

# The Only Constant is Change

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Question Personalization at UC Berkeley

# Heraclitus quotes



*The only constant is change*

*No man ever steps in the same river twice*

Becoming vs. Being

# Overview

Question personalization as a means to:



Empower instructors



Streamline operations



Give departments autonomy

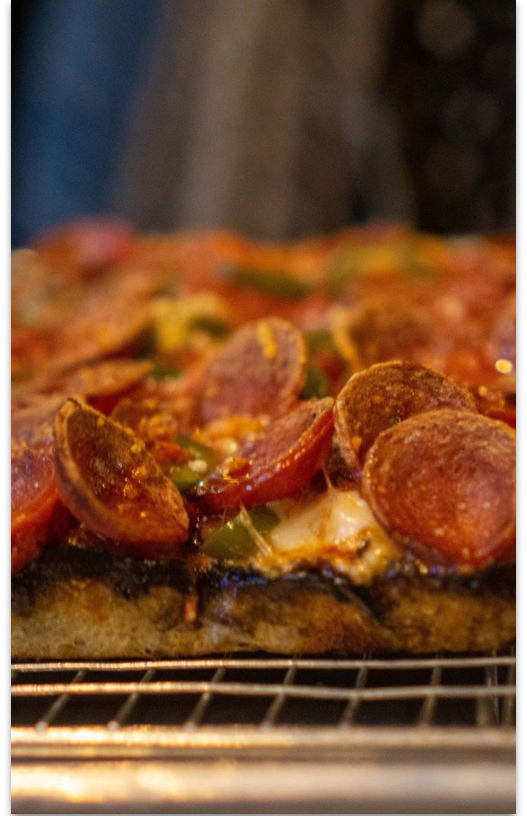
# Obligatory explanations

GSI = Graduate Student Instructor = TA

Course evaluations at Berkeley are mandatory, but it's up to each department to choose how to run them.

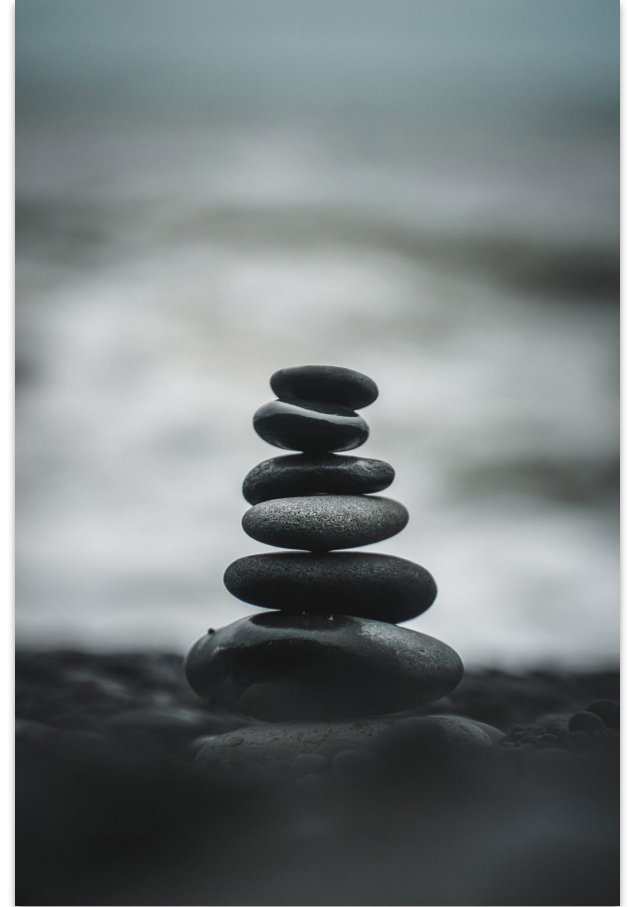
I run the centralized online evaluation service that supports ~65 departments (>80% of enrollments)

Service was first piloted in 2013, and has grown steadily since (I've been in this role since 2016)



# 1. Empowering Instructors

- Lots of pushback against evals at Berkeley
  - Resistance to change
  - Fear of evaluations being used against them
  - Fear of centralization
- Something they couldn't do with paper evaluations
- Shared only with the instructor
  - Instructor can choose to include it in a portfolio
- May improve response rate?\*





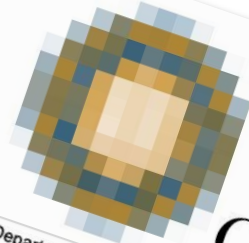
# Data disclaimer



## Course Evaluation Data

Department / Form	F/G	Questions	SP19 TOTAL CC	SP19 QP	COMP	SP19 QP %	SP19 TOTAL IN	SP19 RESPON	SP19 RR %
MCELLBI-F	F	16	103	13	0.1262135922	9642	3792	0.3932794026	
PHYSICS-G	F	11	253	5	0.01976284585	8071	2556	0.3166893817	
ECON-F	G	24	61	8	0.131147541	6952	4334	0.6234177215	
CHEM-G	F	15	153	28	0.1830065359	6795	2895	0.4260485651	
MATH-F	G	10	73	9	0.1232876712	6539	2970	0.4541978896	
PB HLTH-G	F	18	63	2	0.03174603175	6445	5496	0.8305663305	
ECON-G	G	10	225	9	0.04000000000	5962	2170	0.3638188528	
CHEM-F	F	10	52	20	0.08888888889	6795	5353	0.7878881045	
MATH-G	G	10	242	9	0.1730769231	6539	2458	0.3758846905	
PB HLTH-F	F	11	149	21	0.0867768595	6445	5173	0.8027911437	
MCELLBI-G	F	10	239	20	0.1342281879	5962	5121	0.8572538913	
PHYSICS-F	G	15	68	15	0.06276150628	6795	2170	0.3194274343	
STAT-G	F	9	242	6	0.02479342562	6952	2170	0.3121402474	
ESPM-F	G	9	149	9	0.06040268456	6795	2170	0.3194274343	
PSYCH-F	F	21	239	21	0.08786610883	6445	5173	0.8027911437	
POL SCI-F	F	12	68	15	0.06276150628	5962	2170	0.3638188528	
HISTORY-F	F	27	104	6	0.05769230769	6445	5173	0.8027911437	
STAT-F	F	27	89	6	0.06741565217	5962	2170	0.3638188528	
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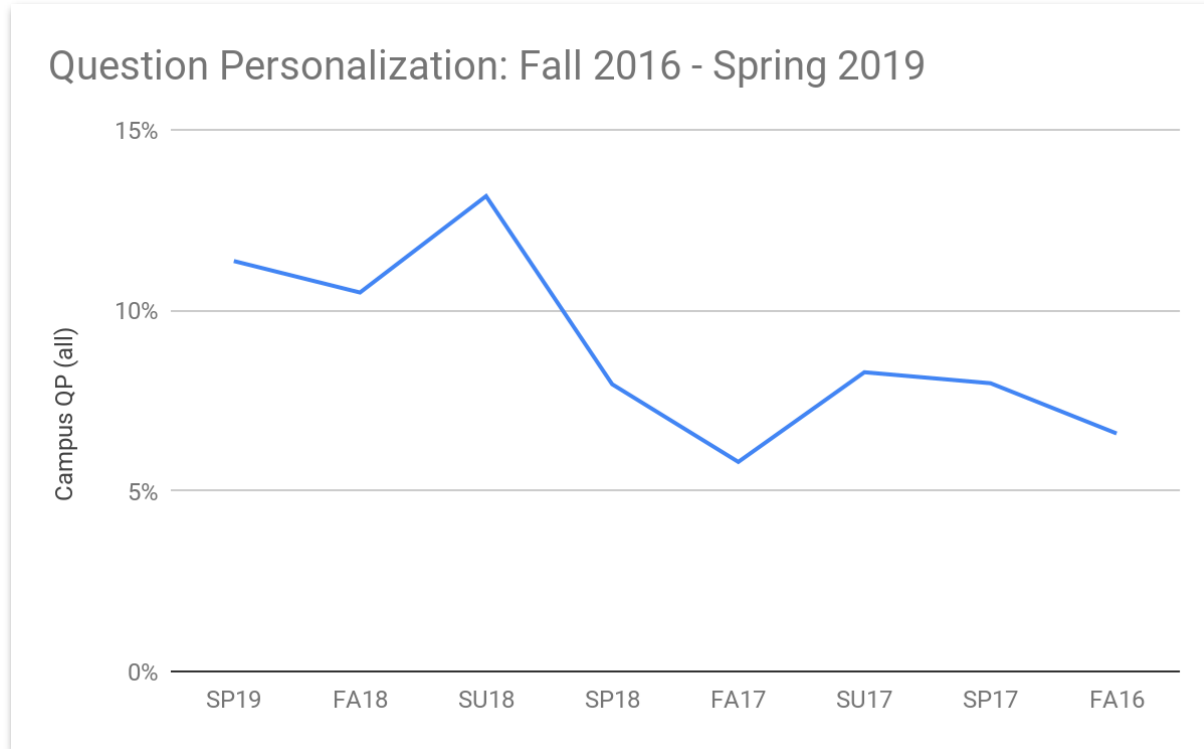


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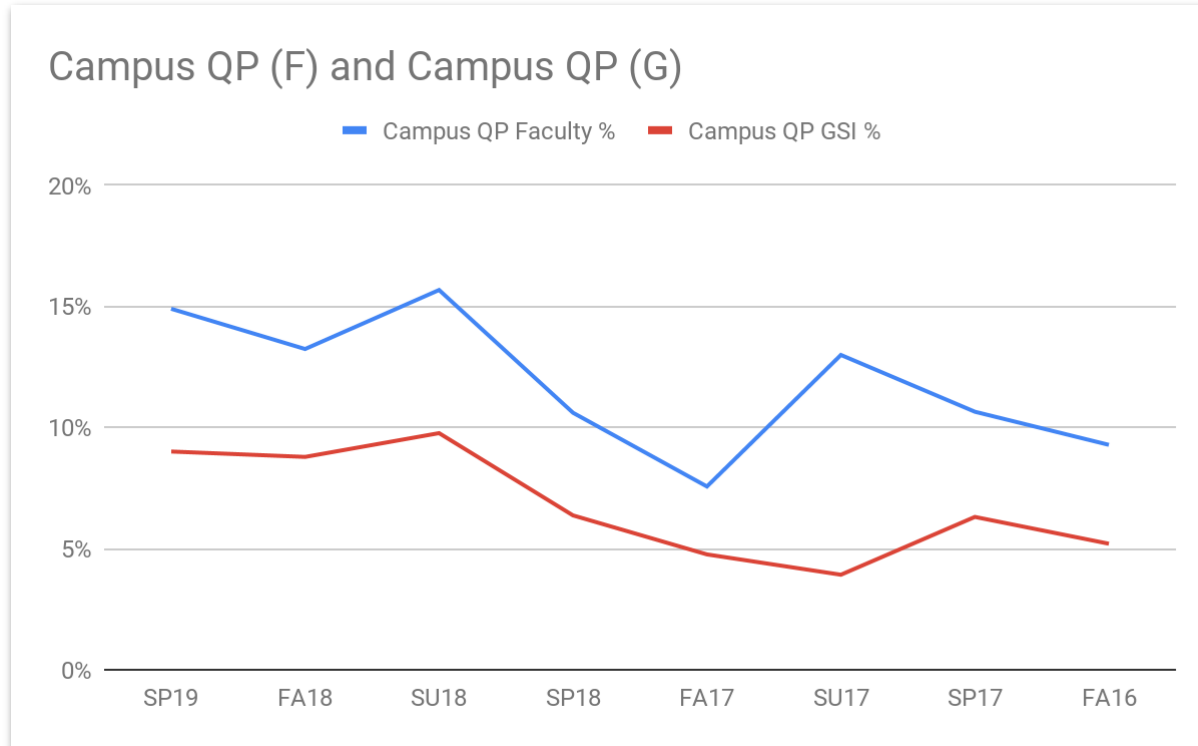
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# How many instructors use QP?

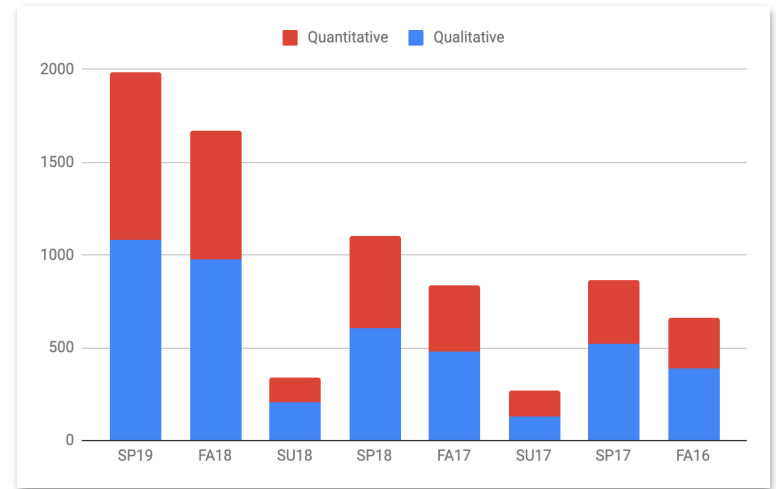


# Faculty vs. Grad Student Instructors (TAs)



# Use of QP Continued

Qualitative vs. Quantitative over time



Average number of questions over time



# How Instructors use QP

Common questions

Supplementing core questions

Re-asking core questions in more specific terms



# Top Users by Department and Instructor Type

Spring 2019		Fall 2018		Summer 2018	
CHEM-G	28	MATH-G	33	MATH-F	7
ANTHRO-G	27	CHEM-G	27	ECON-G	6
MATH-G	21	HISTORY-F	19	PLANTBI-F	6
HISTORY-F	21	PB HLTH-F	19	ENE_RES-F	6
ECON-G	20	COLWRIT-F	17	CHEM-F	5
PB HLTH-F	20	ECON-G	15	DATASCI-F	5
FSSEM-F	17	CHEM-F	14	CHEM-G	4
COLWRIT-F	16	MCELLBI-G	13	COLWRIT-F	4
EA LANG-F	16	MATH-F	13	ENVECON-G	4
MCELLBI-G	15	PSYCH-G	13	ESPM-F	3

# QP and Response Rates

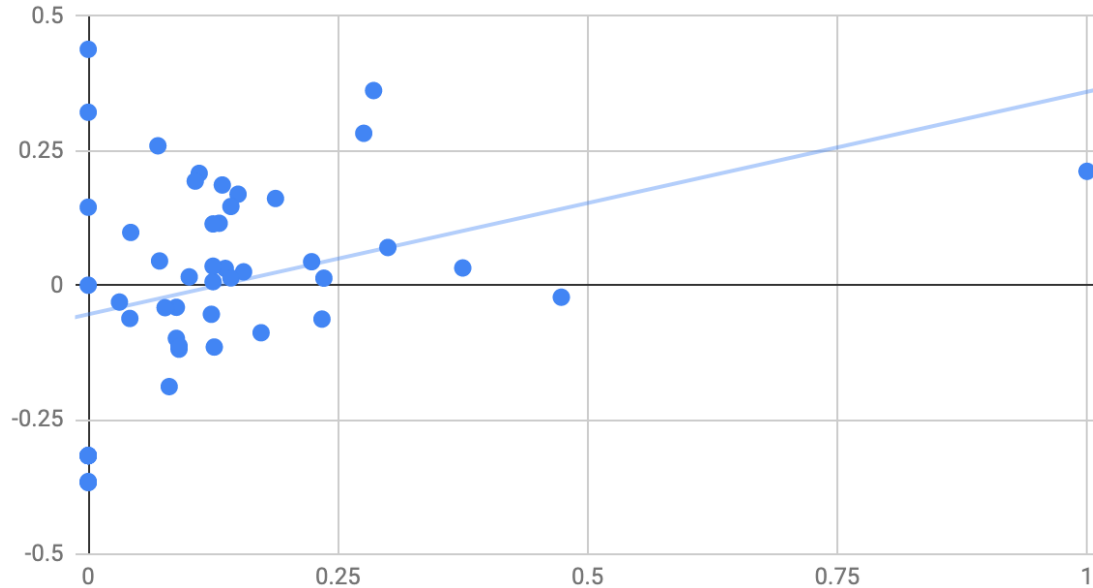
Is there a link between form length and response rate?

Does this extend to question personalization?



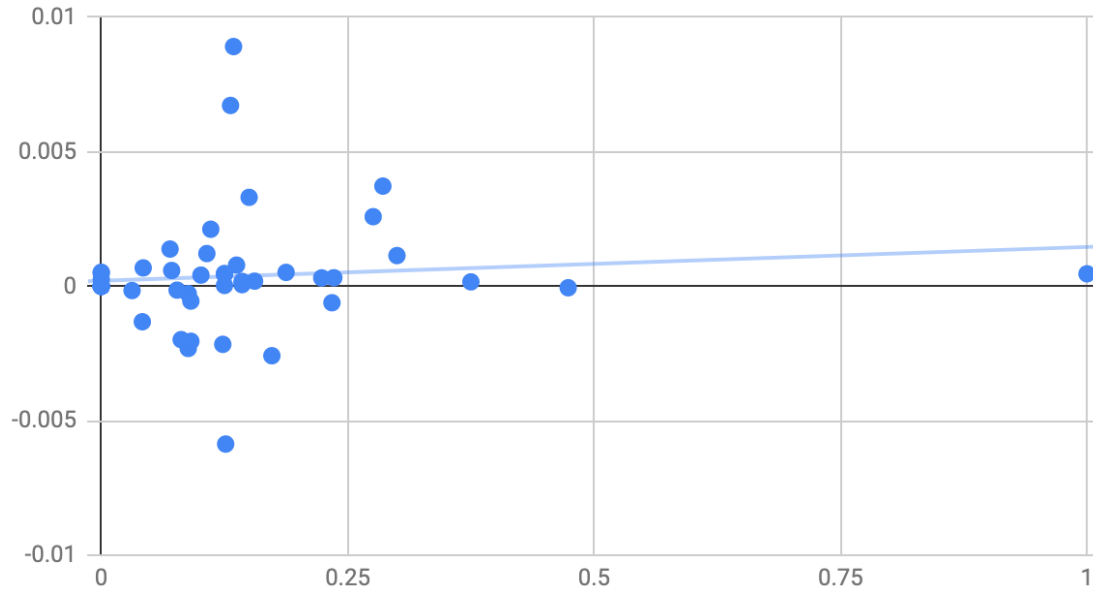
# All departments by term

SP19 DEVIATION vs. SP19 QP %



# All departments by term - weighted

SP19 QP % and SP19 WEIGHTED DEVIATION



# By department over time (8 terms)

Strong positive correlation:

- Political Science
- Music
- Math
- Molecular and Cellular Biology

Strong negative correlation:

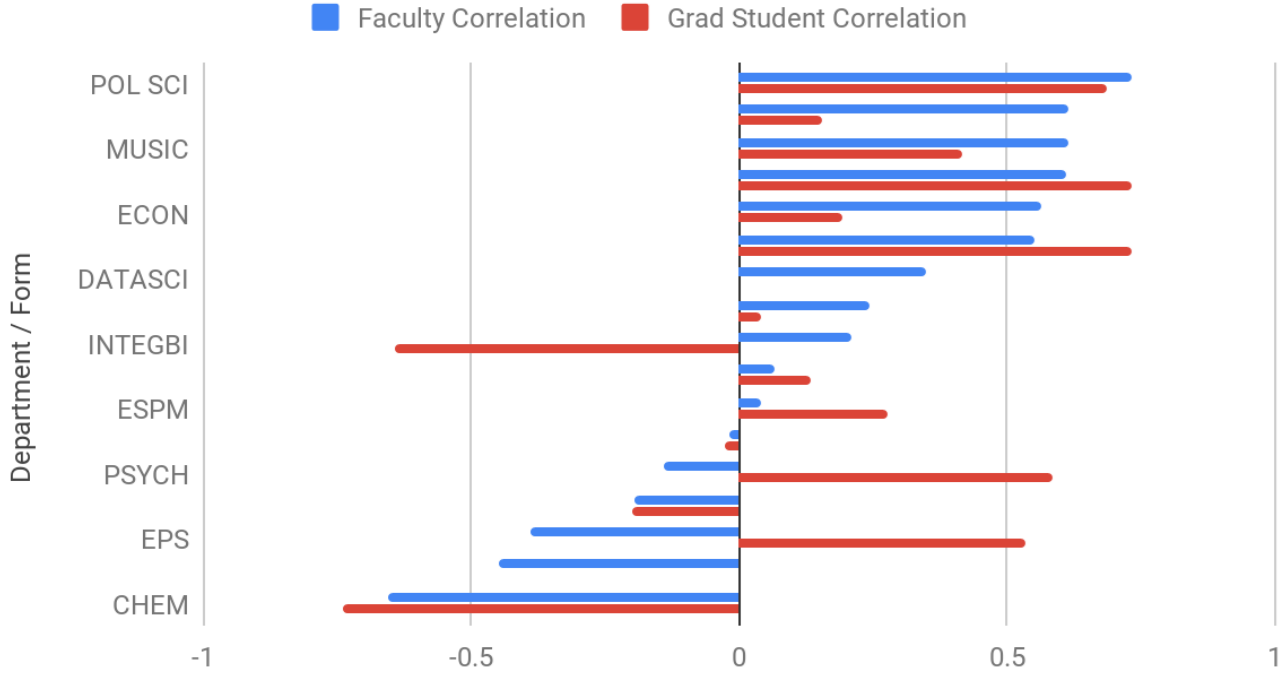
- Chemistry

Conflicting:

- Integrated Biology
- Earth and Planetary Science
- Psychology

Department / Form	Faculty Correlation	Grad Student Correlation
POL SCI	0.7310489802	0.6847352943
NUSCTX	0.6142274131	0.1531956249
MUSIC	0.6131630168	0.4160043645
MATH	0.609695963	0.7314909832
ECON	0.5620650784	0.191797462
MCELLBI	0.5516142989	0.7314909832
DATASCI	0.3504655798	
ANTHRO	0.2428064844	0.0428051451
INTEGBI	0.2098438009	-0.6416058519
PHYSICS	0.06812924864	0.1324287986
ESPM	0.04220904738	0.2758590046
PLANTBI	-0.0191922111	-0.02424678607
PSYCH	-0.1405136001	0.5840631248
STAT	-0.1936044016	-0.2000311561
EPS	-0.3899532908	0.5333222183
ETH STD	-0.4497403273	
CHEM	-0.6564724633	-0.7383665548

# Correlation-F and Correlation-G



## 2. Streamline Operations

Encourage departments to use questions that apply to all courses, give them an option for questions that don't

Reduce need to modify department evaluation forms down the road

### 3. Give Departments More Control

What if we weren't responsible for maintaining a question bank at all?





# Midterm Evaluation Pilot

Structure:

- Half instructor qp
- Half department qp
- Instructor questions only go to instructor
- Department questions are reported up

# How we did it

- Instructor and course QP tasks
  - Not a great fit for co-taught courses
- Department staff completes QP task, and copies questions to all subjects
- Departments can choose to make it optional by not adding any core questions.
  - Evals will only run if an instructor adds questions.

Results: 1 - 8 of 8 Item(s)

	Group Name	Privileges	Link Type	Group Links To	Edit
<input type="radio"/>	Students (Automatic Update)	FO	Relationship	Courses	<a href="#">Edit</a>
<input type="radio"/>	Instructors (Automatic Update)	QP, RV	Link	Instructors	<a href="#">Edit</a>
<input type="radio"/>	Instructors Linked To Courses (Automatic Update)	SV	Relationship	Courses	<a href="#">Edit</a>
<input type="radio"/>	CHAIR	RV	Relationship	Courses	<a href="#">Edit</a>
<input type="radio"/>	DEPT_ADMIN (Automatic Update)	RV	Relationship	Courses	<a href="#">Edit</a>
<input type="radio"/>	DEAN	RV	Relationship	Courses	<a href="#">Edit</a>
<input type="radio"/>	PRIMARY ADMIN (Automatic Update)	QP, RV, SV	Relationship	Courses	<a href="#">Edit</a>
<input type="radio"/>	Dynamic Report Viewers (Dynamic Viewers)	RV	Organization	Courses	<a href="#">Edit</a>

# What we've learned

- It's pretty sustainable!
- We haven't yet scaled enough to standardize or build this into our data process
  - There are some policy challenges around standardizing this across campus
- It takes a bit of manual attention (e.g. to make sure all department QP tasks are completed)
- Reports are simple: quick turnaround
- Students expect more, now that they are being asked to provide feedback earlier on
- It's easy to *think* you've added QP

# The Future

How can we take this hack and apply it to our main project?



# Conclusion

Question personalization is a powerful tool for appealing to instructors, if used purposefully in the instructor's interest

Question personalization can simplify complex projects by delegating what would otherwise need to have been managed centrally

We envision a bright future of delegating everything, in order to empower departments and programs

# Questions

[miles1@berkeley.edu](mailto:miles1@berkeley.edu)