

PTaP.HE - Consent

INFORMED CONSENT TO PARTICIPATE IN A RESEARCH PROJECT

Project Title: Get the Facts Out: Changing the Conversation around STEM Teacher Recruitment

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Purpose and Description: The purpose of this study is to inform and improve national and local campaigns to get the facts out about the teaching profession. We are conducting research to understand which of the recommended strategies in the Get the Facts Out toolkit are most effective, both in terms of impact on faculty and student perceptions and faculty uptake over time. Our initial work has indicated the possibility that the effectiveness of these strategies may vary by discipline and student culture. To answer these questions, we will monitor student and faculty perceptions of the teaching profession and their interactions with the recommended activities in the toolkit via annual surveys. Additionally, we will visit a diverse set of Study Sites annually to learn about their experiences with the toolkit and the impact on student and faculty perceptions of the profession.

As a research participant, we are asking you to complete a survey or to participate in an interview about the perceptions of teaching as a profession. This data will only be used in a de-identified manner. If your name is being collected now, it is only for the purpose of matching your responses to your future responses, if you choose to participate in a survey or interview at a later date. All names/identifiers will be stripped from the data before the data are analyzed and all data reporting will be done in aggregate.

There are no foreseeable risks or discomforts to participants who participate beyond the time spent to participate. There are also minimal direct benefits to participants beyond the potential of personal satisfaction in improving the perceptions of teaching as a profession; however, your participation will have the indirect benefit of aiding in the understanding of the views of the profession of teaching and hopefully help faculty understand how to better identify and support future teachers.

We will take every precaution to protect your individual information. Data collected from surveys will have personal identifiers stripped before any analysis is completed and only data in aggregate will be reported. All data collected and any notes taken during interviews will be kept on a password protected computer or if hand written, in a locked filing cabinet in a locked office. Research reports will include aggregate results and will not provide any individually identifiable information but will include discipline and institution identification.

The Colorado Governmental Immunity Act determines and may limit the legal responsibility of the Colorado School of Mines (CSM) if an injury happens because of this study. Claims against CSM must be filed within 180 days of the injury.

Questions about participants' rights may be directed to Human Subjects Team at CSM at humansubjects@mines.edu

Participation is voluntary. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled. Having read the above and having had an opportunity to ask any questions, please complete the survey. **By completing the survey, you will give permission for your participation.** You may keep this form for future reference.

PTaP.HE statements

Following are a number of statements that may or may not describe your beliefs about grade 7-12 math and science teaching. You are asked to rate each statement by selecting one of the following options (unless otherwise indicated):

- **Strongly Disagree**
- **Disagree**
- **Neutral**
- **Agree**
- **Strongly Agree**

Choose one of the above five choices that best expresses your feeling about the statement. If you don't understand a statement, leave it blank. If you have no strong opinion, choose Neutral.

1. Student loan forgiveness programs are available to grade 7-12 math and science teachers.

- Strongly disagree Disagree Neutral Agree Strongly agree

2. I regularly discuss general career options with students.

- Strongly disagree Disagree Neutral Agree Strongly agree

3. I regularly discuss grade 7-12 math or science teaching as a career option with students.

- Strongly disagree Disagree Neutral Agree Strongly agree

4. I am selective about who I encourage to become a grade 7-12 math or science teacher.

- Strongly disagree Disagree Neutral Agree Strongly agree

5. I have at least one colleague in my department who thinks grade 7-12 math and science teaching is a valuable profession.

- Strongly disagree Disagree Neutral Agree Strongly agree

6. I have the name and contact information of someone at my institution who can tell students how to get certified as a grade 7-12 math or science teacher.

- Strongly disagree Disagree Neutral Agree Strongly agree

7. I think grade 7-12 math or science teaching would be an enjoyable career day-to-day.

- Strongly disagree Disagree Neutral Agree Strongly agree

8. I think grade 7-12 math or science teaching would be a fulfilling career for a STEM major.

- Strongly disagree Disagree Neutral Agree Strongly agree

9. Other faculty in my department discuss grade 7-12 math or science teaching as a career option with students.

- Strongly disagree Disagree Neutral Agree Strongly agree

10. Students are encouraged to consider grade 7-12 math or science teaching by other faculty in my department.

- Strongly disagree Disagree Neutral Agree Strongly agree

11. I discourage our majors from pursuing grade 7-12 math or science teaching.

- Strongly disagree Disagree Neutral Agree Strongly agree

12. What percentage of STEM students do you think expressed some level of interest when answering the following question: "*How interested are you in being a middle or high school teacher?*"

- less than 5%
 5-10%
 10-20%
 20-40%
 40-60%
 60-80%
 more than 80%

13. I believe that grade 7-12 math or science teaching is a good back up plan for students when they can't secure other full-time employment.

- Strongly disagree Disagree Neutral Agree Strongly agree

14. Those who go into grade 7-12 math or science teaching tend to be academically weaker students.

- Strongly disagree Disagree Neutral Agree Strongly agree

15. Earning a teaching license takes too much time.

- Strongly disagree Disagree Neutral Agree Strongly agree

16. I would feel comfortable if one of my strongest students went to graduate school.

- Strongly disagree Disagree Neutral Agree Strongly agree

17. I would feel comfortable if one of my strongest students went into industry.

- Strongly disagree Disagree Neutral Agree Strongly agree

18. I would feel comfortable if one of my strongest students became a grade 7-12 math or science teacher.

- Strongly disagree Disagree Neutral Agree Strongly agree

19. I would be happier if my strongest students, even those who have expressed an interest in grade 7-12 math or science teaching, became college professors rather than becoming grade 7-12 teachers.

- Strongly disagree Disagree Neutral Agree Strongly agree

20. Nearly everyone is capable of understanding math and science if they work at it.

- Strongly disagree Disagree Neutral Agree Strongly agree

21. Many students just don't have the natural ability to succeed in my subject area.

- Strongly disagree Disagree Neutral Agree Strongly agree

22. Almost all students can learn any subject with dedication.

- Strongly disagree Disagree Neutral Agree Strongly agree

23. I consider grade 7-12 math or science teaching a STEM career.

- Strongly disagree Disagree Neutral Agree Strongly agree

24. Please choose "**Agree**" to show that you are not a robot.

- Strongly disagree Disagree Neutral Agree Strongly agree

25. It is beneficial for students to try another career before becoming a grade 7-12 math or science teacher.

- Strongly disagree Disagree Neutral Agree Strongly agree

26. All grade 7-12 science teachers are scientists.

- Strongly disagree Disagree Neutral Agree Strongly agree

27. Students in my department who become grade 7-12 math or science teachers are giving up their identity as a scientist or engineer.

- Strongly disagree Disagree Neutral Agree Strongly agree

28. Teaching pays a lot less than most other careers a student can get with the same degree.

- Strongly disagree Disagree Neutral Agree Strongly agree

29. Grade 7-12 math and science teachers get paid, on average, better than college/university math and science faculty members.

- Strongly disagree Disagree Neutral Agree Strongly agree

30. I would be just as proud to tell people that I am a grade 7-12 math or science teacher as I am to tell them that I am a faculty member at my current institution.

- Strongly disagree Disagree Neutral Agree Strongly agree

31. I would be willing to be a grade 7-12 math or science teacher for a semester.

- Strongly disagree Disagree Neutral Agree Strongly agree

32. Grade 7-12 math and science teaching is more stressful on average than other careers.

- Strongly disagree Disagree Neutral Agree Strongly Agree

33. What fraction of all grade 7-12 teachers remain in the profession at year 5? Choose one:

- 28%
 41%
 59%
 79%
 90%

34. Grade 7-12 teachers have competitive benefits compared to other careers.

- Strongly disagree Disagree Neutral Agree Strongly agree

35. On average, grade 7-12 teachers can retire before age 60 and not have to work after retirement.

- Strongly disagree Disagree Neutral Agree Strongly agree

36. What do you think the starting pay would be for a grade 7-12 math or science teacher in a district where students from your department are most likely to be employed? Choose one:

- \$30,000 or less
 About \$40,000
 About \$50,000
 About \$60,000
 \$70,000 or more

37. What do you think the starting pay is for the average graduate with a bachelor's from your department in their first permanent job? Choose one:

- \$30,000 or less
- About \$40,000
- About \$50,000
- About \$60,000
- \$70,000 or more

38. What do you think the mid-career salary is for a grade 7-12 math or science teacher in your local district? Choose one:

- \$50,000 or less
- About \$60,000
- About \$70,000
- About \$80,000
- \$90,000 or more

39. Grade 7-12 teachers typically have strong relationships with their colleagues.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

40. Grade 7-12 teachers have control over what and how they teach.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

41. Classroom management is one of the biggest challenges that grade 7-12 teachers face.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

42. The vast majority of teachers feel respected by parents.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

43. Grade 7-12 teachers in the U.S. rate their lives higher than nearly all other occupation groups.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly Agree

Demographics

* 44. What is the name of your institution?

45. Which of the following best describes your role?

- Tenured or tenure-track faculty
- Regular faculty/term faculty/teaching faculty (i.e. your position is permanent and your contract is 1 - x years in length)
- Full-time short-term faculty (e.g. Visiting faculty, etc.)
- Part-time teaching faculty (e.g. Adjunct faculty, etc.)
- Full-time research faculty (i.e. you are supported by grant or fellowship funds apart from the regular university budget)
- Part-time research faculty
- Emeritus
- Other (please specify)

46. What percentage of your official responsibilities include teaching (versus research, service, administrative duties, etc.)? Please enter as a percentage of full-time.

0 100

47. How many years of teaching experience do you have as instructor of record (at any level: K-20)?

- Less than 1 year
- 1 to 5 years
- 6 to 10 years
- 11 to 20 years
- More than 20 years

48. Which of the following best describes your department?

- Mathematics
- Chemistry
- Physics
- Computer science
- Engineering
- Biological Sciences
- Earth Sciences
- Other (please specify)

49. What is the highest degree offered by your department?

- Ph.D.
- Masters
- Bachelors
- Associates
- Other (please specify)

50. I identify as

- Female
- Male
- Gender Fluid
- Prefer not to say
- Other (please specify)

51. I am... (choose all that apply)

- White or Caucasian
- Black or African American
- Hispanic or Latino
- Asian or Asian American
- American Indian or Alaska Native
- Native Hawaiian or other Pacific Islander
- Middle Eastern or North African
- Prefer not to say
- Other (please specify)

Perceptions of Teaching as a Profession for Higher Education: Year 5

Faculty Strategy Implementation

52. During a typical year, when classes are in session, how often do you interact with students in classes, meetings, labs, office hours, or other contexts as part of your university role?

	Never	Rarely	About once a month	Weekly	Daily
Undergraduate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Graduate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

53. Within the last year, how frequently have you had a conversation about teaching as a profession with each of the following?

	Never	Rarely	About once a month	Weekly	Daily
Students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advisors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local teachers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify audience and estimate frequency)

54. How many members of each of the following audiences do you believe you have reached through conversations about teaching or the use of other materials (e.g. posters, flyers, etc.)?

	0	1-10	11-50	51-100	More than 100
Students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advisors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local teachers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

55. How often do you actively seek out opportunities to share information about teaching as a profession with others?

	Never	Rarely	About once a month	Weekly	Daily
Frequency:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 56. Have you heard of *Get the Facts Out*?

- Yes
- No
- Unsure

FSI: GFO Summary

57. *Get the Facts Out* (GFO) is a longitudinal NSF study focused on changing the conversation around STEM teacher recruitment by correcting common misperceptions about the teaching profession. It is a partnership between the Colorado School of Mines, the American Physical Society, the American Association of Physics Teachers, the American Chemical Society, and the Association of Mathematics Teacher Educators.

Do you think you have heard about GFO before today?

Yes

No

Faculty Strategy Implementation (II)

58. Where did you learn about *Get the Facts Out*? (check all that apply)

- National conference
- Local or regional conference
- Faculty colleague
- GFO website
- Email announcement / newsletter
- Through a national society
- Facebook
- Instagram

Other (please specify)

59. What is the name of the venue or person identified above, if applicable?

* 60. Have you used any of the *Get the Facts Out* materials or messages?

- Yes, I have used some of the materials or messages.
- No, I have not used any of the materials or messages.

Faculty Strategy Implementation (IIIa)

61. Briefly describe how you have used the *Get the Facts Out* resources, materials, or messages and in what context.

* 62. Thank you for your participation. Because you indicated that you have heard about Get the Facts Out, we would like to ask about your experience with it. Would you be willing to answer a few more questions?

- Yes
- No

Faculty Strategy Implementation (IVa)

63. How frequently have you used the following *Get the Facts Out* resources or materials?

	Never, and no plans to use in the future	Never, but DO plan to use in the future	Once or twice	Several times
Student presentation - Busting Myths About the Teaching Profession	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Data handouts (GFO handouts with facts and graphs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teachers Life by the Numbers Infographic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Select slides pulled out of a GFO presentation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
GFO Video	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty presentation - Teaching: The Best Kept Secret!	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Posters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Brochures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flyer template	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
GFO-related content on Social media	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
GFO Website	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
"Reach students" (a description of various campus venues for reaching students)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
GFO Blog article	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
"Taking the Next Step" (an outline of key information to share with an interested student)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The PTaP survey	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The PTaP.HE survey	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

64. Have you used GFO data in your recruitment efforts without using the pre-made resources (e.g. slide decks, posters, flyers, etc.)? Please explain.

65. In what venues have you used Get the Facts Out messages or materials?

- Classrooms
- Student groups or clubs
- Faculty meeting
- Advisor meeting
- Local or regional conference
- National conference
- Elsewhere within your department
- Elsewhere outside of your department
- Other (please specify)

66. Are there other ways that Get the Facts Out has influenced you, other than the use of specific materials?

67. Which of these materials did you find most helpful, and were you pleased with the outcome?

68. What challenges did you encounter when using these materials?

69. Have you modified any of the *Get the Facts Out* materials to better suit your needs?

- Yes
- No

FSI: Material Modifications

70. Please tell us about your experience modifying these materials.

Which materials did you modify?

How did you modify them?

Why did you modify them?

Perceptions of Teaching as a Profession for Higher Education: Year 5

FSI IVb-1

71. Please indicate how often you have done each the following while discussing grade 7-12 teaching with a student or colleague, since learning about *Get the Facts Out*:

Never Rarely Sometimes Frequently

Used messaging from Get the Facts Out (e.g. "Did you know there are student loan forgiveness programs for math and science teachers?").

Emphasized the key message of Get the Facts Out in interactions with others: "Teachers rate their lives better than all other occupation groups, trailing only physicians."

Stated or elicited common misperceptions about teaching as a profession.

Corrected common misperceptions about teaching as a career **when voiced** (e.g. counter statements about low salaries with: "Did you know mid-career teacher salaries typically range between \$62,000 and \$104,000?")

Compared benefits of teaching as a profession to other **academic** careers in a positive light.

Compared benefits of teaching as a profession to other **non-academic** careers students can get with the same

degree in a positive light.

Mentioned less commonly known advantages of teaching as a profession, such as work-life balance or flexibility in the classroom.

Shared locally relevant data about teaching as a profession (e.g. local salaries, your state's retirement benefits, etc.)

72. Please indicate if you have done the following on your own since learning about *Get the Facts Out*.

	Yes	No
Looked up or examined local salary, retirement, and other benefit data for grade 7-12 teachers.	<input type="radio"/>	<input type="radio"/>
Looked up or examined local salary, retirement, and other benefit data for other careers students can get with the same degree.	<input type="radio"/>	<input type="radio"/>
Requested local teacher salary, retirement, and other benefit data from GFO.	<input type="radio"/>	<input type="radio"/>
Examined your own assumptions or perceptions of grade 7-12 teaching as a career.	<input type="radio"/>	<input type="radio"/>
Created local versions of <i>Get the Facts Out</i> resources or materials (e.g. brochures, flyers, etc.)	<input type="radio"/>	<input type="radio"/>
Spoken to faculty outside of your institution about <i>Get the Facts Out</i> .	<input type="radio"/>	<input type="radio"/>

73. Please indicate if you have done any of the following since learning about *Get the Facts Out*.

- Attended a GFO workshop.
- Joined the GFO email list.
- Joined the GFO Facebook page.
- Followed the GFO Instagram account.
- Enrolled your institution as a GFO study site.
- Other interactions with GFO (please specify)

74. Do you have any other comments or suggestions for the *Get the Facts Out* team?

* 75. Would you be willing to participate in a 30-minute interview about your use and perceptions of *Get the Facts Out*?

- No, thank you.
- Yes. *Please enter your email address below.*

Faculty Strategy Implementation (IIIb)

76. Are there other ways that *Get the Facts Out* has influenced you, other than the use of specific materials?

* 77. Would you be interested in using some of the *Get the Facts Out* materials or resources on your campus? These include brochures, flyers, posters, national data on teaching, and presentations.

- Yes, I am interested.
- No, thank you.

Faculty Strategy Implementation (IVb)

* 78. Can you please tell us the **main** reasons you do not plan to use *Get the Facts Out* materials? (check all that apply)

- I don't have time.
- I couldn't find what I needed in the materials.
- I don't really like the materials.
- I don't have an opportunity to use the materials.
- We do not have a teacher preparation program.
- I do not feel knowledgeable enough about teacher preparation to use these materials.
- I am not comfortable encouraging students to become teachers.
- I do not trust the information in the materials.
- Other (please describe)

Faculty Strategy Implementation (IVc)

* 79. Which of these materials or resources do you anticipate using? (check all that apply)

- Student-facing Presentation - Busting Myths About the Teaching Profession
- Data handouts (GFO handouts with facts and graphs)
- A Teachers Life by the Numbers Infographic
- GFO Video
- Faculty-facing Presentation - Teaching: The Best Kept Secret
- Posters
- Flyer template
- Brochures
- GFO related content on social media
- GFO Website
- GFO Blog Article
- "How to reach students" advice on the GFO site
- "Taking the next step" guidance on advising interested students
- National data on teaching
- PTaP or PTaP.HE Survey Instrument
- Other (please specify)

80. How do you anticipate using those materials or resources?

81. Why do you anticipate using those specific materials or resources?

Facts about the teaching profession

Thank you for your participation. You can learn more about the teaching profession at www.GettheFactsOut.org.

Did you know...

Teachers rate their lives better than all other occupation groups, trailing only physicians. [1]

-- Gallup-Healthways poll of 172,000 U.S. working adults

Grade 7-12 science and math teachers get paid more than most college faculty.

Most teaching jobs have better retirement benefits than private industry.

There's a great deal of freedom in how you teach, how you modify activities for your individual student needs and in what way you showcase your personality through your lessons.

About 50% of STEM undergraduates have some level of interest in becoming a grade 7-12 teacher. [2]

Teachers are happy with their careers:

78% of grade 7-12 teachers are still teaching in year 5. Compared to other careers this is a very high retention rate, surpassed only by federal government positions. [3]

Intellectual challenge and satisfaction rate higher for teaching careers than private sector STEM careers for physics graduates. [4]

Salary:

In Denver, teachers start at about \$45,000 for academic-year contracts. Average STEM annual (12 month) starting salaries by major are as follows [5], [6]:

- i. Biology: ~\$40,700
- ii. Chemistry: ~\$43,600
- iii. Math: ~\$58,000
- iv. Physics: ~\$54,000

The district and state where you teach, experience, level of education, and performance can all significantly impact your salary as a teacher.

Top K-12 teachers in some states and districts can easily earn more than \$150,000, not counting bonuses, additional income for extracurriculars, or summer jobs.

Retirement:

Most US states offer a pension plan for teachers, and the average age for teachers to retire in the US is 59. For example, Colorado teachers have PERA which allows teachers to retire before age 60 with a pension of 87.5% HEI.

The typical pension is worth two to four times more than the typical corporate 401K.

[1] <https://news.gallup.com/poll/161516/teachers-love-lives-struggle-workplace.aspx>

[2] <https://www.aps.org/policy/reports/popa-reports/upload/POPASTEMReport.pdf>

[3] 2015 U.S. Dept. of Ed: Public School Teacher Attrition and Mobility in the First Five Years: Results From the First Through Fifth Waves of the 2007-08 Beginning Teacher Longitudinal Study

[4] <http://www.aip.org/statistics>

[5] "Recruiting Trends Report Archive - Collegiate Employment Research Institute." [Online]. Available:

<http://www.ceri.msu.edu/recruiting-trends/recruiting-trends-report-archive/>. [Accessed: 08-Jan-2019].

[6] "Typical Starting Salaries for Physics Bachelors," 07-Mar-2018. [Online]. Available: <https://www.aip.org/statistics/physics-trends/typical-starting-salaries-physics-bachelors>. [Accessed: 08-Jan-2019].