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A Career Planning Tool For Chemical Scientists





ChemIDP is an Individual Development Plan designed specifically for graduate students and postdoctoral scholars in the chemical sciences. Through immersive, self-paced activities, users explore potential careers, determine specific skills needed for success, and develop plans to achieve professional goals. ChemIDP tracks user progress and input, providing tips and strategies to complete goals and guide career exploration.

https://chemidp.acs.org

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Career Consultant Directory





- ACS Member-exclusive program that allows you to arrange a one-on-one appointment with a certified ACS Career Consultant.
- Consultants provide personalized career advice to ACS Members.
- · Browse our Career Consultant roster and request your one-on-one appointment today!

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ACS Scholar Adunoluwa Obisesan

BS, Massachusetts Institute of Technology, June 2021 (Chemical-biological Engineering, Computer Science & Molecular Biology)

"The ACS Scholars Program provided me with monetary support as well as a valuable network of peers and mentors who have transformed my life and will help me in my future endeavors. The program enabled me to achieve more than I could have ever dreamed. Thank you so much!"

GIVE TO THE



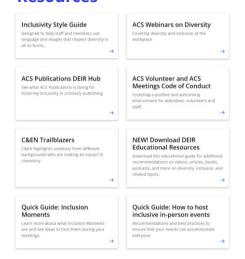
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ACS OFFICE OF DEIR

Advancing ACS' Core Value of Diversity, Equity, Inclusion and Respect

Resources





Diversity, Equity, Inclusion, and Respect

Adapted from definitions from the Ford Foundation Center for Social Justice:

Equity**

Seeks to ensure fair treatment, equality of opportunity, and fairness in access to information and resources for all. We believe this is only possible in an environment built on respect and dignity. Equity requires the identification and elimination of barriers that have prevented the full participation of some groups.

Diversity**

The representation of varied identities and differences (race, ethnicity, gender, disability, sexual orientation, gender identity, national origin, tribe, caste, socio-economic status, thinking and communication styles, etc.). collectively and as individuals. ACS seeks to proactively engage, understand, and draw on a variety of perspectives.

Inclusion**

auties a cutture of beionging by actively inviting the contribution and participation of all people. Every person's voice adds value, and ACS strives to create balance in the face of power differences. In addition, no one person can or should be called upon to represent an eatire community.

Respect

Ensures that each person is treated with professionalism, integrity, and ethics underpinning all interpersonal interactions.

https://www.acs.org/diversity





















































https://www.youtube.com/c/ACSReactions/videos

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Looking for a new science podcast to listen to?



Check out Tiny Matters, from the American Chemical Society.



Sam Jones, PhD Science Writer & Exec Producer



Deboki Chakravarti, PhD Science Writer & Co-Host



visit http://www.acs.org/tinymatters or scan this QR code



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ACS Industry Member Programs

ACS Industry Matters

ACS member only content with exclusive insights from industry leaders to help you succeed in your career. #ACSIndustryMatters

Preview Content: acs.org/indnl

ACS Innovation Hub LinkedIn Group

Connect, collaborate and stay informed about the trends leading chemical innovation.

Join: bit.ly/ACSinnovationhub

ACS on Campus is the American Chemical Society's initiative dedicated to helping students advance their education and careers.





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ACS Career Resources



Virtual Office Hours



https://www.acs.org/careerconsulting.html

Personal Career Consultations



https://www.acs.org/careerconsulting.html

Linked in Learning



https://www.acs.org/linkedInlearning

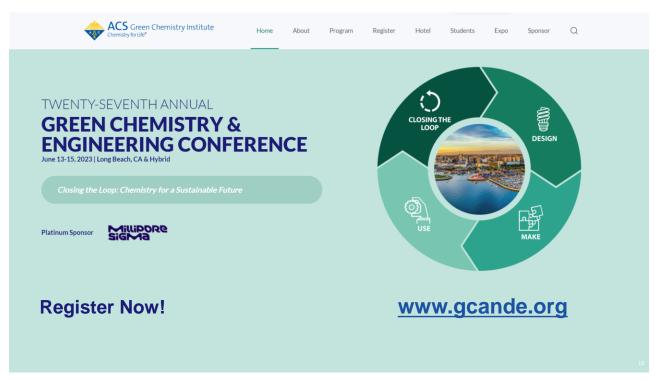
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Wednesday, July 19, 2023 | 2-3pm ET

Fundamentals of Intellectual Property for Scientists

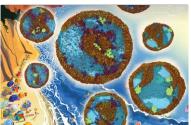
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How Students Can Help Us Teach Better: Moving Beyond Student Ratings



- Kevin Gable, Oregon State University
- Valerie Wright, American Sociological Association (ASA)
- Emily Miller, Association of American Universities (AAU)

This ACS Webinar is co-produced with the Society Committee on Education (SOCED) and ACS Education.

Link to presentation slides: https://www.acs.org/content/dam/acsorg/acs-webinars/2023/Slides/2023-07-13-student-feedback-acsedu1.pdf

Link to resource list: https://www.acs.org/content/dam/acsorg/acs-webinars/2023/Slides/2023-07-13-student-feedback-acsedu1-resources.pdf





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Audience Survey Question ANSWER THE QUESTION ON THE INTERACTIVE SCREEN IN ONE MOMENT

Which of the following best describes you?

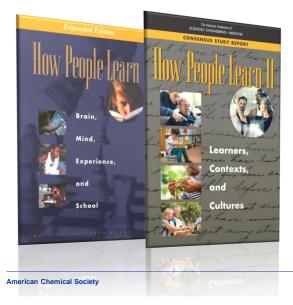
- Undergraduate student
- · Graduate student
- Instructor
- Administrator
- Other (Let us know in the questions box)

^{*} If your answer differs greatly from the choices above tell us in the chat!



A shifting educational landscape



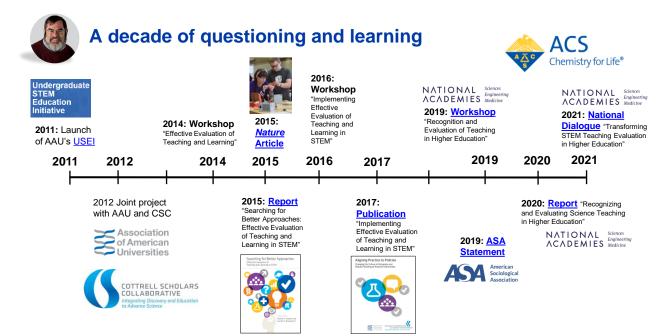


As we've learned more about how people learn, we are...

- Shifting vocabulary from teaching to learning
- Shifting focus from being educatororiented to being student-oriented
- Shifting roles of educators from being the expert to being the guide
- Shifting pedagogical approaches from being passive to being active
- Shifting assessments from being evaluative to being formative, as well as evaluative

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AAU = Association of American Universities; **ASA** = American Sociological Association; **NASEM** = National Academies of Sciences, Engineering, and Medicine



National Dialogue Evaluating Teaching Effectiveness









National Academies Collaborations with Partner Organizations

- Recognizing and Evaluating Science Teaching in Higher Education Workshop & Report (Sept 2019)
- National Dialogue on Transforming STEM Teaching Evaluation in Higher Education Virtual Workshop (Jan 2021)

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September 2019

A collection of activities across ACS



1. Statement on Student Evaluations of Teaching American Sociological Association

https://www.asanet.org/wp-

content/uploads/asa_statement_on_student_evaluations_of_teaching_feb132020.pdf

2. SCIENCE EDUCATION POLICY https://www.acs.org/policy/publicpolicies/education/educationpolicies.html

Science literacy and expertise are essential to the function of modern society. Understanding science illeracy and expertise are essential to the function of modern society. Understanding concepts and processes of science, including chemistry, help to make sense of and to address the complex challenges encountered every day. Scientists and engineers with a diversity of abilities, identities, experiences, and backgrounds drive an innovative economy and improve the well-being of all global citizens. Preparing current and future learners with scientific knowledge and skills to contribute to society and to address global health, environmental, and economic challenges requires investment at all levels of STEM (science, technology, companying and mathematicals) education. engineering, and mathematics) education





Vision Mission Goal 3: Support and recognize chemistry educators and mentors

https://americanchemicalsocietymy.sharepoint.com/:p:/g/personal/j wesemann acs org/EfsR7esfJBZOiNg-0dR58IMBZzgTcBNp2ZLFMriEtlrD5w?e=Y8NG2b

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What You Will Learn

- ✓ What are the risks associated with student ratings and evaluations of teaching.
- ✓ How can we obtain student feedback effectively
- ✓ What are the steps for implementing student feedback mechanisms

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Student evaluations of teaching... are used for evaluation





- SETs do not measure teaching effectiveness
 - Meta-analysis of faculty's teaching effectiveness:
 Student evaluation of teaching ratings and student learning are not related (White and Gonzalez, 2017).
- Biases in SET's hinders faculty diversity on campuses
 - Impacts tenure, promotion, and contract renewals
 - Reduces number of underrepresented role models for students

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Audience Survey Question

ANSWER THE QUESTION ON THE INTERACTIVE SCREEN IN ONE MOMENT

How is end-of-course feedback from students used in courses offered on your campus? (check all that apply)

- · Used for improvement
- Used for formal evaluation
- · Not collected
- Other (Let us know in the questions box)

* If your answer differs greatly from the choices above tell us in the chat!

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Student evaluations of teaching... are biased toward women





Direct Gender Bias in Student Evaluations

- Rated lower even in online experiments
 - What's in a Name: Exposing Gender Bias in Student Ratings of Teaching (MacNell, Driscoll, and Hunt, 2015).

More likely to be referred to as teachers rather than professors

 Women Are Teachers, Men are Professors: A Study of Student Perceptions (Miller and Chamberlin, 2000).

Rated lower than male instructors despite similar learning outcomes

- Persistent Inequity: Gender and Academic Employment (Curtis, 2011).
- Gender biases in student evaluations of teaching (Boring, 2017).

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Student evaluations of teaching... are biased toward women



- Indirect Gender Bias in Student Evaluations
 - Most likely to show up in open-ended questions
 - Students tend to evaluate personality, manners, and appearance
 - Students expect women to be more helpful and sensitive
 - Women are evaluated more closely than men



 Evaluating Student Evaluations of Teaching: a Review of Measurement and Equity Bias in SETs and Recommendations for Ethical Reform (Kreitzer and Sweet-Cushman, 2022).

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Student evaluations of teaching... are biased toward minorities





- Students rate minority faculty more negatively than whites
- Reduces career pipelines
 - leads to higher attrition and lower achievement
- Blacks (particularly black men) and
 Asians receive the lowest evaluations

 The role of perceived race and gender in the evaluation of college teaching on RateMyProfessors.Com (Reid, 2010).

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Reducing bias in student evaluations of teaching





- Focus on feedback not ratings
- Avoid comparing faculty to department means
- Use specific questions
- Eliminate open-ended qualitative comments
- Interpret with caution

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Audience Survey Question

ANSWER THE QUESTION ON THE INTERACTIVE SCREEN IN ONE MOMENT

What approaches are you using to give or get student feedback? (check all that apply)

- Activities embedded into course
- Student surveys during course
- End of course student surveys
- End of course student evaluations of teaching
- Other (Let us know in the questions box)

^{*} If your answer differs greatly from the choices above tell us in the chat!







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A Focus on Faculty Rewards Systems

Reform in teaching evaluation is one essential ingredient in creating institutional cultures that allow a more meaningful and deliberate balance between teaching and research, specifically when it provides fair and equitable measures of teaching effectiveness as well as actionable guidance on teaching practice.

Faculty lewards



AAU Teaching Evaluation Learning Community



Funded by the Sarah Gilbert & Carl Wieman Charitable Fund and the Howard Hughes Medical Institute, the learning community and teaching evaluation demonstration projects aim to:

- Influence the way faculty members view their teaching responsibilities
- Implement more effect and holistic models to evaluate teaching
- Create better systems to recognize and reward evidence-based and equitable educational practices
- Integrate concepts of justice and equity into the faculty rewards system

1200 New York Ave, NW, Washington, DC, 20005, Suite 550 ● 202.408.7500 ● www.aau.edu ● @AAUniversities

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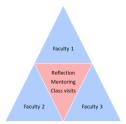


KU - Chemical & Petroleum Engineering

Goal: Develop and assess a new system for teaching evaluation that aligns with evidence-based inclusive practice, relies on multiple sources, and overlaps with other departmental processes.

Key Features:

1- Create Faculty Peer Triads



Builds On: A model developed and tested in TEval/Benchmarks project.







2- Empower Teaching Evaluation Committee to utilize multidimensional rubric to assess teaching effectiveness



Graphic developed by the KU Center for Teaching Excellence

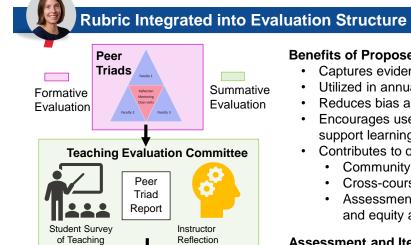
Project Leads:

Susan Williams & Prajna Dhar, Chemical & Petroleum Engineering

Andrea Follmer Greenhoot, Center for Teaching Excellence



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Evaluation and Recommendations using

Benchmarks Rubric

Multiyear

Evaluation (P&T

Committee)

Annual

Evaluation

(Chair)

Benefits of Proposed System:

- Captures evidence from multiple sources
- Utilized in annual and multiyear evaluation
- Reduces bias and is more equitable
- Encourages use of effective practices known to support learning and inclusion in students
- Contributes to other vital departmental processes
 - Community building
 - Cross-course coordination
 - Assessment and improvement of student learning and equity at the degree level

Assessment and Iterative Improvement of the System:

- Is it reliable, feasible and sustainable?
- Does it diminish bias?
- Does it support improved teaching and learning?

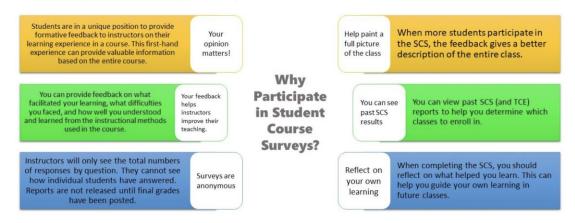
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Students provide a unique perspective on a course.

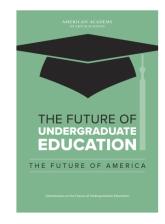


https://scs.arizona.edu/



Students as Instructional Coaches





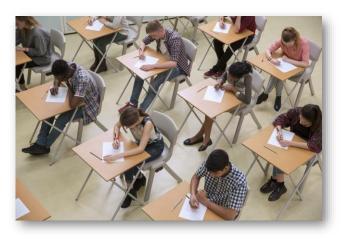
https://www.amacad.org/publication/becoming-better-college-teacher-if-youre-lucky

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A moment for reflection





What is the most informative student feedback you have received?

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Resources







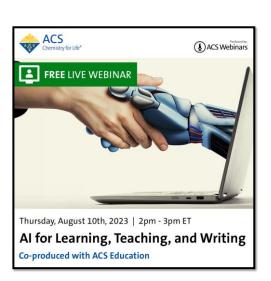
https://www.acs.org/content/dam/acsorg/acs-webinars/2023/Slides/2023-07-13-student-feedback-acsedu1-resources.pdf

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Next Event on August 10 @ 2pm ET!







MEET THE EXPERTS

Assistant Professor of Chemistry, University of Hawaii-Manoa

André Silva Pimentel

Chemistry Associate Professor and Graduate Coordinator, Pontificia Universidade Católica do Rio de Janeiro

Kirk Schanze

Editor-in-Chief, ACS Applied Materials & Interfaces, Chemistry Chair and Professor, University of Texas at San Antonio

Student Liaison, ACS Undergraduate Student Advisory Board

Alivia Ishee

Student Liaison, ACS Undergraduate Student Advisory Board

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https://www.acs.org/acs-webinars/library/ai-in-education.html





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Fundamentals of Intellectual Property for Scientists

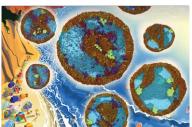
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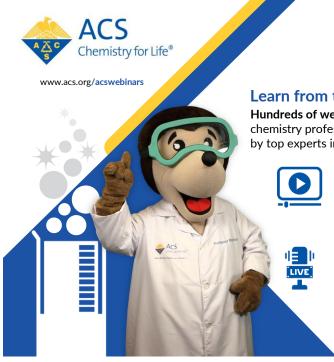
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