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Diagnosing Professionalism in the Co-Curriculum: Using Rubrics to Assess Pharm.D. Reflections

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BACKGROUND

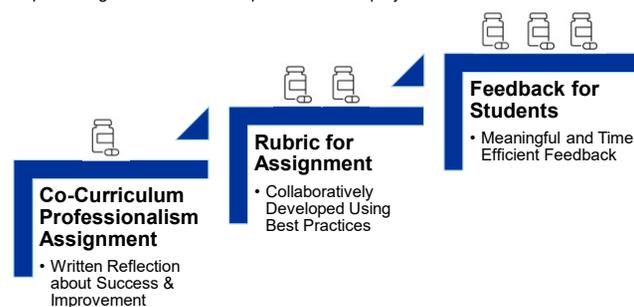
The co-curriculum is essential to preparing practice ready graduates but is sometimes overlooked in pharmacy education. To respond to this gap, we developed a rubric to assess a co-curricular reflective assignment about professionalism.¹

OBJECTIVE

To demonstrate the value of using a feedback rubric to diagnose student learning.² The poster shows rubric development, data analysis, and results.

METHODS

Methods include collaborative rubric development and data analysis. The rubric was collaboratively developed over three- two-hour working sessions.³ There were four rubric domains including writing conventions and submission, reflection and self-assessment, implementing success strategies, and connections to experience. A three-point Likert scale (1 = *beginner*, 2 = *developing*, and 3 = *accomplished*), with descriptions of expectations, was used to provide feedback to students. Data analysis consisted of descriptive statistics and inter-rater reliability (IRR). Below is the process map showing the three main steps of our rubric project.



RESULTS

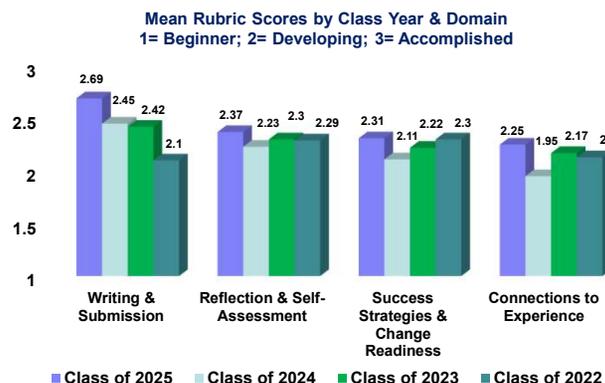
During the 2021-2022 academic year, the rubric provided feedback to 544 Pharm.D. students about their professionalism assignments. There were 388 students (71%) who provided informed consent for this study. Results show moderate- to high levels of achievement across the four rubric domains as measured by the three-point Likert scale for writing conventions and submission (M = 2.41; SD = .79); reflection and self-assessment (M = 2.31; SD = .71); implementing success strategies (M = 2.24; SD = .68); and connections to experience (M = 2.15; SD = .73). Score validity is supported by IRR analysis which shows fair strength of agreement between graders across rubric domains ($k = .20$; $p < .001$).

CONCLUSIONS

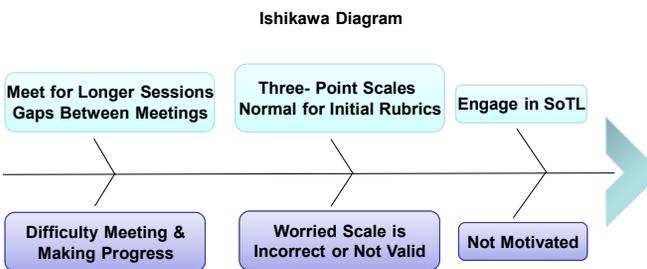
- Rubric development initially requires a high level of resources and time. After implementation, rubrics save time and provide efficient feedback.
- Our developed rubric provided meaningful and useful feedback to students.
- Our students need more instruction for implementing success strategies related to professionalism as well as connecting their writing to personal experiences.
- IRR ratings show a need for improvement in the consistency of faculty grading.

ASSESSMENT RATINGS

The primary goal of our rubric project was to provide students with meaningful and efficient feedback. This was accomplished by providing students with a quality rating in each of the four rubric domains. Faculty also provided written comments to students when it was helpful. Below are the aggregate ratings for students (n = 388) who provided informed consent to participate in our study.



RUBRIC CHALLENGES & SOLUTIONS



Another notable part of our study intentionally focused on learning more about the common barriers and solutions to rubric development. The fishbone diagram above shows the three most significant challenges we worked through as a research, assessment, and co-curricular team.

We also had some difficulty adequately connecting specific domain criteria to the professionalism self-assessment assignment. Including additional perspectives and opinions helped us to overcome this challenge but we continue to improve in this area. Other tips that we discovered which were especially helpful for rubric development include examining other rubrics, researching and reading about best practices, and recognizing that developing rubrics requires a unique type of mental effort as well as notable time and human resources.^{4,5}

FEEDBACK RUBRIC

Professionalism Self-Assessment Rubric	Beginner 1	Developing 2	Accomplished 3
Writing Conventions & Submission Correct grammar, spelling, capitalization and punctuation. Assignment is completed in full and submitted on time.	Several errors, assignment not complete and/or submitted on time.	Few errors with writing conventions, completion or submission.	Proper writing conventions, assignment complete and submitted on time.
Reflection and Self-Assessment Demonstrates a sense of self, building on prior experiences to respond to new and challenging contexts.	Describes own performances with general descriptors of success and/or failure. Reviews prior experiences at a surface level.	Articulates strengths and challenges to increase effectiveness in different contexts. Evaluates changes in one's own learning over time.	Envisions a future self and makes plans that build on past experiences. Reflects on prior learning in depth to reveal changed perspectives.
Implement Success Strategies & Readiness for Change Identifies connections between self reflection and future success. Embraces change and realizes the benefits of self improvement.	Inconsistent approach describing how learning affects their success. Hesitant to implement change.	Describes how learning affects their success and provides some examples or connections. Open to implementing change.	Consistent approach describing how learning affects their success with examples. Embraces change and is eager to implement success strategies.
Connections to Experience Connects relevant experience to future success through self reflection.	Lack of connections between prior knowledge to current and future experiences.	Compares prior knowledge to experiences with some examples. Acknowledges perspectives other than one's own.	Applies knowledge and experience to make meaningful improvements. Values self reflection as a pathway to future success.

IMPLICATIONS & FUTURE CHANGES

Our project was successful and led to notable findings about the co-curriculum, professionalism self-assessment, and rubric development. As a result of completing our project we learned that we need to make minor edits to describing both the assignment and what is required at each level of the rubric domains. Our team has already begun making these changes and plans to implement them in the 2022-2023 academic year. We also plan to host a team meeting focusing on improving inter-rater reliability.

The success of our project has also encouraged us to move forward with rubric development in other areas of our co-curriculum. For example, we are currently working on a rubric to help us provide meaningful feedback for advocacy participation and reflection. Moving forward we hope that our successful use of rubrics will result in a greater understanding of the importance of the co-curriculum, meaningful and efficient student feedback, and the holistic assessment of Pharm.D. students.

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