

Perceptions of Flipped Classroom Teaching Among California Pharmacy School Faculty

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Introduction

- “Flipped classrooms” are courses that require students to learn material outside of the classroom (via learning modules, readings, or pre-recorded lectures) and subsequently apply learning by working through problems, case studies, etc. during class time
- Faculty reported flipped classrooms increased undergraduate and high school student engagement^{1,2}
- A major challenge to flipped classrooms include students preparing necessary material(s) in advance^{3,4}
- Effective flipped courses in pharmacy education have been demonstrated in pharmaceutical calculations and laboratory courses⁵⁻⁸
- The SARS-CoV-2 (COVID-19) pandemic forced colleges and universities to move their courses to remote learning
- Courses or programs using flipped classrooms pre-pandemic needed minimal adjustments and were more likely to remain as online offerings⁹
- It is unclear how COVID-19 has impacted the learning and teaching styles in pharmacy education

Objectives

Primary objective: to evaluate and compare teaching style perceptions of California pharmacy school faculty.

Secondary objective: to determine the impact of the COVID-19 pandemic on perceptions of teaching styles among California pharmacy school faculty.

Methods

- Cross sectional study of California pharmacy school faculty who have taught and/or coordinated traditional and flipped classrooms
- Participants were invited via emailing curriculum directors and known faculty from 14 California pharmacy schools
- Participants emailed with interview details and consent form
- Interviews were conducted anonymously using Zoom audio, recorded, and subsequently transcribed
- Interview included 13 questions related to the benefits and challenges of flipped classrooms in the pharmacy curriculum
- Dedoose qualitative software used for data analysis
- Created inductive coding scheme to identify the presence of patterns, relationships, and themes
- Data was subdivided into key phrases, assigned a code (e.g., word or phrase) to identify key patterns, and grouped by concepts to help generate a theory that addressed the research question

Results



Overall Key Findings From 10 Participants

- 60% currently use flipped classrooms at their pharmacy school
- 30% believed any course can be taught as a flipped classroom
- 80% had positive perceptions of flipped classroom after the COVID-19 pandemic

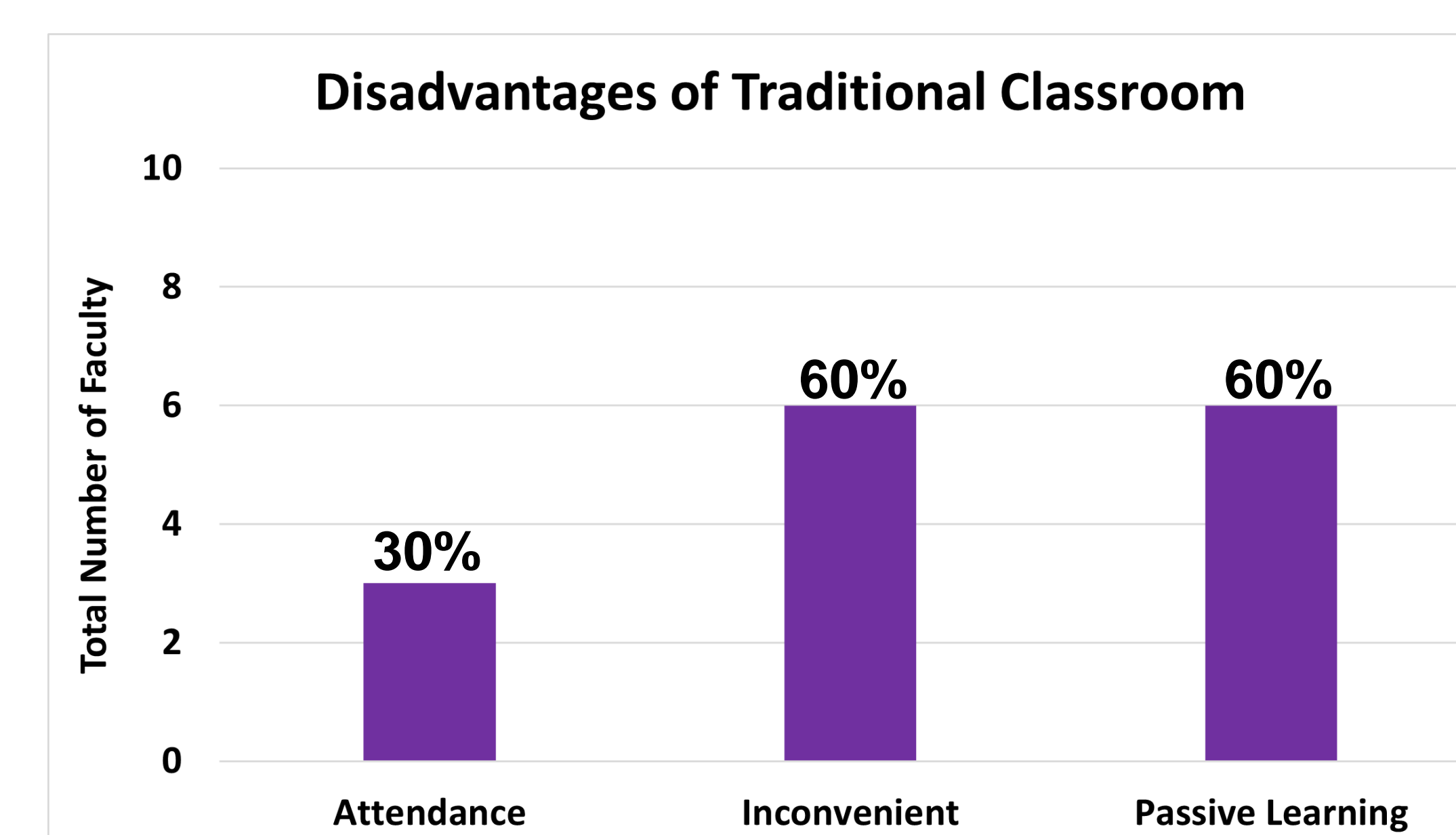
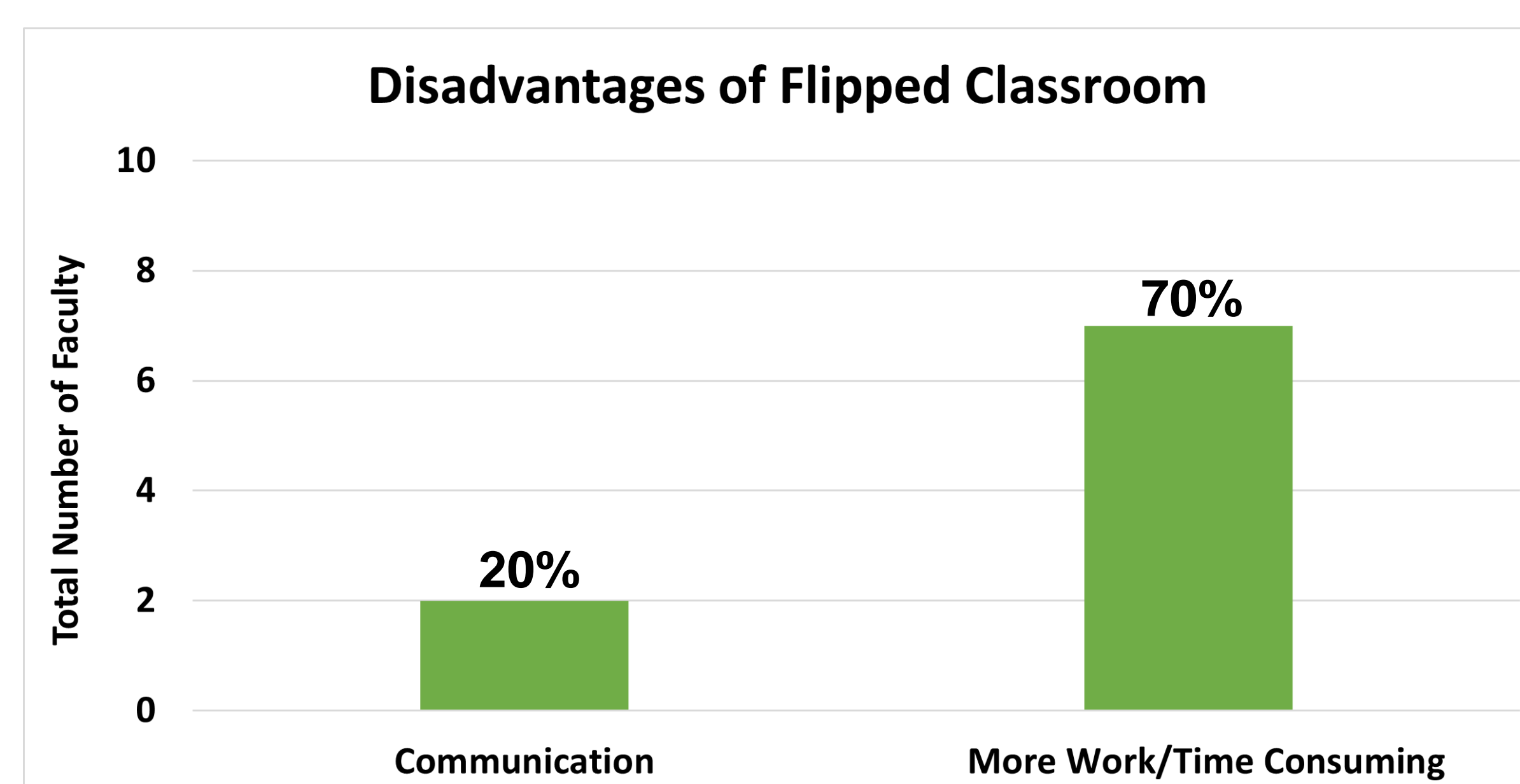
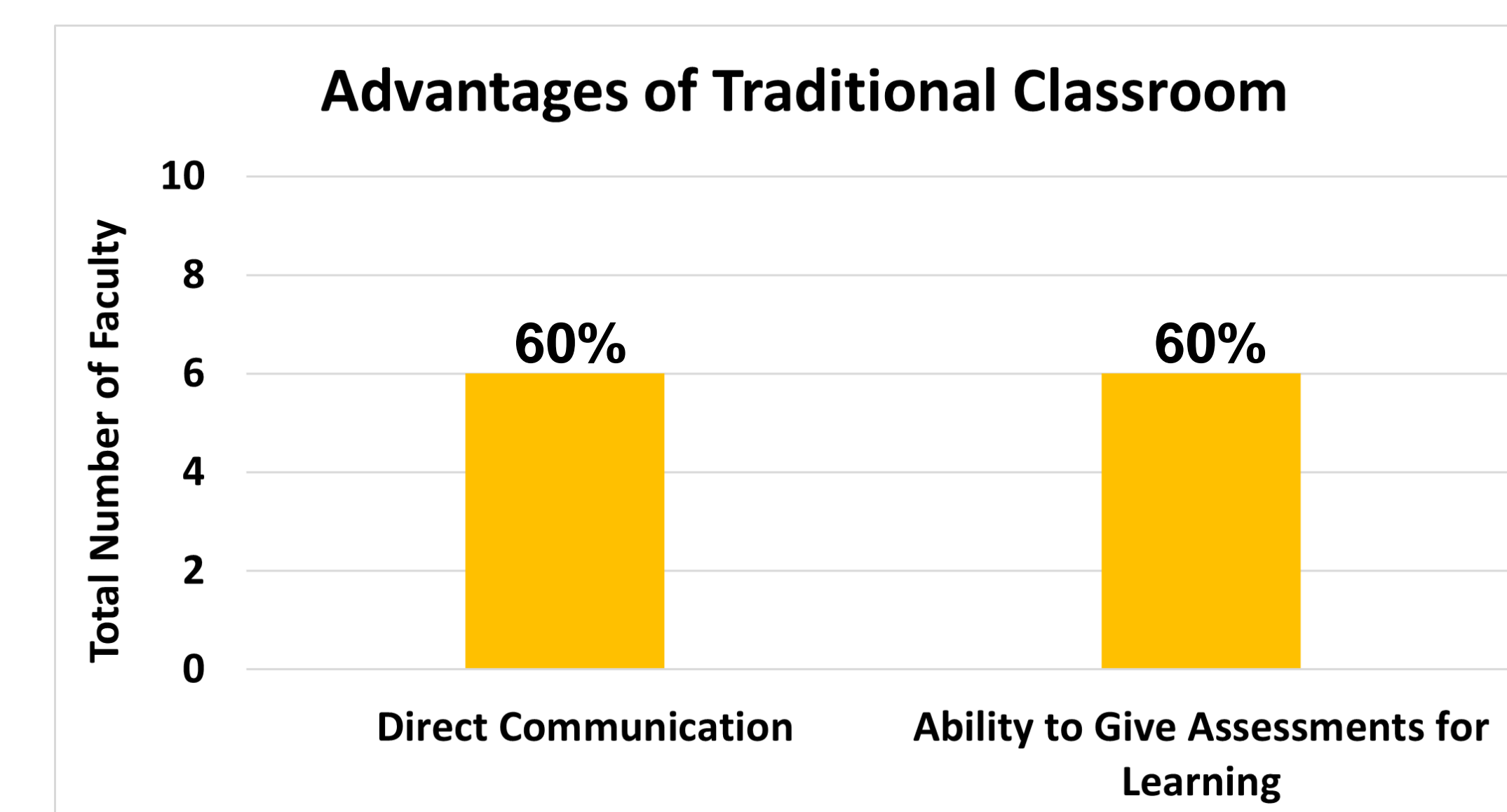
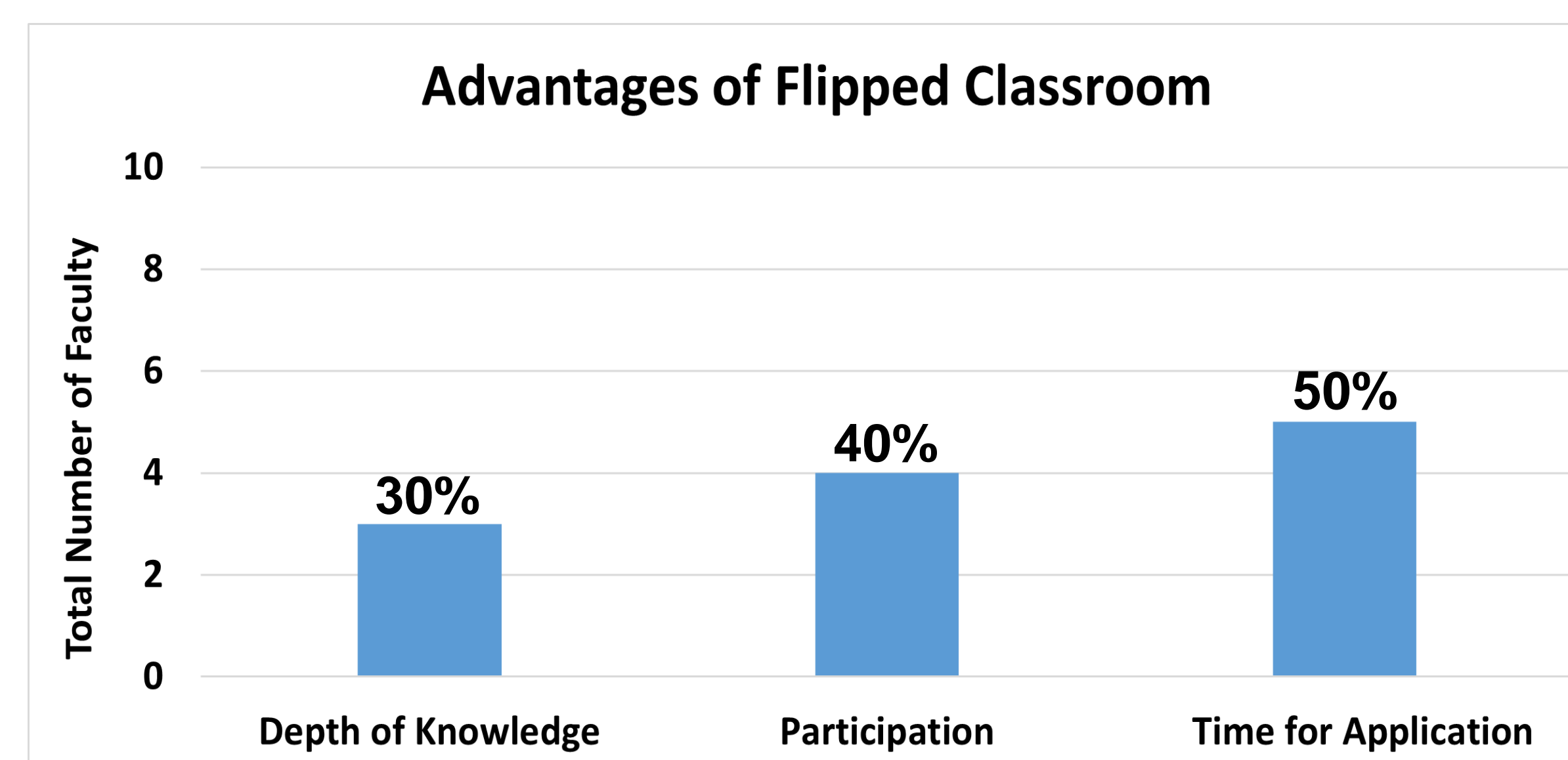


Figure 1. Occurrences of Various Themes Across Faculty Participants on Perceptions of Flipped Classrooms.

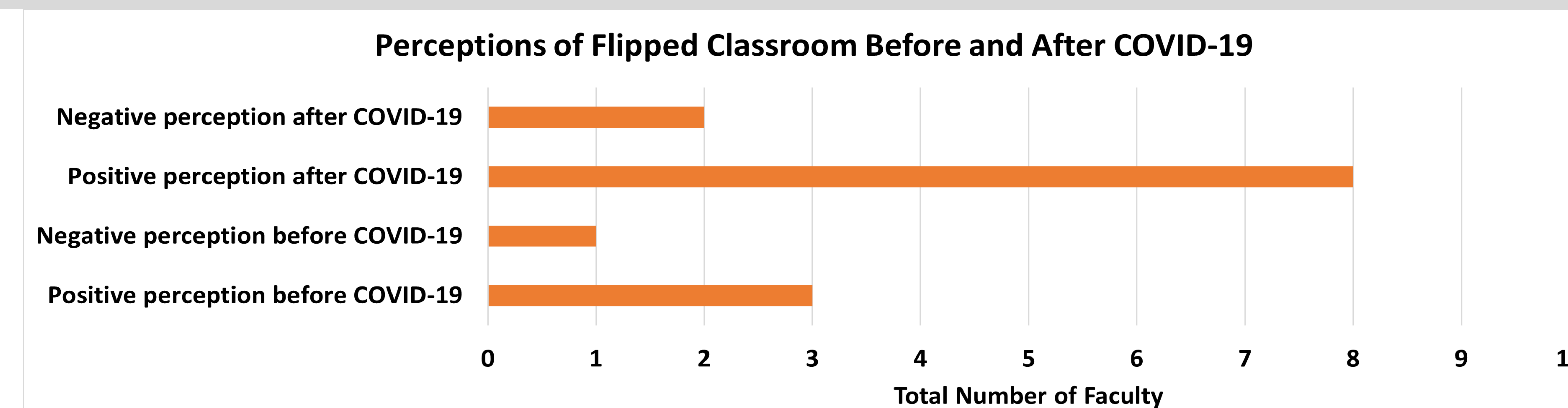


Figure 2. Occurrences of Various Themes Across Faculty Participants on Perceptions of Flipped Classrooms Before and After COVID-19.

Discussion

- Most faculty believed it is time consuming to prepare material for flipped classes but acknowledged that it provides students more time to apply knowledge during class time
- Disparity in direct communication likely due to favoring real-time feedback during lecture in traditional vs flipped classrooms
- Majority of faculty felt more positive about flipped classrooms after COVID-19

Strengths:

- Addressed advantages and disadvantages of flipped and traditional class methodologies
- Adds to limited literature on COVID-19 impact on perceptions of flipped classrooms

Limitations:

- Small sample size, uneven school representation, and low response rate
- Only generalized to CA pharmacy schools
- Can not be extrapolated equally to 3 vs 4-year programs

Future Studies Should:

- Identify most effective teaching styles
- Determine specific pharmacy courses to benefit from each teaching style

Conclusion

- Advantages of flipped classroom were increased time for knowledge application and participation
- Disadvantages were workload and time required to prepare a flipped classroom
- After the COVID-19 pandemic, most faculty had positive perceptions of flipped classrooms

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