

# An Evidence-Based Approach to Identify Student Success Strategies: Focus on Individualized Reassessment

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## Background

- Remediation and reassessment strategies vary by colleges/schools of pharmacy, and no patterns were identified in a recent systematic review.<sup>1</sup>
- The Jefferson College of Pharmacy has historically employed a 'second chance' policy wherein students earning final course grades of <C and >F could request to take a comprehensive examination for the course to prove competency and progress on-time.
- Beginning in the 2021-2022 academic year, the College created and adopted an individualized reassessment (IR) program to replace the 'second chance'.
- Advantages of an IR program include addressing student-specific learning gaps without increasing student workload by repeating work in areas of prior success.<sup>2,3</sup>

## Objectives

- Describe a process for engaging faculty in evaluating the feasibility of and designing and implementing evidence-based strategies to improve student success.
- Highlight one successful outcome of this process: IR.

## Methods

- Small faculty groups were assigned one of five strategies to improve student success (promoting student success; operationalizing alternative progression strategies; changing course formats/curricular structure; increasing student support services for at-risk students; and exploring utility of readiness assessments).
- Each group used evidence to describe and recommend the 'top three' solutions for their assigned strategy.
- Out of 15 overall recommendations, the top four student success solutions identified through survey of faculty were: 1.) P1 Bridging Course; 2.) IR; 3.) converting P1 year to pass/fail; and 4.) diversifying assessments.
- Following a feasibility study, the College implemented all strategies, except a change to pass/fail, during academic year 2021-2022.
- Specific to IR, students earning final course grades of 59.5-72.4% are eligible for the process, which takes place after the conclusion of the semester. They are reassessed on the material included in assessments worth >10% of the final course grade and for which they earned <72.5%. Attendance at targeted remediation sessions (20 minutes/1 hour of class time) with faculty is required.

## Results

### Rate of Successful Remediation (by student) for P1-P3 students

Fall (% , n/N*)			
2020 (Second Chance)	2021 (IR)	2022 (IR)	2021-2022 (IR, combined)
42.9% (9/21)	76.9% (10/13)	77.8% (7/9)	77.3% (17/22)

Spring (% , n/N*)			
2021 (Second Chance)	2022 (IR)	2023 (IR)	2022-2023 (IR, combined)
80% (8/10)	90.9% (10/11)	100% (8/8)	94.7% (18/19)

- There were 47 attempts for IR for courses from Fall 2021-Spring 2023. Of these, 63.8% (30/47) attempts were students who had to complete only those assessments on which they earned less than a passing grade; the remaining 36.2% (17/47) attempts were for those who had to repeat all assessments in the course, similar to the 'second chance' policy. The success rate of partial versus full reassessment is shown in the table below.

### Rate of Successful Remediation (by course attempt) for P1-P3 students

	Second Chance (Fall 2020-Spring 2021), (% , n/N*)	IR (Fall 2021-Spring 2023) (% , n/N*)
Full Reassessment	54.8% (17/31)	76.4% (13/17)
Partial Reassessment	n/a	93.3% (28/30)

\*N= total number participating; n=number successful

## Discussion

- The IR policy reduced student workload by negating the need to, in most cases, re-demonstrate success in all assessments.
- The improved progression rates may be related to the addition of a formalized remediation process (comparing 'second chance' to those completing IR-full) as well as completing assessments for learning gaps only (comparing 'second chance' to IR-partial and comparing IR-full to IR-partial).
- One limitation to this investigation is restricting the 'second chance' course data to the final academic year of its policy. However, this was done to be most like the following years in terms of course content and delivery.
- Another limitation is that due to the small numbers of students completing IR or 'second chance' in any given academic year, a composite endpoint was used.
- Confounding interventions were initiated to improve exam validity, such as peer review of exam writing, in Fall 2021 for P1 courses, and Fall 2022 for all courses, that may affect these results.
- Anecdotally, students participating in both methods, 'second chance' and IR, appreciated the features of the new IR (structured remediation and retaking only the previously unsuccessful assessments).
- Feedback from faculty included increased workload at the end of the semester to schedule and deliver remediation sessions.

## Conclusion

- Despite the impact on faculty workload at the conclusion of the semester, this new IR process has resulted in improved on-time progression for students.

## References

1. Harmon KS, Gonzales AD, Fenn NE III. Remediation and reassessment methods in pharmacy education: A systematic review. *Cur Pharm Teach Learn.* 2021; 13:81-90.
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3. Wang XR, Cruthirds DL, Kendrach MG. Effect of an individualized post-examination instructor remediation on pharmacy student performance in a biochemistry course. *Am J Pharm Educ.* 2018;82(6): Article 6297.