

Using the steps of evidence-based practice to target a medical science library's instructional practices for local professional health programs curricula

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OBJECTIVE AND BACKGROUND

Objective

We created two approaches to continue developing a medical library instructional schema supporting information skills and behaviors for academic health sciences programs.

- Mapping the alignment of the steps of evidence-based practice (EBP) with information skills and behaviors within the local programs' curricula
- Analyzing the representation of information skills and behaviors in curriculum standards for the programs' accrediting bodies

Background

- The library supports the professional health programs housed within five colleges
 - Veterinary Medicine
 - Medicine (Human)
 - Nursing
 - Pharmacy
 - Public Health
- Program-level curricula created by programs themselves
 - Accredited by specific discipline-specific bodies
- The disciplines for each of the programs use evidence-based practice (EBP)

METHODS

Two Phases of Coding and Mapping

- Collected curricular documents
- Created novel rubric from the collected documents
- Coded the documents using the rubric

Phase 1:
2017-2019

Reference for this phase:

Waltz MJ, Moberly HK, Carrigan EE. Identifying information literacy skills and behaviors in the curricular competencies of the professional health programs. JMLA. 2020;108(3). doi:10.5195/jmla.2020.833

- Coded updated curricular documents and added accreditation documents
- Curricular documents mapped to the steps of EBP

Phase 2:
2020-2021

Updated Rubric for Phase 2

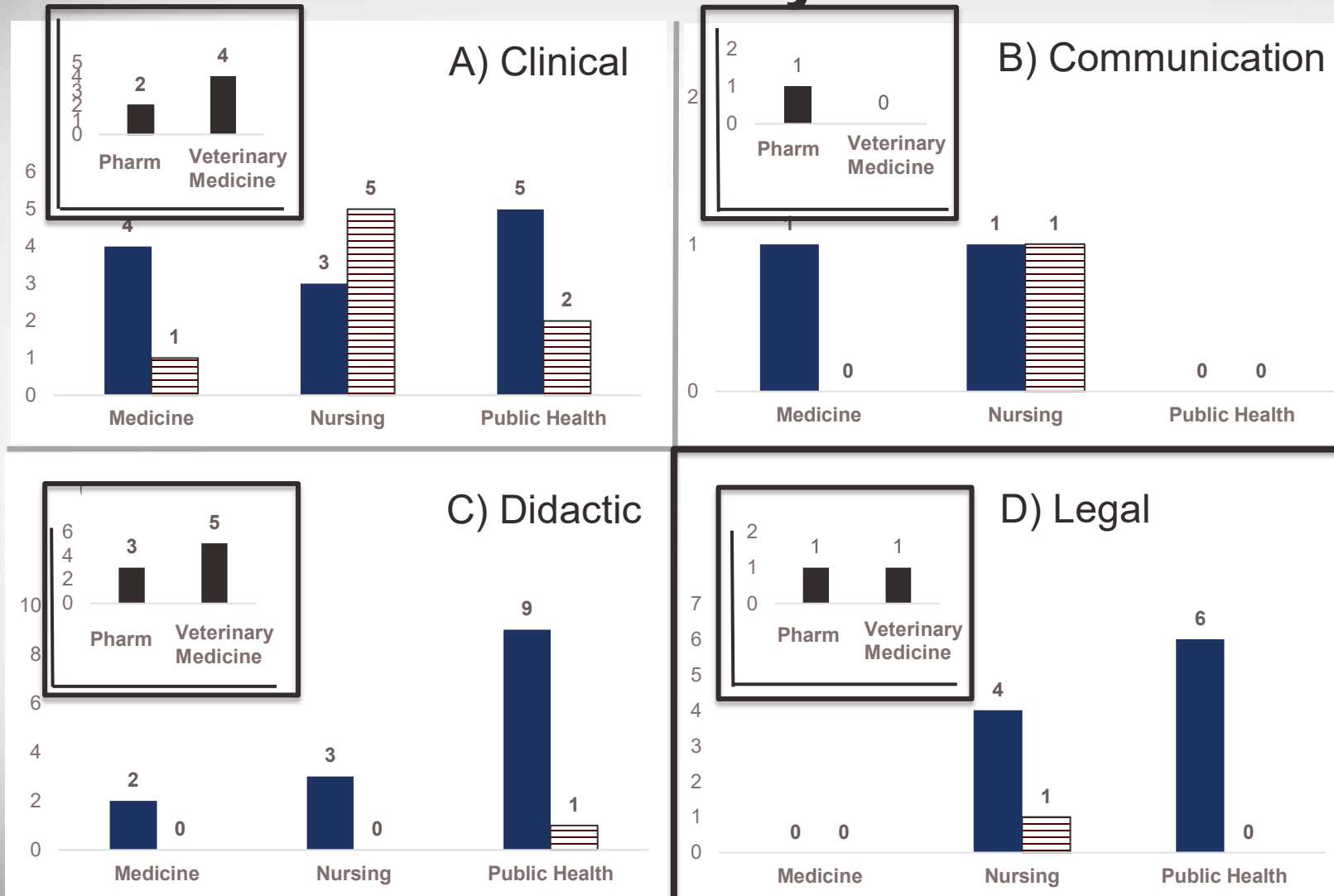
Nine categories were identified from the curricular documents:

Coding Categories	
1.	Clinical Skills
2.	Communication skills/human interaction
3.	Didactic knowledge and understanding
4.	Ethics
5.	Information seeking behaviors and skills
6.	Leadership/professional
7.	Legal awareness, organizational awareness, and advocacy/ethics
8.	Statistics, experimental design, understanding, or application
9.	Other

New Categories

RESULTS

Changes in Co-occurrence of Information Seeking Behaviors by Rubric Code



- The distribution of co-occurrences of information seeking behaviors shifted across the three professional programs with updated curricular documents.

- 2017 curricular documents
- ▨ 2020 updated curricular documents
- Curricular documents not updated

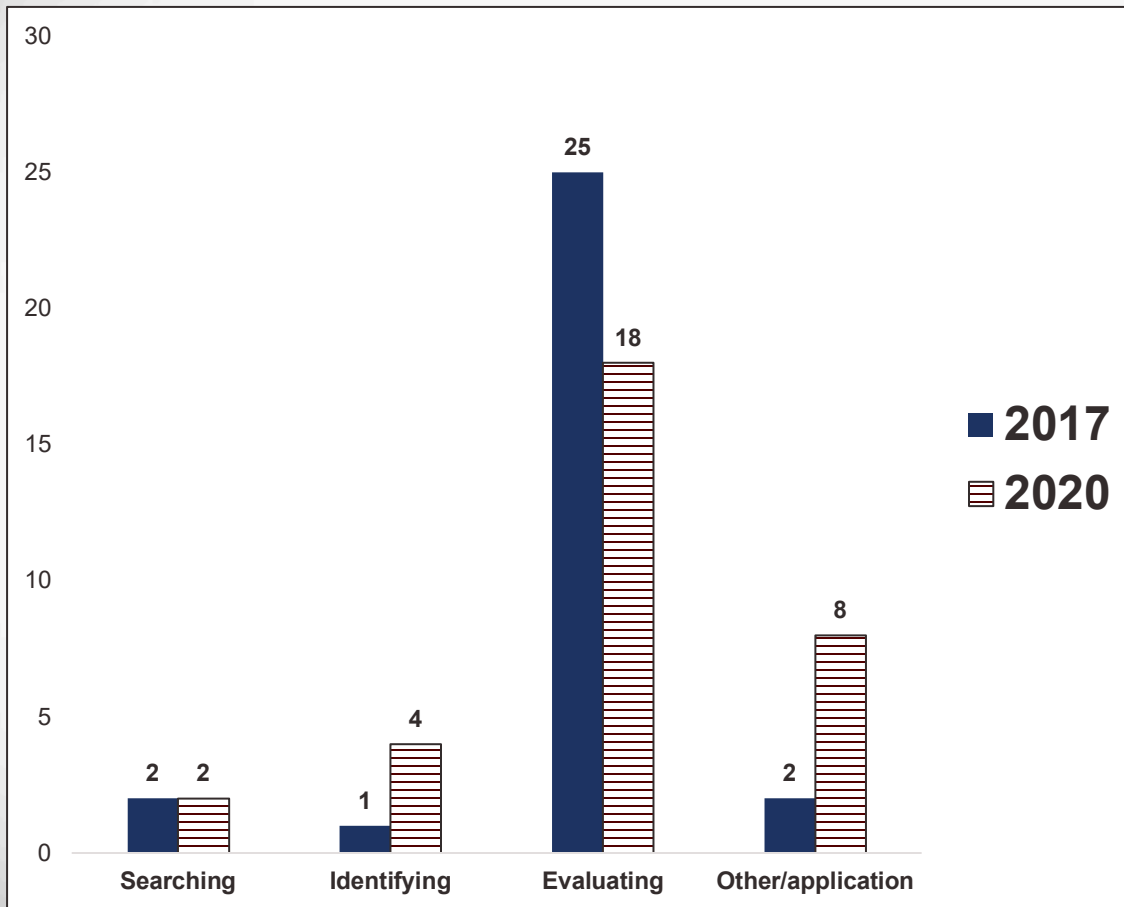
Curricular documents from programs

Changes in Verb Usage in Updated Competencies with Information Skills and Behaviors

- Pharmacy and Veterinary medicine were not updated during the 2017-2020 time period
- Medicine, Nursing, and Public Health updates included different verbs

Programs	Verbs dropped in 2020 Competencies	Verbs added in 2020 Competencies	Verbs kept from 2017 to 2020 Competencies
Medicine	Based, interpret, utilize, record, select, appraise	Engage, evaluate, identify, manage, monitor, reason, retrieve	NA
Nursing	Analyze	Apply, design, integrate, implement, using	Evaluate
Public Health	Evaluate, analyze	Apply, explain, integrate	NA

Changes in Verbs with Updated Competencies



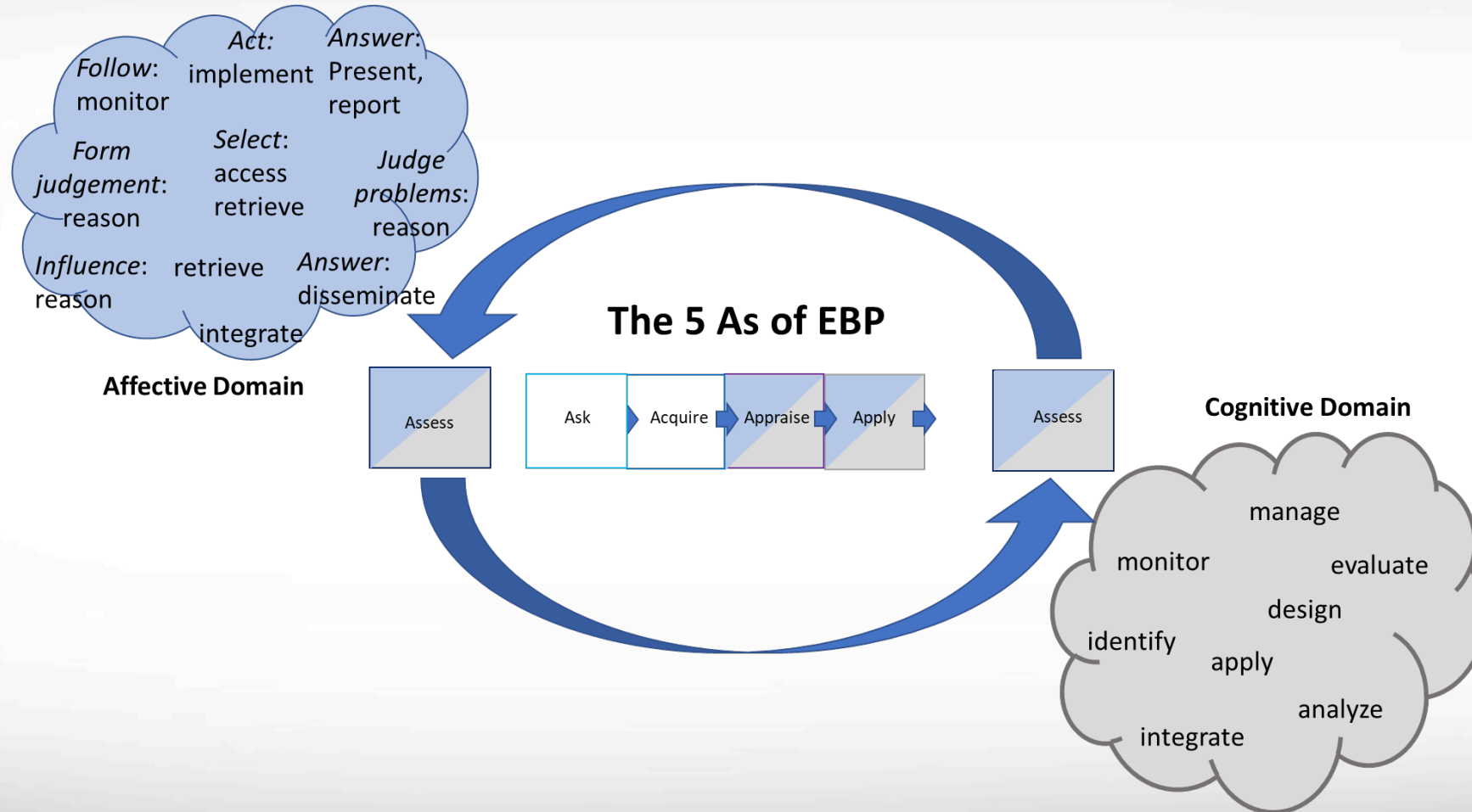
- The verbs associated with *searching* stayed the same between 2017 and 2020.
- Verbs involved with *identifying* and other/application (of) information **increased.**
- Verbs associated with *evaluating* **decreased.**

Mapping the Competency Verbs to the steps of EBP and the Affective and Cognitive Domains

Taxonomy	Ask	Acquire	Appraise	Apply	Assess
Cognitive	identify		analyze	apply integrate	evaluate
Affective		retrieve	Form judgement: reason	Act: implement	Form judgement; Judge problems: reason

- Bloom BS, Engelhart MD, Furst EJ, Hill WH, Krathwohl DR. 1956. Taxonomy of educational objectives: the classification of educational goals. Handbook I: Cognitive domain. New York: David McKay Company.
- Krathwohl DR, Bloom BS, Masia BB. 1965. Taxonomy of educational objectives: Handbook II: Affective domain. New York, NY: David McKay Company.

Linking Competency Verbs with the Steps of EBP and the Affective and Cognitive Domains



Examples of Information Skills and Behaviors in Accreditation Documents

- The scope of accrediting documents used by local professional programs varied widely across disciplines.

Two illustrating examples of information skills and behaviors in different accreditation documents:

Accrediting Body	Local Program	Accrediting document statement
LCME	Medicine	Critical Judgment/Problem-Solving Skills - The faculty of a medical school ensure that the medical curriculum incorporates the fundamental principles of medicine, provides opportunities for medical students to acquire skills of critical judgment based on evidence and experience, and develops medical students' ability to use those principles and skills effectively in solving problems of health and disease.
CEPH	Public Health	Foster an educational climate that supports program students, graduates, and faculty in their pursuit of life-long learning

CONCLUSIONS

Informing Instruction and Other Support

- Identify additional places for liaison librarians to support instruction
 - Additional instructional opportunities
 - Informs collection development
- Use the affective/cognitive domains to develop, or modify, learning objectives and goals that are tailored to programs' curricular and accreditation documents
 - Framed within the context of the 5As of EBP

Conclusions

- Information literacy continues to be present in all five professional programs' curricular programs
 - In the updated curricular documents, analysis of verbs indicates a shift in the areas of information skills and behaviors that are being emphasized, aligning with the steps of EBP
 - These verbs also map to the Cognitive Domain (Bloom's) and Affective Domain, which may help inform future instructional endeavors
- There is little direct emphasis on the *ask* and *acquire* steps of EBP
 - The emphasis in curricular documents is implied
 - This implication may indicate the expectation of competencies developed prior to joining a professional program

Questions

- Thanks for coming to our talk!
- We welcome any questions at this time.