

Reimagining Pharmacy Skills Lab: Implementation and Assessment of Multiple Attempt Practicals and Policy Violations

Jared Van Hooser, PharmD; Morgan Hoeft, PharmD; Katie Oja, PharmD; Stephanie Swanson, PharmD; Jennifer Chen, PharmD; Lauren Anderson, PharmD; Sarah Schweiss, PharmD
University of Minnesota College of Pharmacy, Duluth and Minneapolis, MN



1 Previous Structure	Challenges	Changes Implemented
Practicals <ul style="list-style-type: none"> Single attempt Failure resulted in an individualized minimum competency Failure of minimum competency resulted in failure of the course 	<ul style="list-style-type: none"> Increased student stress and negative impact on learning Instructor workload exceeded capacity Resource and course changes 	Practicals <ul style="list-style-type: none"> Two no-fail attempts were offered to all students Students must pass practical by 3rd attempt
Professionalism <ul style="list-style-type: none"> Evaluation embedded within each activity & assignment 		Professionalism <ul style="list-style-type: none"> Expectations of the Pharmaceutical Care Learning Center Policy

Background

- Repetitive practice is necessary for mastering skills
- Multiple testing attempts can improve long-term retention of knowledge (1,2,3) and can improve students' learning and performance in a pharmacy skills laboratory course (4)
- Previous pharmacy student evaluations of the five skills lab courses indicated high levels of stress, pressure, and tension during some required activities, including practical assessments
- Students' perceptions of the lab environment, pressure, and tension all improved when the course series transitioned from A-F grading to Pass/Fail grading
- To continue to make the lab a safer space for students to learn and make mistakes, reduce students' stress, and address instructor and resources challenges, multiple attempt practicals and policy violations were implemented
- The objective was to evaluate students' perceptions of two no-fail attempts (three attempts total) on practical skills assessments and the use of professionalism policy violations in a pharmacy skills lab sequence

Methods

- Panel 1 highlights the previous structure, associated challenges, and changes implemented
- A survey assessing pharmacy students' perceptions of changes made to the lab course sequence was distributed at the end of the Fall 2022 semester
 - P1-P3 students surveyed (n=344)
 - Responses were optional, except for P2 students
- Descriptive statistics were completed, including proportions of responses (agreement vs. neutral and disagree)
- Fisher's exact tests were completed analyzing for differences in agreement between student year
- A portion of the survey was compared to responses from a previous student cohort

Results

- 200 students (58%) completed some or all aspects of the survey
 - 36 P1 respondents, 114 P2 respondents, and 50 P3 respondents
- Panel 2 displays combined P1-P3 responses to five questions on a five-point Likert scale related to three practical attempts
- The majority of students reported having 3 practicals attempts is:
 - Preferred
 - Reduced their stress and anxiety
 - Allowed them to learn from their mistakes
 - Allowed them to focus on skill development over performing
- Panel 3 displays summed P1-P3 student perceptions on pressure and tension questions displayed in percentage positive response on a six-point Likert scale
 - Compared to students' responses from Spring 2019
 - ↑ 18.5% - The lab environment is a safe place to fail
 - ↓ 5.3% - I feel very anxious while doing lab activities
 - ↑ 15.4% - The lab environment allows me to learn from my mistakes
- There was no difference between classes on any of the survey items (p>.05)

2 P1-P3 Responses to Three Practical Attempts

Three attempts on practicals allowed me to focus on the development of my skills compared to worrying about performance



Three attempts on practicals allowed me to learn from my mistakes



Three attempts on practicals reduced my stress



Three attempts on practicals reduced my anxiety



I prefer to have three attempts for practicals over the old practical and minimum competency structure*



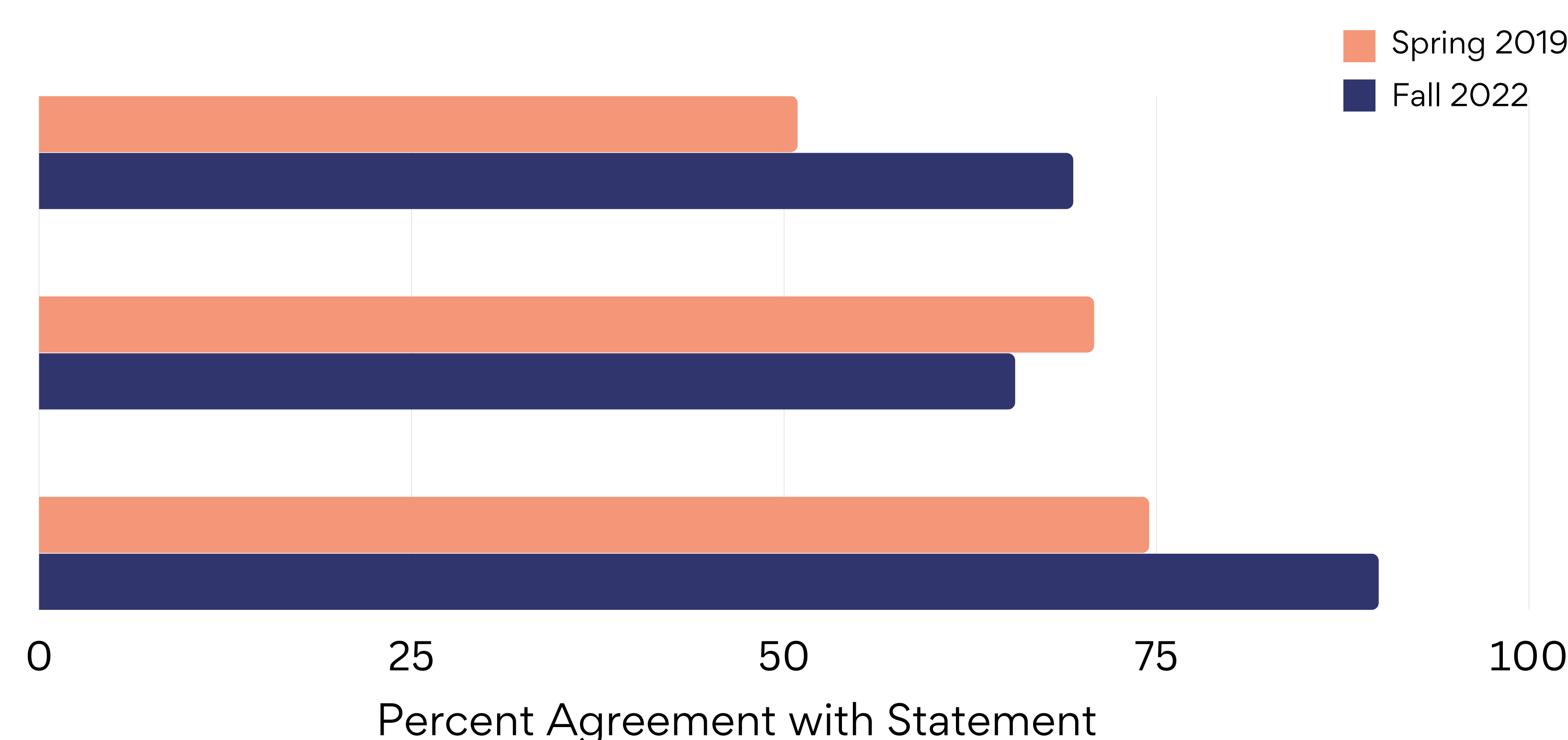
*P2 and P3 responses only

3 P1-P3 Perceptions on the Lab Environment, Pressure, & Tension

The lab environment is a safe place to fail

I feel very anxious while doing lab activities

The lab environment allows me to learn from my mistakes



Discussion & Conclusion

- Implementation of the three-attempt practical structure was received positively by students and resulted in a decrease in the percent positive responses to stress and tension regarding the lab environment and activities
- Next steps
 - Assess for change in performance
 - Improve consistency of implementation across courses
- Limitations
 - Student self-reported perceptions
 - Variability across courses in how and when multiple-attempt practicals were implemented

References

- Scan the QR code to access the reference list