National Institutes of Health
  - Bioethics Resources and the Office of Science Policy
    - http://bioethics.od.nih.gov/
Effects of Noncompliance

- Immediate loss of funding for all federally funded human subject research
- Damage to an institution’s reputation
- Jeopardizes future ability to secure research funding
- Damage to an investigator’s reputation
- Adverse effects on graduate research students
Beyond Compliance

Professional Development
• Improve job performance and potential for advancement
• Maintain competencies and share learned information
• Address specific and immediate needs in areas of responsibility

Networking and Socialization
• Peers and Colleagues
• Senior Administration
• Research Community

Marketing Opportunities
• Institution (Culture)
• Presenters (Departments)
• Participants (Advocacy)

Training + Collaboration = Success!
Interactive Technology: Applications and Features

A Data Collection & Assessment Tool

- Demographics
- Question Exercises
- Comparative Links
- Priority Rankings
- Conditional Branching
- “On-the-Fly” Polling
- Pre / Post Testing
- Case Study Analysis
- Surveys & Evaluations
- Exam Prep & Review
- Team Competitions
- Comprehensive Report Summaries
- Fully Integrated in PowerPoint® and WebCT®
Key Concepts to Consider

• Stay focused on course content and objectives
• Determine how class productivity and learning retention would be enhanced by using interactive technology
• Plan ahead. Test and retest. Seek input from a variety of collaborators to develop the most effective program
Pre-Test / Post-Test

“I’m Listening!”
“If you think you can do a thing or think you can't do a thing, you're right.”

1. Albert Einstein
2. Henry Ford
3. Benjamin Franklin
4. Nelson Mandela
5. John Wooden
“Things turn out best for those who make the best out of how things turn out”

1. Winston Churchill
2. Benjamin Franklin
3. Abraham Lincoln
4. Henry David Thoreau
5. John Wooden
“I am only one, but still I am one. I cannot do everything, but still I can do something. And I will not refuse to do something that I can do.”

1. Mahatma Gandhi
2. Helen Keller
3. Robert F. Kennedy
4. Martin Luther King, Jr.
5. Nelson Mandela
“Success is not final, failure is not fatal: it is the courage to continue that counts.”

1. Winston Churchill
2. Harry S. Truman
3. Martin Luther King, Jr.
4. Abraham Lincoln
5. Theodore Roosevelt

1. Aesop
2. Aristotle
3. Cicero
4. Confucius
5. Hippocrates
“Principles of Effective Leadership and Management”

• Empowerment
• Positive Attitude
• Determination
• Perseverance
• Commitment
Empowerment

• Foster self-confidence and self-esteem in all staff members
• Inspire workers to ‘believe in yourself; trust in your teammates’
• Henry Ford
  American Inventor
  (1863 - 1947)
Positive Attitude

• A positive will beat a negative every time!
• A little guy, who doesn’t think he’s so little, can do great big things!

John Wooden
(1910 - )
Presidential Medal of Freedom, 2003

They Call Me Coach
1988
Determination

- Strength of character to face all challenges
- The importance of always trying one’s best

Helen Keller
(1880 - 1968)
American Author and Educator
Perseverance

• Always keep the goal in sight!
• Work hard and maintain proper perspective
• Winston Churchill (1874 - 1965) British Orator, Author and Prime Minister during World War II
Commitment

• Be dedicated and show passion for both individual and team successes
• Educate and motivate; lead by example; practice, practice, practice!
• Confucius (551 - 479 BC) Chinese teacher, philosopher and political theorist
So, What Have We Learned?
“If you think you can do a thing or think you can't do a thing, you're right.”

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<th>Abraham Lincoln</th>
<th>Henry David Thoreau</th>
<th>John Wooden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top 10%</td>
<td>16%</td>
<td>11%</td>
<td>0%</td>
<td>0%</td>
<td>74%</td>
</tr>
<tr>
<td>Bottom 10%</td>
<td>30%</td>
<td>20%</td>
<td>5%</td>
<td>15%</td>
<td>30%</td>
</tr>
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5. Hippocrates
Priority Rankings

“It’s A Wonderful Life”
(No man is a failure who has friends!)
Please select in rank order your Top 3 funding priorities for FY 2007-08:

1. Capital Equipment
2. Computer Software
3. Facility Improvements
4. Hire Additional Staff
5. Increase Salaries
6. Office Furniture
7. Professional Memberships
8. Training Programs
9. Travel Expenses
Please select in rank order your Top 3 funding priorities for FY 2007-08:

- **Capital Equipment**: 20% (Other)
- **Computer Software**: 40% (Other)
- **Facility Improvements**: 33% (Other)
- **Hire Additional Staff**: 50% (Senior Administration), 40% (Facility Improvements)
- **Increase Salaries**: 40% (Postdoctoral), 33% (Other)
- **Office Furniture**: 70% (Other)
- **Professional Memberships**: 0% (Other)
- **Training Programs**: 33% (Other)
- **Travel Expenses**: 0% (Other)

Legend:
- Faculty / PI
- Senior Administration
- Nurse / Researcher
- Staff Member
- Postdoctoral
- Other
Good Clinical Practice
and Source Documentation

As the Study Coordinator, you arrive early one morning to find a message that the physician (PI) enrolled a patient in the Pediatric Intensive Care Unit during the night.

All the paperwork has been left in your mailbox to create a study file and perform the necessary follow-up.

Upon reviewing the documents, you immediately notice that the Informed Consent form used was a previously approved version rather than the one with the currently approved IRB watermark.
Select the following steps in proper sequence to remedy the situation:

1. File the correct version
2. Notify the IRB
3. Provide the parent with a copy of the current version
4. Notify the PI
5. Explain the situation and ask the parent to sign a current version
6. Include appropriate notations with the original of the obsolete version
To remedy the situation, perform the following steps in proper sequence:

1. Notify the PI (#4)
2. Explain the situation and ask the parent to sign a current version (#5)
3. Provide the parent with a copy of the current version (#3)
4. File the correct version (#1)
5. Notify the IRB (#2)
6. Include appropriate notations with the original of the obsolete version (#6)
Conditional Branching

“I’ll gladly pay you Tuesday for a hamburger today!”
Decisions, Decisions

- Should research education and training be mandatory or voluntary?
- Should records of training attendance and completion be maintained?
- Should training be offered individually, in a group setting, or both?
Mandatory or Voluntary Participation

- Implementation and Enforcement Strategy
- Duty of Care and Responsibility
- Subject Matter Expert (SME) Recruitment
- Hiring Decisions / Conditions of Employment
- Compensation Issues
- Documentation, Records and Statistics
**Participation:**
Should research ethics training be mandatory or voluntary?

- Mandatory
- Voluntary

**Official records of attendance should be maintained by:**

- Human Resources
- Research Education
- College / Department
- Multiple Areas

**Should records of training attendance and completion be maintained?**

- Yes
- No

**No, but a certificate of completion should be given to each attendee.**

**Method of Delivery:**
How should the training be delivered?
Participation in research ethics training should be:

1. Mandatory
2. Voluntary
The majority has selected **mandatory participation**. Official records of attendance should be maintained by:

1. Human Resources
2. Research Education
3. College / Department
4. Both 1 & 3
5. All of the above
So, **how** should the training be offered?

**Method of Delivery**

- Identify and understand all target audiences
- Conduct detailed Needs Assessments
- Prepare “Feature / Benefit” tables for each proposed method of delivery
- Develop Marketing and Promotional Strategies
- Evaluation Processes
- Administration Costs
Method of Delivery

Evaluate the advantages and disadvantages of each:

**Options:**
- Policy Letters, Emails & Web Postings
- Online Training Courses
- Classes, Workshops and Meetings

**Desired Outcomes:**
- Effective learning and retention (Program Quality)
- Broad-based attendance (Level of Outreach)
Level of Outreach
Policy Letters, Emails and Web Postings

1. Low
2. ...
3. ...
4. ...
5. ...
6. ...
7. ...
8. High
Level of Outreach
Online Training Courses

1. Low
2. ...
3. ...
4. ...
5. ...
6. ...
7. ...
8. High
Level of Outreach
Classes, Workshops and Meetings

1. Low
2. ...
3. ...
4. ...
5. ...
6. ...
7. ...
8. High
Program Quality
Policy Letters, Emails and Web Postings

1. Low
2. ...
3. ...
4. ...
5. ...
6. ...
7. ...
8. High
Program Quality
Online Training Courses

1. Low
2. ...
3. ...
4. ...
5. ...
6. ...
7. ...
8. High
Program Quality
Classes, Workshops and Meetings

1. Low
2. ...
3. ...
4. ...
5. ...
6. ...
7. ...
8. High
Administrative Costs
Policy Letters, Emails and Web Postings

1. Low
2. ...
3. ...
4. ...
5. ...
6. ...
7. ...
8. High
Administrative Costs
Online Training Courses

1. Low
2. ...
3. ...
4. ...
5. ...
6. ...
7. ...
8. High
Administrative Costs
Classes, Workshops and Meetings

1. Low
2. ...
3. ...
4. ...
5. ...
6. ...
7. ...
8. High
Bubble size = Administrative Costs

- Policy Letters, Emails and Web Postings, 2.2
- Online Training Courses, 4.9
- Classes, Workshops and Meetings, 7.3

Program Quality vs. Level of Outreach

Legend:
- Policy Letters, Emails and Web Postings
- Online Training Courses
- Classes, Workshops and Meetings
Case Studies

The Socratic Method
Public Health Service (PHS) Regulations

• “Research misconduct means fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.”

42 CFR 93.103
Research Misconduct Definition

- “Fabrication is making up data or results and recording or reporting them”
- “Falsification is manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record”
- “Plagiarism is the appropriation of another person’s ideas, processes, results, or words without giving appropriate credit.”
An allegation of sexual harassment was filed by a post-doctoral fellow against a junior faculty member. The two worked together for 18 months in a lab facility conducting a bone marrow study. The institution investigated and determined the allegation to be true.

Is this an example of Research Misconduct?

1. Yes
2. No
A senior faculty member fails to reveal a significant financial interest on a conflict of interest disclosure relevant to an awarded NSF grant application.

Is this an example of Research Misconduct?

1. Yes
2. No

25% Yes
75% No
A new psychological assessment scale is developed by a junior faculty member. His colleagues include the new scale in a project proposed for NIH funding without his knowledge.

Is this an example of Research Misconduct?

1. Yes
2. No
The senior faculty member in a laboratory requires her name on all papers published from her lab, whether or not she made substantive contributions to the work.

Is this an example of Research Misconduct?

1. Yes
2. No

35% Yes
65% No
“On-the-Fly” Polling Question:
Do University regulations override Federal policy?

1. Yes  83%
2. No  17%
Conclusions

• Not all unethical or inappropriate behavior in the conduct of research constitutes “research misconduct” under federal or university policies.

• A variety of institutional policies beyond research misconduct may be relevant to addressing problems.
Short Film:
Budget Preparation and Development
On a scale of 1 (Low) to 5 (High),
Rate the effectiveness of the film:

Duration: 2 minutes
Surveys and Evaluations
Take Home Points

• Focus on training program content and educational outreach objectives
• Implement training and educational outreach methodologies based upon your unique institutional culture
• Consider incorporating interactive technology for instruction, data collection and assessment purposes
Reminder ..... 

Please return your ResponseCard®

Thank You!