

INTRODUCTION

- Engagement is important to learning and engaged students have improved learning outcomes^{1,2}
- Engagement is complex and difficult to define simply
 - Participation during class is a form of engagement³
- There have been reports of increasing absenteeism in pharmacy education⁴⁻⁶
- One way to combat absenteeism is to require attendance
- Attendance is an imperfect surrogate marker for engagement
- It is unknown if students are actively engaged in courses with required attendance

OBJECTIVE

- Evaluate student engagement in a pharmacotherapy course with required attendance
 - Identify class intervals where students are most and least likely to be engaged
 - Assess student perceptions of the importance of engagement

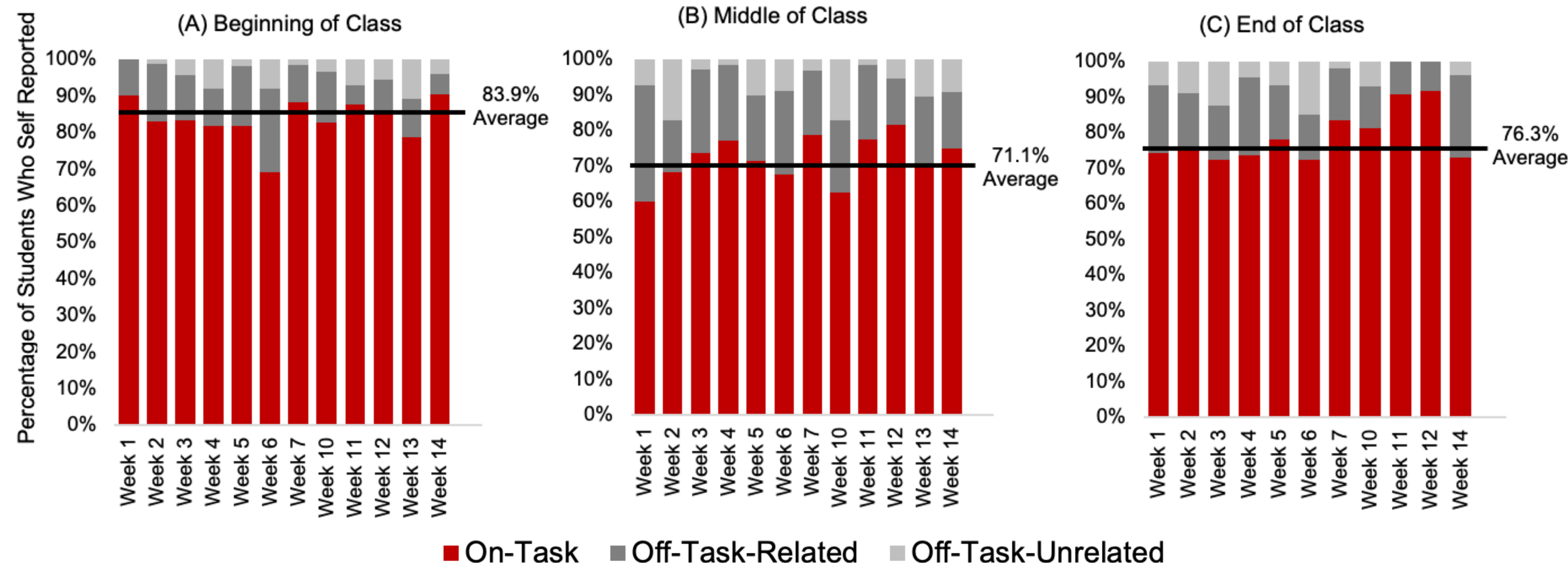
METHODS

- Pharmacotherapy IV (required didactic course, 4 credits, offered during fall of the 3rd professional year) implemented graded, mandatory attendance
- All students enrolled in Pharmacotherapy IV during 2022 were eligible to participate
- Course content included predominately infectious diseases
- Course structure utilized an active-learning, flipped classroom model
- Two survey instruments were developed using Qualtrics
 - Engagement survey: administered during 3 different time points (beginning, middle, and end) each week throughout the semester
 - Perceptions survey: administered at the midpoint and end of semester
- Descriptive statistics were utilized for engagement data
- Student's t-test was used to compare mean responses between groups and the chi-square test was used for categorical variables
- p-values of 0.05 or less were considered significant and all tests were two-tailed

Students report HIGH levels of engagement in a course with REQUIRED attendance

RESULTS

Figure 1: Percentage of Time Student Reported Being On-Task, Off-Task-Related, or Off-Task-Unrelated Organized by Class Time Period and Week



*Data not available for Week 13 End due to collection issue.
(A) Beginning N=759, (B) Middle N=779, (C) End N=570

RESULTS

Figure 1: In-Class Engagement Survey Questions

For the past 5 minutes what best describes your attention?

ON TASK:

You are currently paying attention to what is occurring in the presentation

OFF TASK-RELATED:

You are not directly paying attention to the presenter, but you are doing something related to the session (thinking about the content, looking at notes, figuring out a problem)

OFF TASK-UNRELATED:

You are not paying attention to the presentation content and doing something else (work for another class, online shopping, daydreaming, etc)

Table 1: Comparison Midpoint and End of Semester Attendance Perception Survey Data

| Survey Item ^a | Midpoint M (SD) | End of course N (%) | p value ^b |
|---|-----------------|---------------------|----------------------|
| I would attend class if it was not mandatory | 4.07 (1.11) | 4.12 (1.10) | 0.75 |
| Attendance should be mandatory for all pharmacotherapy courses | 2.99 (1.28) | 3.27 (1.25) | 0.15 |
| Class attendance is not helpful if I do not complete the pre-work | 3.42 (1.24) | 3.46 (1.24) | 0.86 |
| I am engaged when I attend each class session | 3.87 (.99) | 3.96 (1.07) | 0.57 |

^a Likert-type scale ranging from 1 [Strongly disagree] to 5 [Strongly agree].
^b Student's t test comparing mean of student responses to each item comparing midpoint and end of course time points. P < .05 considered significant.

REFERENCES

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