

Longitudinal Introductory Pharmacy Practice Experience and Quality Improvement: Innovation and Impact

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INTRODUCTION

- A longitudinal introductory pharmacy practice experience (IPPE) is a component of Community Health, a required course in the first professional year.
- A quality improvement (QI) project was introduced during the IPPE rotation at one location as means of engaging learners in the site, patient population, and scholarship.
- Bloom's taxonomy and the 2022 AACP Curriculum Outcomes and Entrustable Professional Activities (COEPA) are modalities to assess progress across skills and pharmacy school curriculum respectively.
- Blooms taxonomy contains six categories of cognitive skills. The skills range from foundational, low cognitive skills to skills requiring higher levels of cognitive processing.¹
- The COEPA Educational Outcomes span domains of knowledge, skills, and attitudes of the profession with sub-domains emphasizing specific skills.²

Image 1: Blooms Taxonomy Levels¹

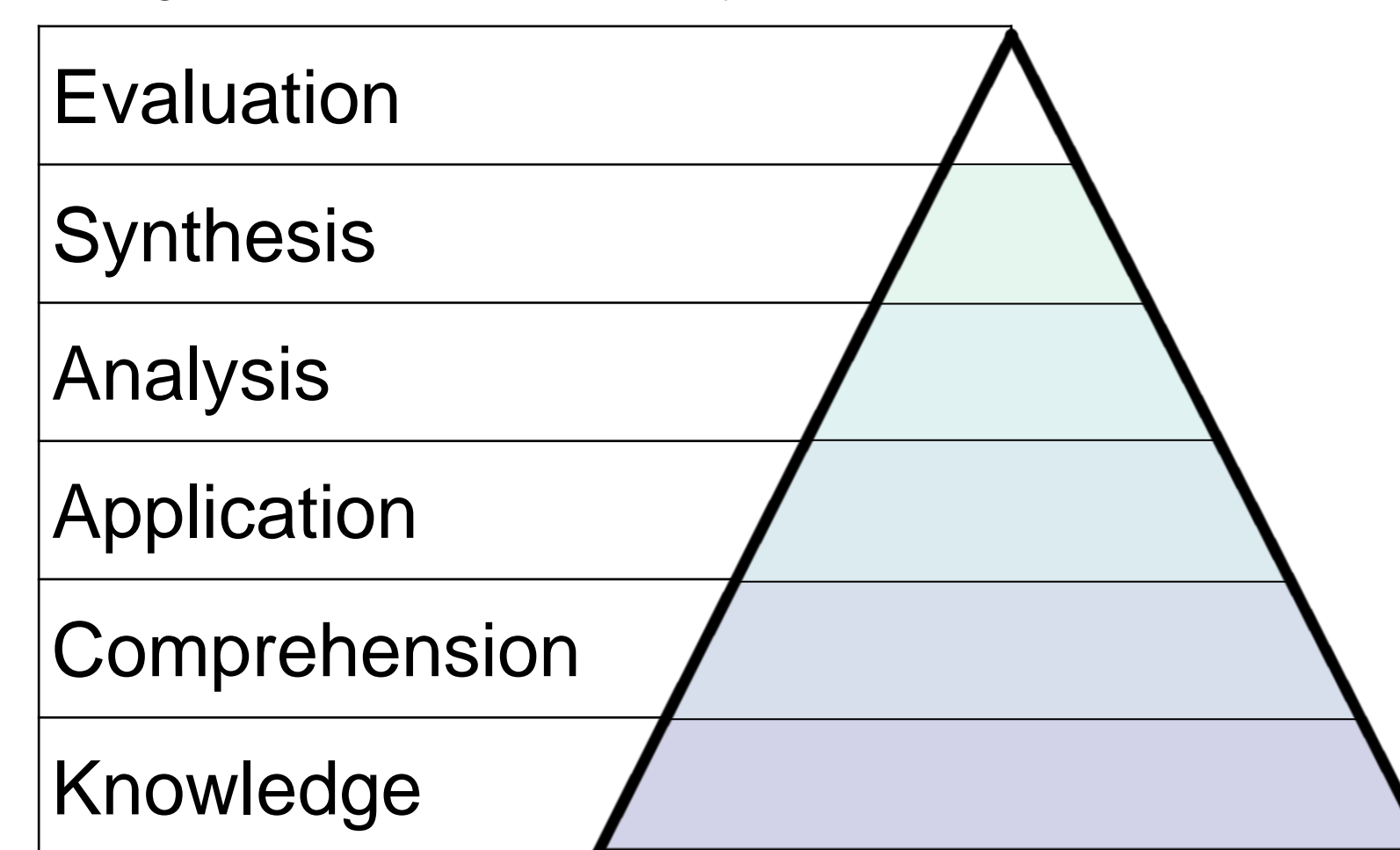


Table 1: 2022 COEPA Educational Outcomes²

Domain	Sub-Domain	Descriptor
Knowledge	1.1	Learner
	2.1	Problem-solver
Skills	2.2	Communicator
	2.3	Ally
	2.4	Provider
	2.5	Advocate
	2.6	Steward
	2.7	Collaborator
	2.8	Promoter
	2.9	Leader
Attitudes	3.1	Self-aware
	3.2	Professional

OBJECTIVE

Describe the impact of a longitudinal rural IPPE on student engagement and learning when introducing QI and scholarship.

METHODS

- A hybrid (onsite/remote) rural IPPE including a QI project was offered as a component of Community Health.
- Reflective essays of five students were coded independently by two reviewers. Reviewers evaluated engagement in learning through exploratory case series design with thematic qualitative analysis using Bloom's taxonomy of categories of cognitive processes of learning and mapping to COEPA.
- Quantitative outcomes were demonstrated through scholarship.

RESULTS

- Reflective essays captured learning in all Bloom's Taxonomy categories and all educational objectives. With increasing complexity of Bloom's Taxonomy, representation of higher-level skills diminished.
- All essays indicated learning in Bloom's Taxonomy skills of knowledge, comprehension, and application, and COEPA sub-domain outcomes of learners, problem-solver, communicator, ally, provider, and professional with the highest frequency in application (Bloom's) and learner (COEPA).
- While not explicitly referenced by all essays, COEPA outcomes 2.8 promoter and 2.9 collaborator were emphasized through citation of QI project impact on the patient population.
- Reflective essay encourage COEPA outcome 3.1 self-awareness
- An abstract was submitted, and poster presented at the American Pharmacist Association National Meeting.

Table 2: Results – Bloom's Taxonomy

	Occurrence of Word Use by Bloom's Taxonomy Level					
	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Essay 1	4	2	7	1	2	0
Essay 2	4	7	3	0	0	0
Essay 3	4	3	15	4	3	1
Essay 4	4	1	3	4	4	0
Essay 5	5	3	5	1	0	0
Mean	4.2	3.2	6.6	2	1.8	0.2

Table 3: Results – 2022 COEPA Educational Outcomes

	Occurrence of Written Statement Use by 2022 COEPA Sub-Domain Outcomes											
	1.1	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.1	3.2
Essay 1	4	2	1	2	1	0	1	0	2	1	2	1
Essay 2	3	1	1	2	3	0	0	3	1	0	0	1
Essay 3	2	3	2	3	3	2	2	5	1	1	1	3
Essay 4	2	1	1	3	3	0	1	0	1	1	3	2
Essay 5	4	1	2	2	1	1	2	3	0	0	1	2
Mean	3	1.5	1.4	2.4	2.2	0.6	1.2	2.2	1	0.6	1.4	1.8

CONCLUSIONS

Engaging students in a longitudinal, rural practice experience with structured QI:

- Fosters learning across all Bloom's taxonomy skills with appropriately diminishing examples of learning skills across reflections as skill complexity increases
- Provides an opportunity for learning across the COEPA outcomes
- Facilitates participation on scholarly activity

1. Adams NE. Bloom's taxonomy of cognitive learning objectives. *J Med Libr Assoc.* 2015;103(3):152-153.

2. Medina M, Farland M, Malcom D, et al. *AACP Curriculum Outcomes and Entrustable Professional Activities (COEPA) 2022 Report of the 2022-2023 Academic Affairs Standing Committee: Revising the Center for the Advancement of Pharmacy Education (CAPE) Educational Outcomes and Entrustable Professional Activities.* <https://www.aacp.org/sites/default/files/2022-11/coepa-document-final.pdf>