

# Proposal for a U of S SoTL Cluster Charter

**Title: Pharmacy Education Development Cluster**

**Date of application: May 2019**

**GMCTL contact person: Wendy James**

**Description/Background:** *What is the context and need for the study?*

The focus of the Pharmacy education development cluster is to better understand how to develop skills that are important to the practice of pharmacy. Drs Krol and Dobson have recently published an article demonstrating that students who are successful in prerequisite courses which require synthesis and mastery of knowledge are more likely to be successful in the pharmacy program. This agrees with the requirement that pharmacists be able to integrate and synthesize different sources of information to arrive at a coherent patient care recommendation.

Objective structured clinical examinations (OSCEs) are used by the Division of Pharmacy at the UofS as a means of assessing and enhancing the development of practical student skills. We hypothesized that performance in OSCEs are an indication of knowledge synthesis and application and would be associated with the prerequisite courses from our previous study. We found through our research, however, that these same courses have only weak associations with student performance in OSCEs. The current OSCEs employed at the UofS are best described as largely process-based and, as such, may not adequately measure advanced professional skills such as synthesis and application of knowledge. As part of our ongoing development of the new PharmD program, we would like to develop OSCEs that better measure these higher level cognitive skills.

**Connection to the *Learning Charter's* educator commitment to engage in lifelong learning and continuous enhancement of teaching practice.** . *"Honouring this commitment requires that educators seek out and participate in opportunities to build their knowledge of teaching within their discipline, learn about advances in effective pedagogies/andragogies and engage in meaningful conversations about their practices with others."*

*Please describe how this will occur in your cluster:*

As the practice of pharmacy continues to evolve, a goal of the new PharmD program is to develop educational strategies that improve and enhance the practice of pharmacy in part by facilitating learning and development of higher-level skills of pharmacists. This cluster seeks to develop assessments of these higher-level learning attributes and use this to help us improve our teaching and learning methods. Continual assessment of the effectiveness of educational methods to meet nationally mandated competencies is a requirement of accreditation of the PharmD program. The activities of this cluster would contribute to this goal and provide opportunities to enhance learning methods within the college.

**Cluster Lead:**

Ed S. Krol, Ph.D.

Professor

Division of Pharmacy, College of Pharmacy & Nutrition

**Members of the Cluster:**

Ed S. Krol, Professor of Pharmacy

Roy T. Dobson, Professor of Pharmacy

Yvonne Shevchuk, Professor of Pharmacy

Jane Cassidy, Pharmacy Skills Coordinator

Kerry Alcorn, Program Evaluation and Assessment Coordinator

**Goals and predicted timeline (specific Deliverables/Milestones) *bullet point please:*****Goals**

- Carry out a review of the literature to identify OSCEs that assess higher level learning attributes and determine the tools that are available to identify, select and apply the appropriate assessment methods for knowledge synthesis and application.
- Develop and test OSCEs for assessment of knowledge synthesis and application using practicing pharmacists from various settings as well as students and use these findings to revise and retest OSCEs as needed.
- Use validated OSCEs to assess student progression in high-level learning attributes before and after their full year of placements in 4<sup>th</sup> year.

**Timeline**

- July-September 2019: Identify OSCEs assessing higher-level learning attributes.
- September-November 2019: Submit ethics application and receive approval to test OSCEs
- September-November 2019: Prepare high-level learning OSCEs for testing.
- December 2019-April 2020: Test high-level learning OSCEs on practicing pharmacists and 4<sup>th</sup> year BSP students.
- March-April 2020: Revise and retest high-level learning OSCEs on practicing pharmacists and 4<sup>th</sup> year BSP students.
- May 2020: Test high-level learning OSCEs on PharmD students at the end of their course work/ beginning of their year of placements.
- June-August 2020: Analyze data from PharmD student OSCEs.
- April-May 2021: Test high-level learning OSCEs on PharmD students at the end of their year of placements.
- June-August 2021: Prepare manuscript and perform additional analysis as needed

**Over the next two years this research team will:** *Articulate the specific actions you'll want your midterm funding and final sharing to be based on. Focus on what you anticipate doing and how. Please include how you will share your findings, including at GMCTL SoTL celebrations/events.*

Initial funding: Timeline items 1-3, funding for a research assistant to help collect and collate data. Funding to offset travel/ time for testing OSCEs on practicing pharmacists, 4<sup>th</sup> year BSP students and PharmD students at the end of their formal coursework.

Midterm funding: Research assistant to help with analysis of OSCE data, final revisions and funding to offset travel/ time for testing OSCEs on PharmD students at the end of their placement year.

An important forum available to share and present the results of these developments is the Canadian Pharmacy and Education Research Conference (CPERC) held annually through the Association of Faculties of Pharmacy of Canada (AFPC). The previous work of Drs Krol and Dobson was published in the American Journal of Pharmaceutical Education, the leading North American peer-reviewed journal for pharmaceutical education.

**Financial (specify how funding will be spent, can be high level criteria and processes for allocating funds rather than a specific budget; note any additional or matching funds):**

\$7,000: Research assistant to identify OSCEs assessing higher-level learning attributes, recruit practicing pharmacists, 4<sup>th</sup> year BSP and PharmD students for OSCEs, analyze OSCE results, help with revision of OSCEs.

\$3,000: Travel/time for practicing pharmacists to attend OSCEs at the UofS, incentives for 4<sup>th</sup> year BSP students to participate in development of OSCEs.

**Scope (Focus):**

In Scope: (what is the intended focus of the Cluster)

The intended focus of the cluster is to develop and assess high-level learning attributes for students in the Pharmacy program.

Not In Scope: (what will NOT be included in the focus of the Cluster; limits on expenditures may be included here or in the Finances section.):

**Constraints, Assumptions, Risks and Dependencies of Note**

<b>Constraints</b>	[Describe here potential factors that will impact the achievement of the goals; time, resources, competing demands]
<b>Assumptions</b>	[Describe here conditions or situations that you are relying on in order to achieve project goals] <ol style="list-style-type: none"> <li>1. <b>OSCEs can be developed that measure high-level learning attributes (application, analysis and evaluation) in pharmacy students.</b></li> <li>2. <b>Assessment methods will distinguish between OSCE performance using Bloom's taxonomy.</b></li> </ol>
<b>Risks and Dependencies</b>	[What are the most significant risks? What things must happen before the project is delivered?] <ol style="list-style-type: none"> <li>1. <b>Ethics approval.</b></li> <li>2. <b>Recruitment of practicing pharmacists to test OSCEs</b></li> <li>3. <b>Recruitment of 4<sup>th</sup> year BSP pharmacists to test OSCEs</b></li> </ol>

**What in-kind support would benefit your project?** (*Support available includes research design consultation, facilitating research design or analysis meetings, workshop, writing retreat, identification of potential journals, and more. Support related to implementing changes in teaching, courses and programs are also available through the GMCTL.*)