



2023|24 Year 5

Get The Facts Out

Faculty Strategy Implementation (FSI) Analysis



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About Get the Facts Out

Get the Facts Out (GFO) is a five-year, NSF-funded partnership of the Colorado School of Mines and four national societies: the American Physical Society, the American Chemical Society, the American Association of Physics Teachers, and the Association of Mathematics Teacher Educators. GFO is a unique project designed to reach STEM majors in a large fraction of all U.S. mathematics, chemistry, and physics departments and has the potential to address teacher shortages in these high-need STEM disciplines significantly.

Repairing the Reputation of the Teaching Profession

To change the conversation around STEM teacher recruitment at institutions across the country, GFO produces research-based content and reports that faculty can use to help improve their teacher recruitment efforts. The resources are designed to celebrate the positives of teaching and to provide students and faculty with facts that address misinformation and common misperceptions about teaching. The GFO Project Team continually works to update and improve these resources as well as provide support to the faculty who use them.

These resources, and all other content in this report, are intended to be used broadly to change the conversation around STEM teaching careers. We encourage anyone to use and distribute these materials for their intended purpose, within the terms of the [Creative Commons license described here](#).



Any opinions, findings, conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation. NSF DUE #1821710 & 1821462.

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About this Report

The Faculty Strategy Implementation (FSI) survey is appended to the end of the PTaP.HE to ascertain the degree to which GFO materials are used. In order to learn about Professor's responses to the FSI, we administered the survey directly to this group. We are not able to identify Professors individually within the broader responses to the PTaP.HE. We added some specific questions to the survey about gender, department, and whether the professors are tenured or not.

Research questions and statements include:

- How much opportunity do faculty have/seek to influence their students? (Q52-55)
- How do faculty hear about GFO? (Q56-59)
- Faculty usage of and experience with GFO resources
- Modification of GFO materials
- Anticipated future usage or non-usage of GFO resources
- Other impacts of GFO - Is GFO inspiring action/change?

(Free response questions or questions with "other – specify" sections have numbers stating how many times that general answer was mentioned by respondents. Responses with no number next to it means it was only mentioned once)

Demographics

There were approximately 240 respondents that took part in at least one question of the FSI survey. The average amount of responses was around 230 for the earlier questions and decreased to around 5-20 responses per question.

Out of the 240 responses to the question about gender identification, the results are:

Faculty Gender Information (n = 240)		
Gender	Respondents	Percentage
Male	91	37.9%
Female	137	57.1%
Other	12	5.0%
Total	240	100.0%

Out of the 239 responses pertaining to which department the respondents are affiliated with, the results are:

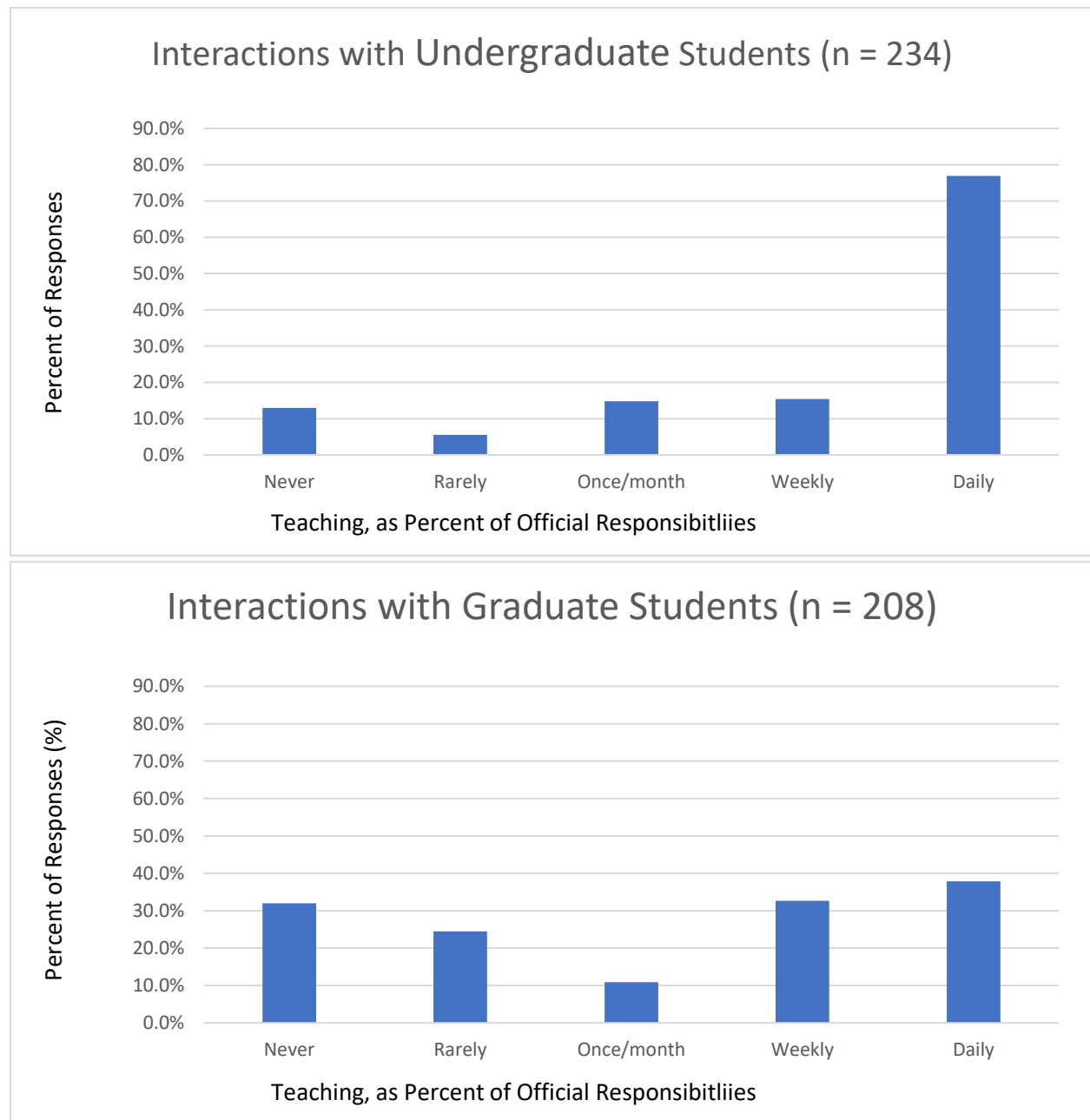
Faculty Department Information (n = 239)		
Department	Respondents	Percentage
Math	62	25.9%
Chemistry	51	21.3%
Physics	57	23.9%
Comp. Science	4	1.7%
Engineering	11	4.6%
Biology	31	13.0%
Earth Science	8	3.3%
Other	15	6.3%
Total	239	100.0%

Out of the 243 responses pertaining to whether the respondents were tenured or not, the results are:

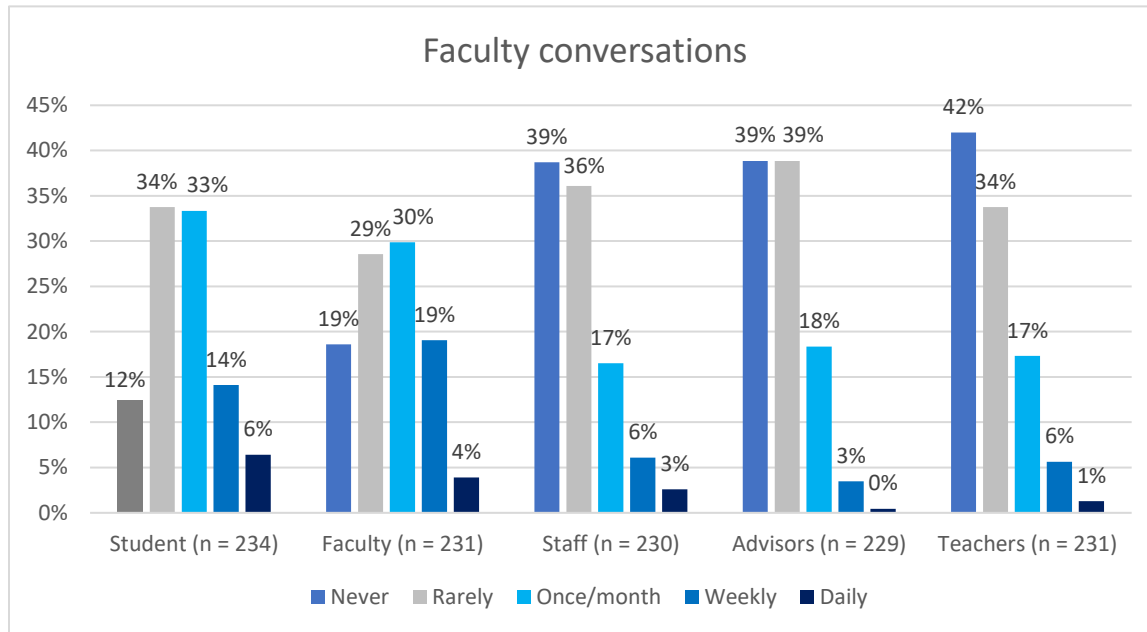
Faculty Tenure Information (n = 243)		
Type	Respondents	Percentage
Tenured/TT	162	66.7%
Non-Tenured	81	33.3%
Total	243	100.0%

Communication and Conversation between students and faculty

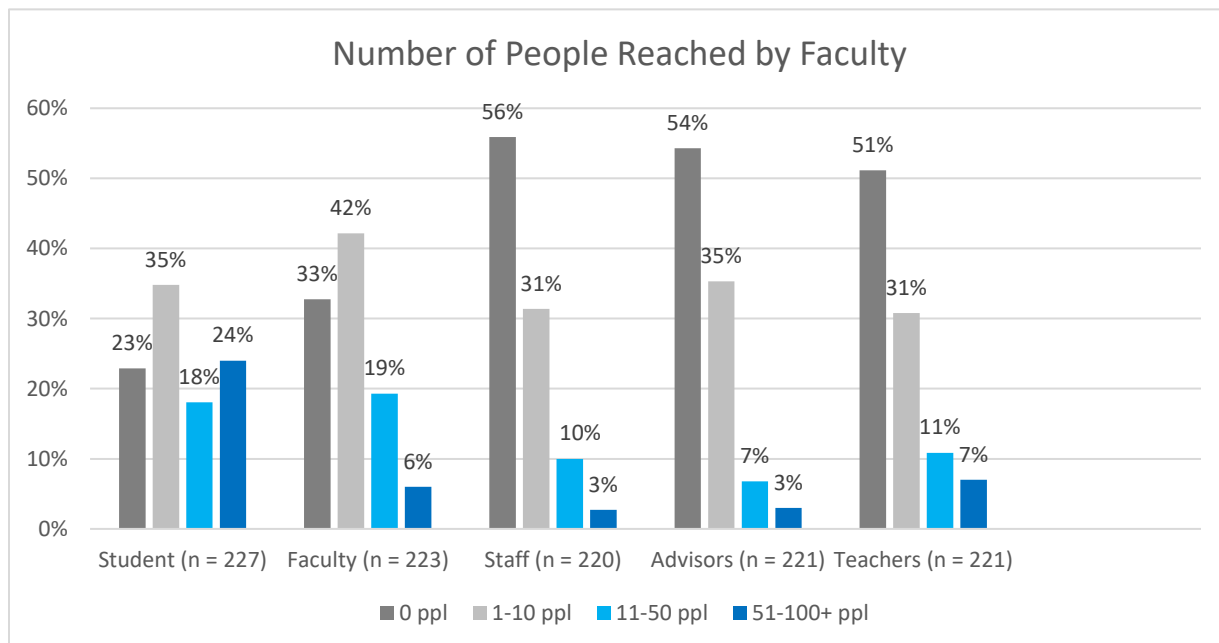
Respondents were asked how often they interact with undergraduate and graduate students in classes, meetings, labs, office hours, or other contexts as part of their university role during a typical year. Most respondents interact daily with their undergraduate students, and for graduate students, there is an even spread among never and daily, with the majority being daily. There was also a significant number of respondents that communicate weekly with their graduate students.

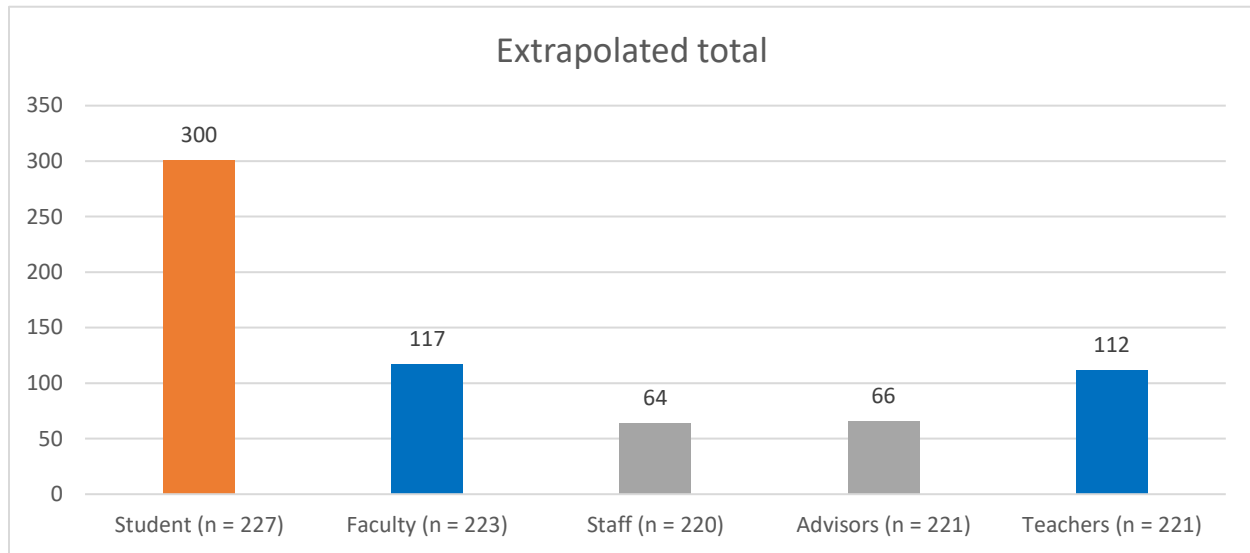


Respondents were asked how frequently they had had a conversation about teaching as a profession with students, faculty, staff, advisors, and local teachers, within the past year. Most of the respondents typically never or rarely had these conversations with these different groups except for students and faculty being rarely or once a month.

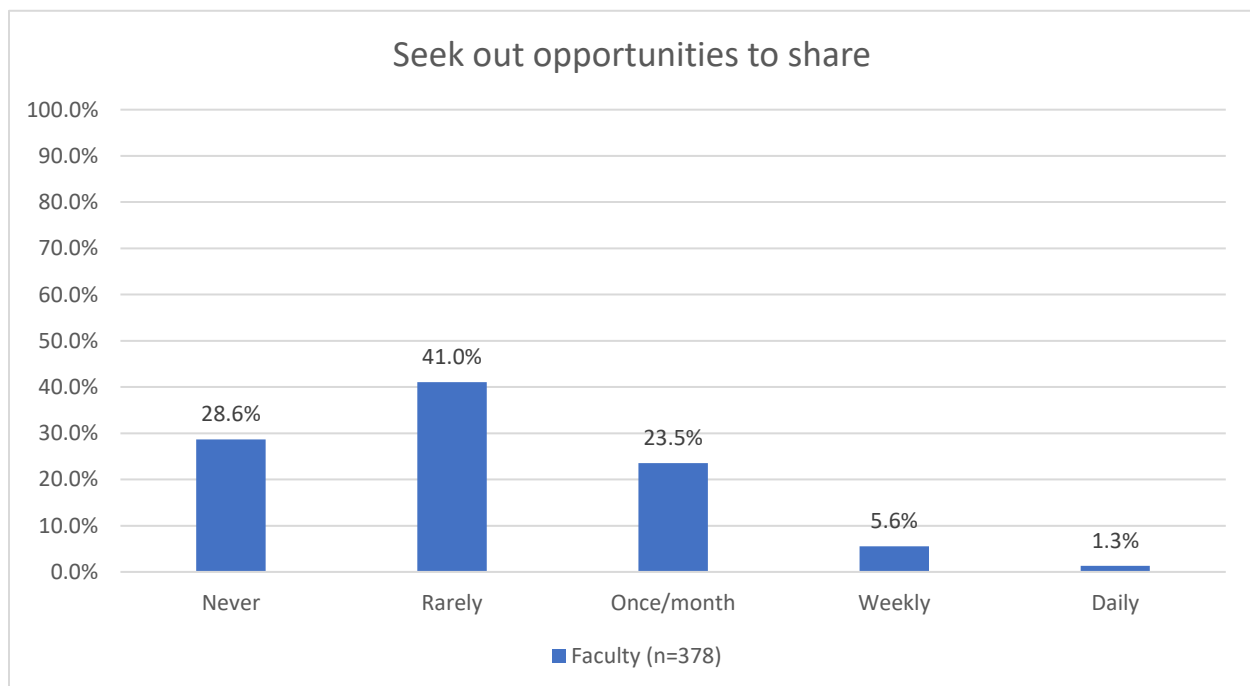


We then asked the faculty respondents how many members of each of the following audiences do they believe they have reached through conversations about teaching or the use of other materials on a scale of 0 to over 100 people. Most respondents indicated 0 people or between 1-10 people. Although, for students, there was a significant amount of responses for 51-100+ people.





We also asked respondents how often they actively seek out opportunities to share information about teaching as a profession with others. Most of the respondents rarely sought out opportunities to share information, while many of the other respondents either never share or only share about once a month.



Have faculty heard of GFO?

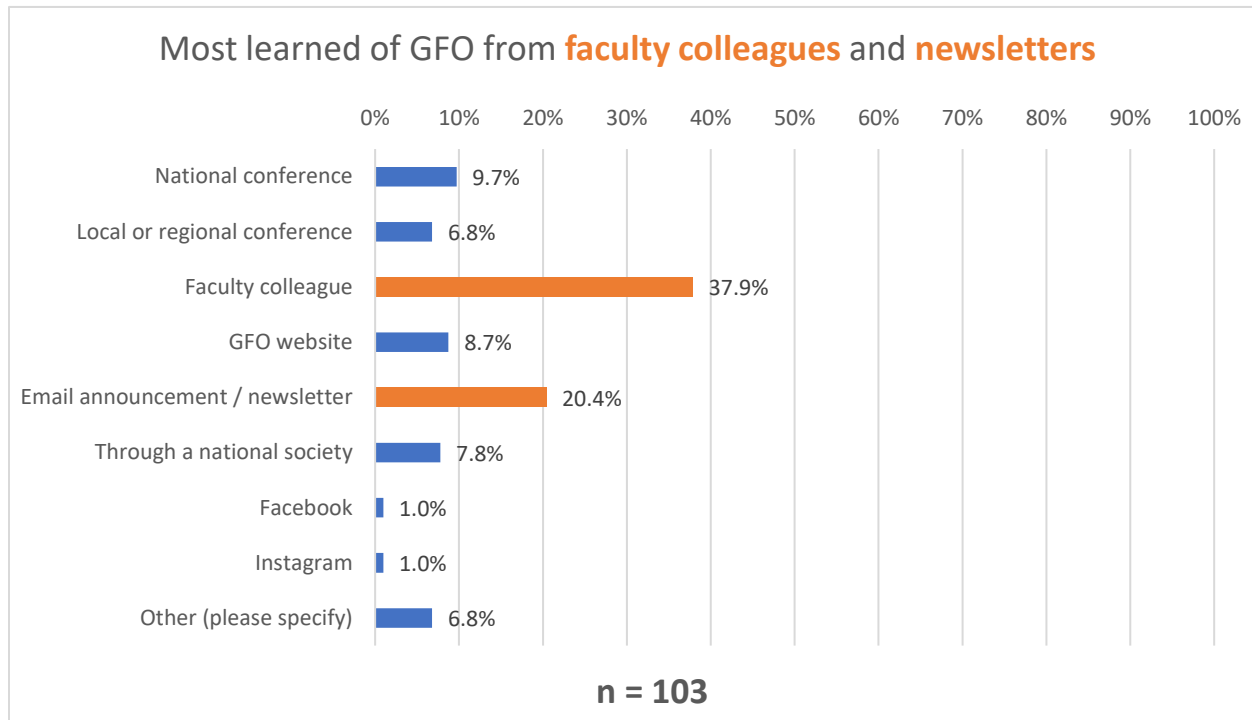
We asked respondents if they have heard of GFO and how. Most of the responses said they have never heard of GFO.

Values	Total (excl. missing for question)	
	241	
	#	%
Yes	59	24.5%
No	159	66.0%
Unsure	23	9.5%

We then mentioned that GFO is a longitudinal NSF study focused on changing the conversation around STEM teacher recruitment by correcting common misperceptions about the teaching profession and that 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. The result led to 8 respondents to say yes.

Values	Total (excl. missing for question)	
	23	
	#	%
Yes	8	34.8%
No	15	65.2%

Respondents were asked where they have heard of GFO. 37.9% of responses were under “Faculty colleague.” Social media seemed to be the least used source for learning about GFO.



The “other” responses are summarized below:

- This survey - 4
- Grant contacted us
- twitter
- PhysTEC

Respondents were asked to identify a person or venue that referred GFO to them. Most of the responses are colleagues/other faculty.

Faculty/Colleagues: (in alphabetical order)

Tonya Coffey - 3	Ellen Granger - 1
Allison Daubert - 1	Chance Hoellwarth - 1
Mike Dobranski - 1	Karel Jacobs - 3
Andrea van Duzor - 1	Alyson Lischka - 1
Steve Elliot - 3	Richard Pearson - 1
Paige Evans - 1	Donna Stokes - 1
Michael Everest - 2	Jeff Williams - 1

Physics = Blue

Chemistry = Yellow

Math = Red

Biology = Purple

National Societies and Conferences/Universities/Other:

ACS - 2	PhysTEC - 2
APS	FSU Teach faculty member
AAPT	Colorado School of Mines
AMTE Pre-conference	Cal Poly
CESAME - 2	administrator
MAA	Previous survey

Usage of and experience with GFO Information

Respondents were asked whether they have used GFO information for themselves or for others. The results were 70/30 with the majority answer being no.

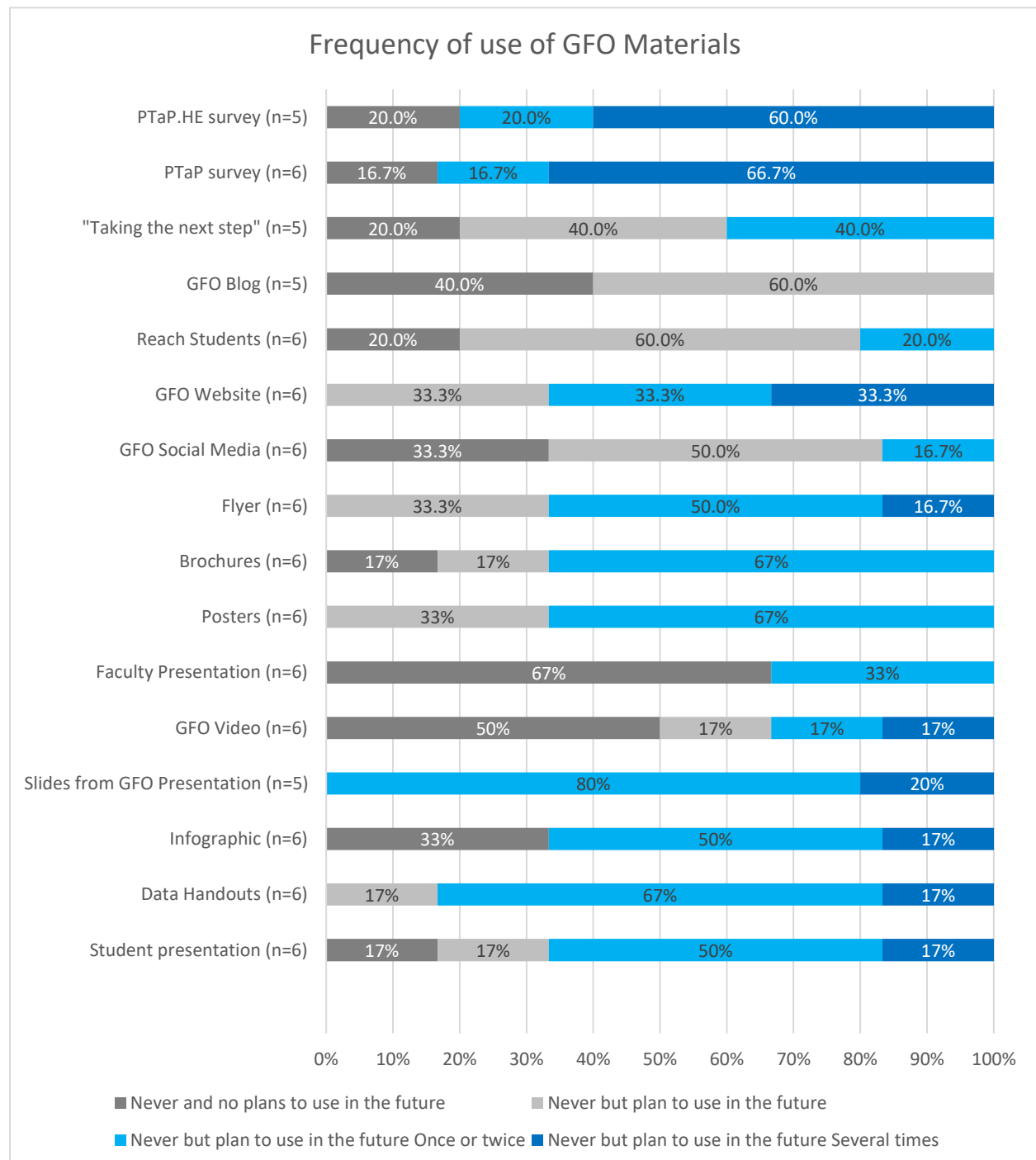
Values	Total (excl. missing for question)	
	69	
	#	%
Yes	20	29.0%
No	49	71.0%
Total	69	100%

For those that said yes, we asked if the respondents would specify how they used GFO materials and in what context.

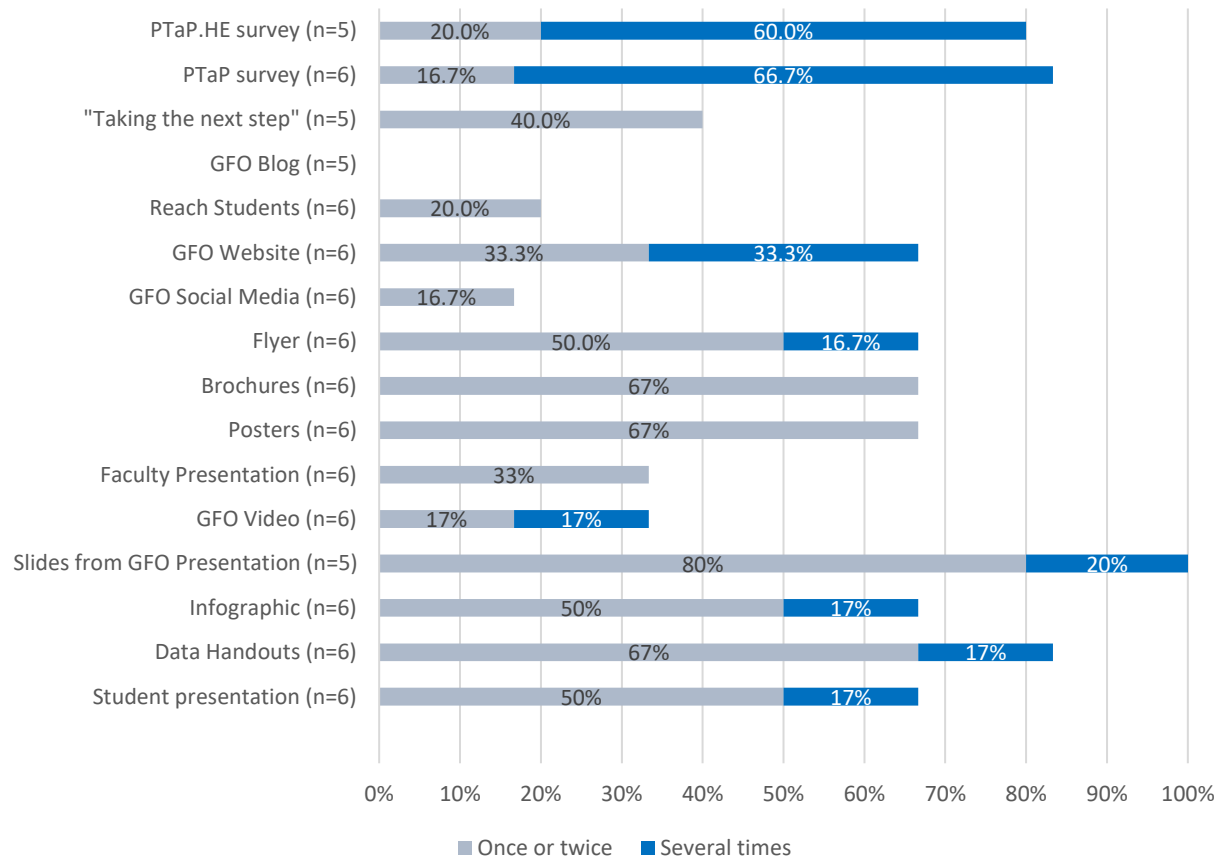
Their specified responses are summarized below:

- Shared information during class - **5**
- Shared information with students through email/list serves – **4**
- Shared information through discussions with students – **3**
- Used/personalized materials for recruitment - **3**
- Flyers

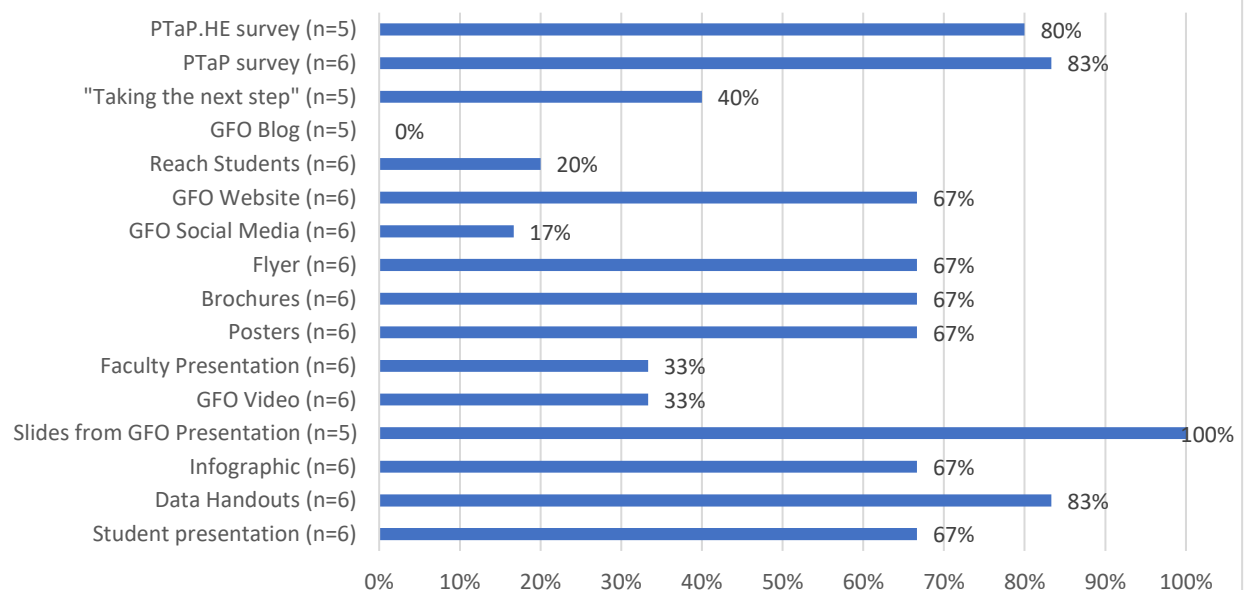
Respondents were asked how frequently they have used GFO materials including, student presentation, faculty workshop, posters, brochures, flyers, reaching students via various venues, PTaP survey, PTaP.HE survey, and first conversations



Slides from GFO Presentations, Data Handouts, and the PTaP Survey are the most commonly used materials on the FSI survey



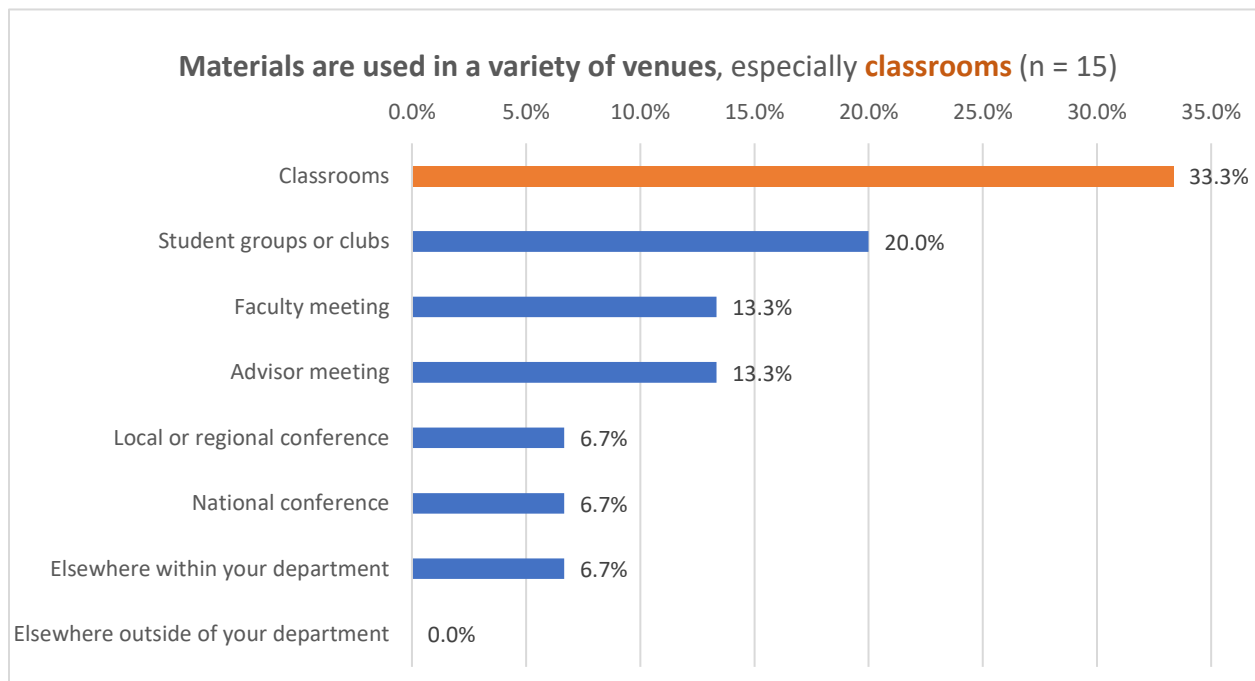
% of faculty that used materials at least once



Respondents were asked if they used GFO data in their recruitment efforts without using the pre-made sources.

- No
- We modified the flyers for size and used our school's color scheme and fonts.
- I have used a few slides.

Respondents were asked in which venues they have used GFO messages or materials.



Respondents (faculty that have heard of GFO and HAVE used the materials) were asked if there were other ways that GFO has influenced them, other than the use of specific materials. The elaborated answers are as follows:

(No responses)

Respondents were asked which of the materials they found the most helpful and if they were pleased with the outcome. The responses are as follows:

- I really like the local district salary information to bust some of the myths about salary.
- Flyer templates. Yes. Pleased.

Respondents were asked what challenges they encountered when presenting these materials.

- We struggle to offer the teacher prep program due to the resources needed.
- None that I can think of.

Responses about modifying materials

Respondents were asked if they have modified any of the GFO materials to better suit their needs.

Values	Total (excl. missing for question)	
	6	
	#	%
Yes	2	33.3%
No	4	66.7%
Total	6	100%

The specific materials that were modified are summarized below:

- flyer and GFO presentation
- Flyer template

How did you modify them?

- local data
- We changed the size, colors, fonts, and photo (we used a photo of people at our university).

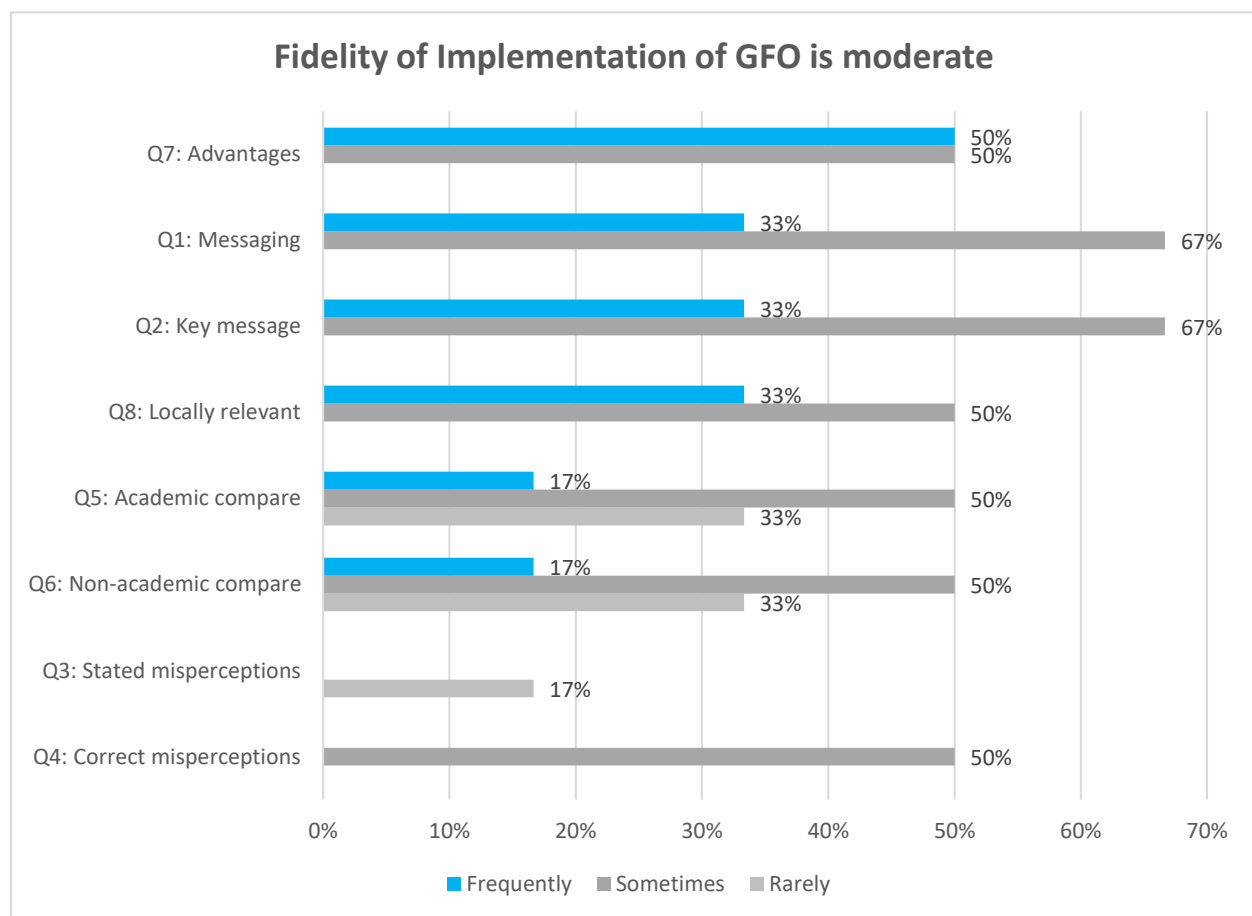
Why did you modify them?

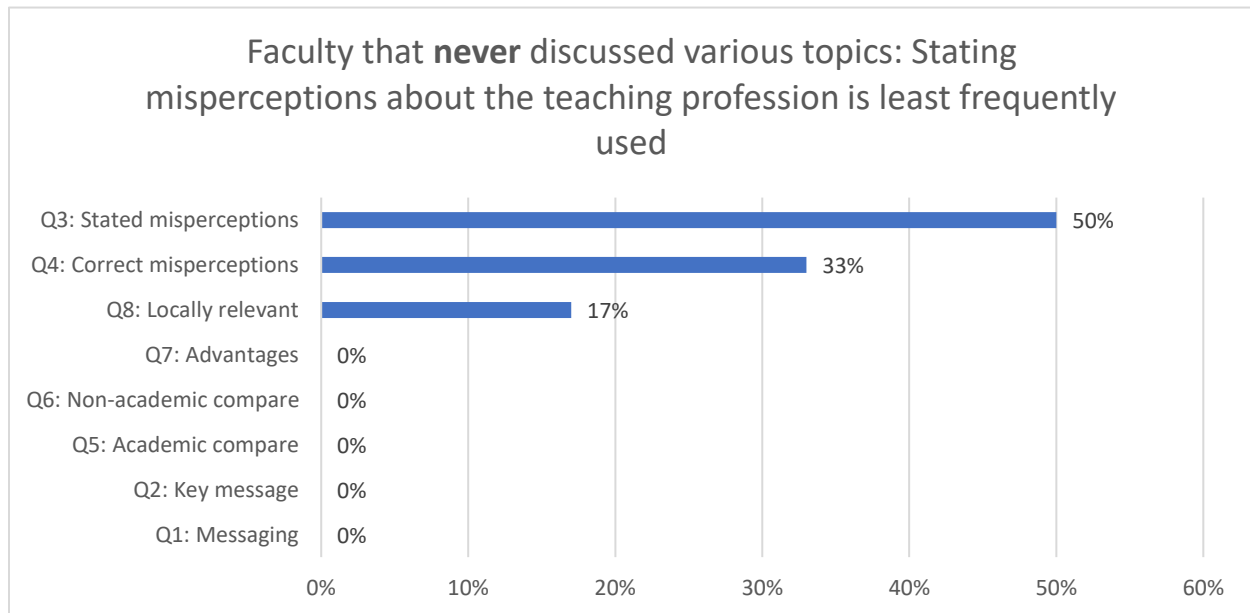
- make more local
- We wanted the flyers to appeal to people on our campus. I thought that was the idea behind the flyer template.

Future usage or non-usage of GFO resources

Respondents were asked how often they discussed these various topics while discussing grade 7-12 teaching, since GFO, including:

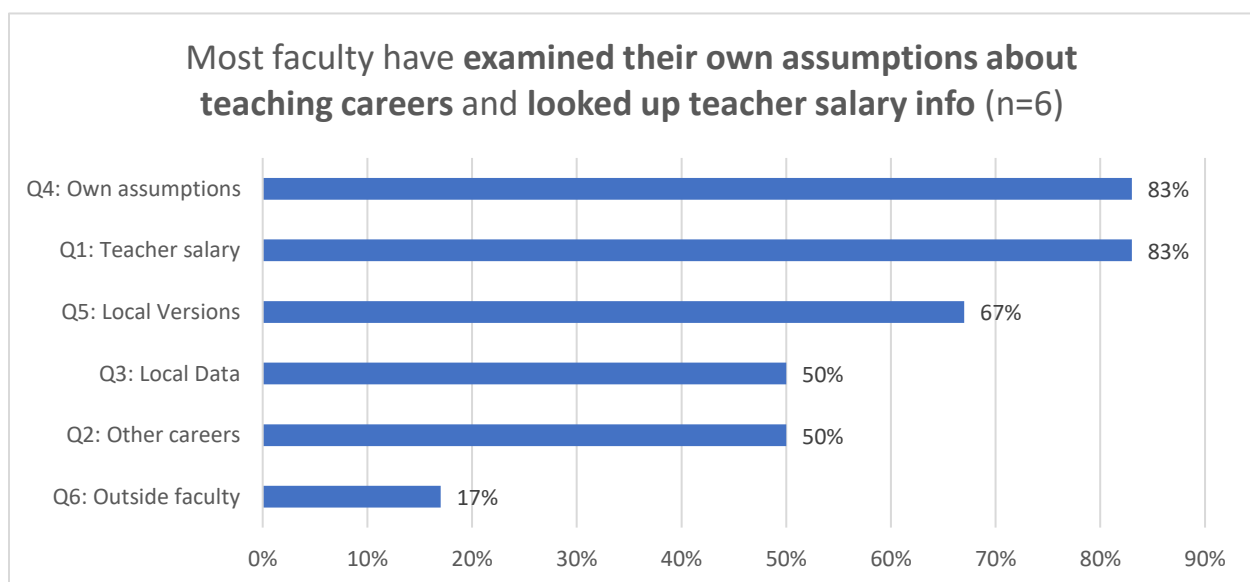
1. Used messaging from GFO
2. Emphasized the key message of GFO in interactions with others
3. Stated or elicited common misperceptions about teaching as a profession
4. Corrected common misperceptions about teaching as a career when voiced
5. Compared benefits of teaching as a profession to other academic careers in a positive light
6. Compared benefits of teaching as a profession to other non-academic careers students can get with the same degree in a positive light
7. Mentioned less commonly known advantages of teaching as a profession, such as work-life balance or flexibility in the classroom
8. Shared locally relevant data about teaching as a profession



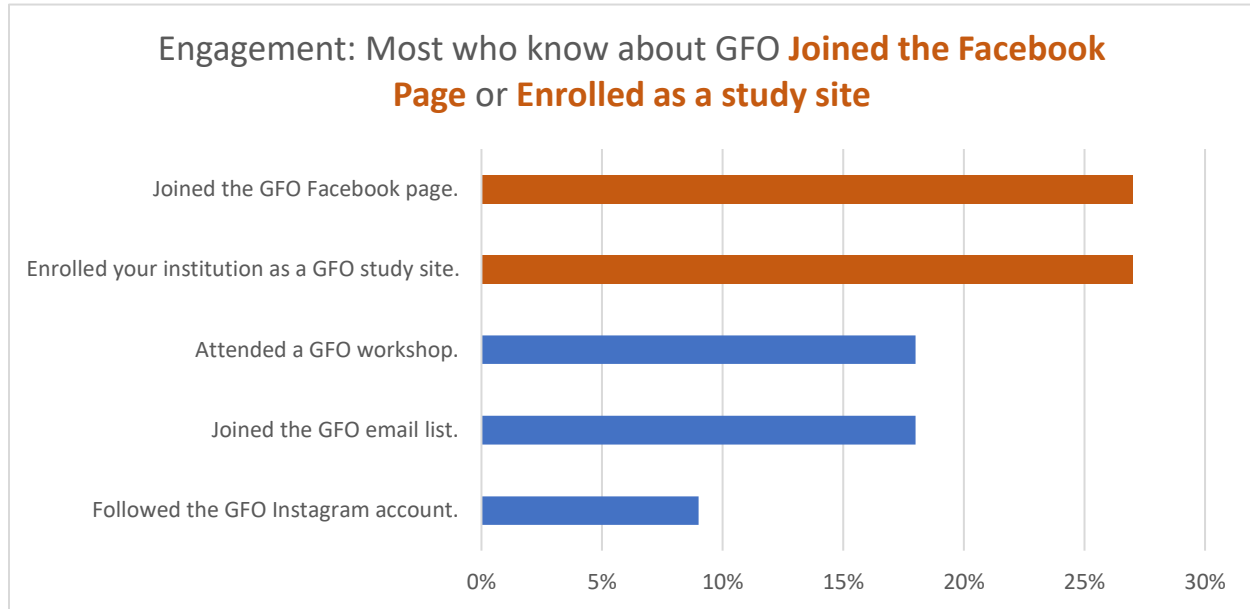


Respondents were asked since learning about GFO if they have:

1. Looked up or examined local salary, retirement, and other benefit data for grade 7-12 teachers.
2. Looked up or examined local salary, retirement, and other benefit data for other careers students can get with the same degree.
3. Requested local teacher salary, retirement, and other benefit data from GFO.
4. Examined your own assumptions or perceptions of grade 7-12 teaching as a career
5. Created local versions of GFO resources or materials.
6. Spoken to faculty outside of your institution about GFO



7. Attended a GFO workshop
8. Joined the GFO Facebook page
9. Joined the GFO email list
10. Followed the GFO Instagram account
11. Enrolled your institution as a GFO study site



Respondents were asked if they have any other comments or suggestions for the GFO team.

- I did the 30 min interview last year so I will answer no below. Jeff

Respondents (faculty that have heard of GFO, but have NOT used the materials) were asked if there were other ways that GFO has influenced them, other than the use of specific materials. Most responses said “no” and the other responses include:

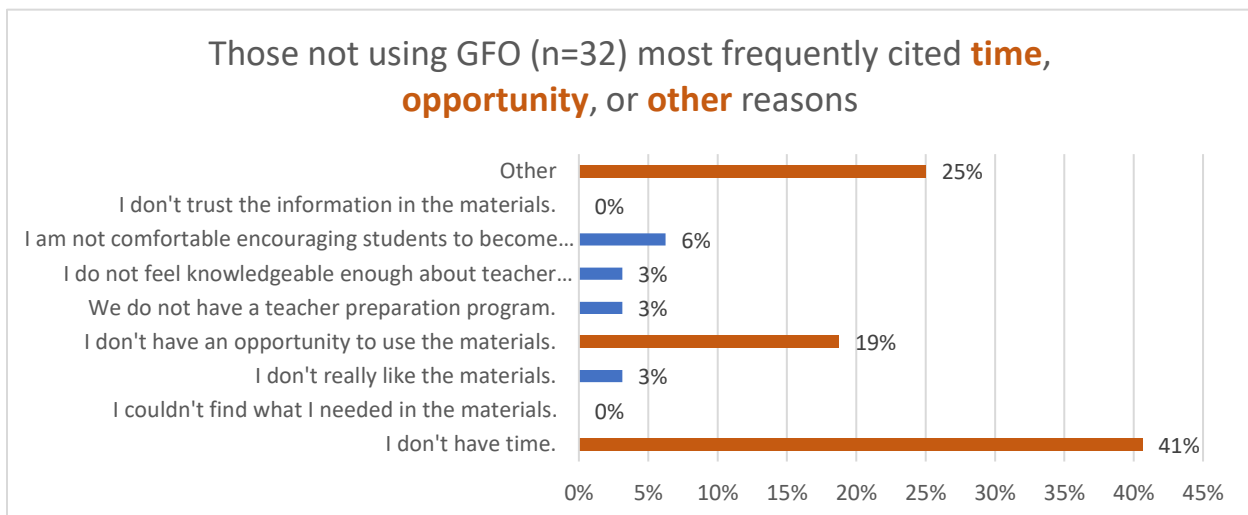
- No/NA – 3
- more aware of salary and career satisfaction
- I mentioned it to a colleague who was writing a grant related to STEM education.
- Zoom call with other sites was very encouraging.
- These surveys.
- I think as the spouse of a high school teacher and having several friends that have been/are high school teachers that the "facts" in "Get the facts out" are either outdated or not entirely honest. I think teaching is an awesome profession, but to deny or ignore what COVID and the last several years of anti-science rhetoric have done to change the nature of what teachers endure is dishonest.
- no
- Made me more aware of the facts about 7-12 teaching.

Respondents were asked if they would be interested in using some of the GFO materials on their campus.

Values	Total (excl. missing for question)	
	47	
	#	%
Yes, I am interested	25	53.2%
No, thank you	22	46.8%
Total	47	100%

For those respondents that replied no, we asked if they could tell us the main reason why they do not plan on using GFO materials.

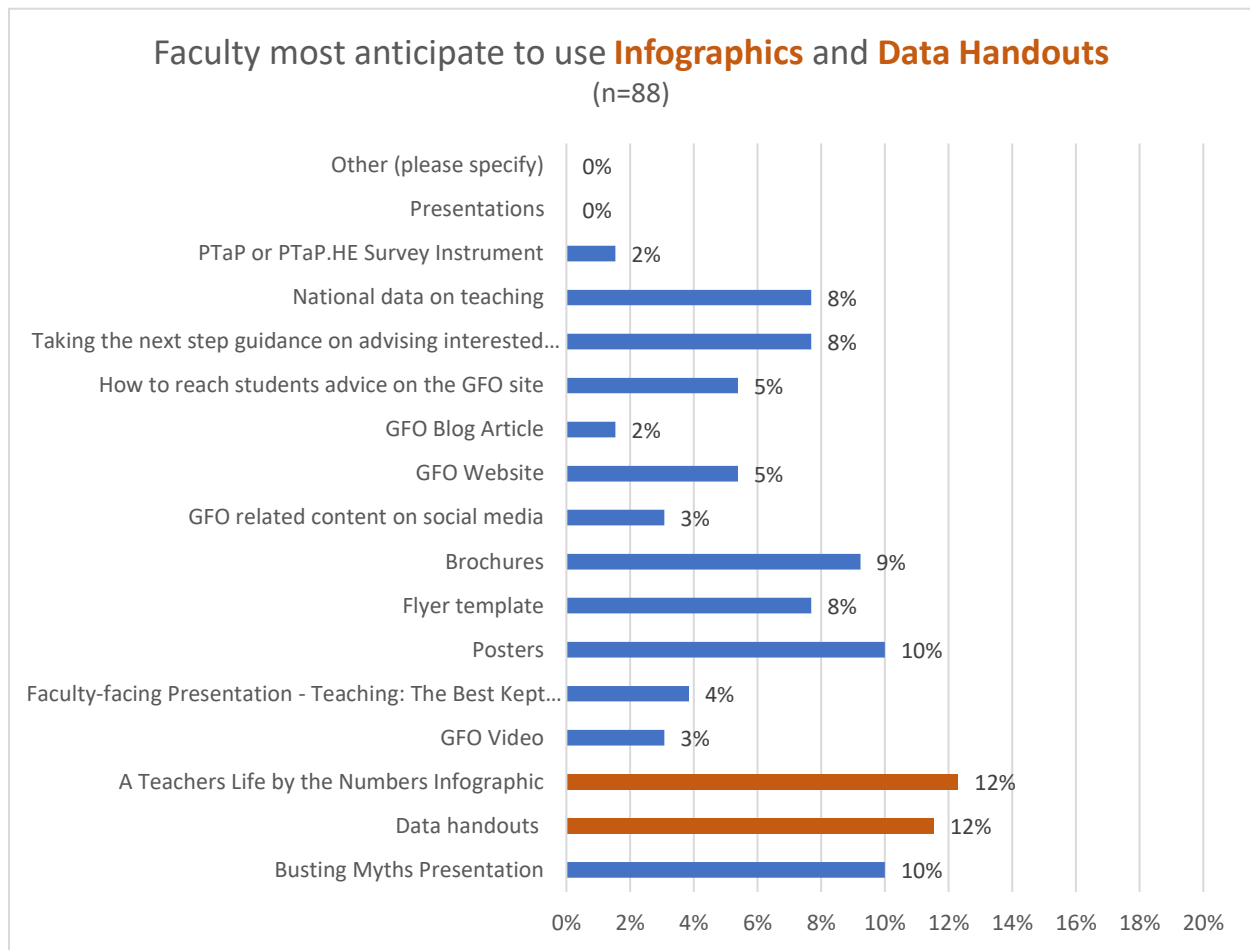
1. I don't have time
2. I couldn't find what I needed in the materials
3. I don't really like the materials
4. I don't have an opportunity to use the materials
5. We do not have a teacher preparation program
6. I do not feel knowledgeable enough about teacher preparation to use these materials
7. I am not comfortable encouraging students to become teachers
8. I don't trust the information in the materials
9. Other



Other responses:

- The resource is available on campus already
- I do not need more material
- I plan to use them
- I feel completely comfortable discussing and encouraging teachers without it.
- Students do not ask me for career advice.
- There are very few to NO jobs available for 9-12 Earth Science/Geology Teachers in Kentucky.
- I will direct students to these materials in advising, but don't share it during class time.
- The "facts" are not immutable facts and in several places are outdated and outright false.

For those that replied yes, we asked which of the materials they would use.



We asked respondents how they anticipate using these materials.

- Posting materials (brochures, posters, flyers) around campus – **7**
- Share information with students – **3**
- Faculty workshop – **2**
- Undergraduate seminar that focuses on career development.
- emails / announcements to graduate students and selected undergrads
- Classrooms and group meetings
- student recruitment to physics major

We asked respondents why they anticipate using these materials.

- Great to have and share data with students that are interested – **4**
- Opportunities for students – **2**
- I teach primarily freshman who often have very high aspirations of post graduate work, but then they quickly change their mind. But for those that want to stay in the sciences, this may be a great way.
- recruit students to our secondary STEM teaching program
- I picked ones that focus on data. I teach stats. I could use some in my stats classes
- I know there is a need for skilled and confident science teachers with science degrees that feel comfortable with the subject matter and have a passion for educating students.
- To help faculty understand STEM teaching as a profession.
- To get the facts out!