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https://scholar.valpo.edu/ccls_fac_pub/85

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Integrating the ACRL Threshold Concept Research as Inquiry into Baccalaureate Nursing Education

Kimberly J. Whalen and Suzanne E.
Zentz

Introduction

Teaching information literacy skills to nursing students is a shared domain of nursing and library science faculty at Valparaiso University. This collaborative effort commenced in 2012 as faculty worked together to incorporate information literacy instruction within an undergraduate Introduction to Nursing Research for Evidence-Based Practice course. A deliberate effort was made to move away from the preexisting one-shot information science lecture provided by the librarian to multiple learning experiences with corresponding assignments aimed at building information skills of students over the semester. Positive student outcomes were achieved as students' grades on classroom assignments significantly improved. Gaining momentum from

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this initial work, nursing and library science faculty examined information literacy skills across the entire College of Nursing and Health Professions (CONHP) curriculum, which resulted in threading information literacy content with associated assignments throughout the sophomore, junior, and senior nursing courses.

Since the development of the ACRL Framework for Information Literacy for Higher Education in 2015, library faculty reevaluated information literacy education at the university and college levels.¹ The language of the Framework was adjusted and related learning outcomes were developed to fit the local learning community. Faculty developed curriculum maps to document the adjusted Framework concepts within common first-year and discipline-specific programs. This chapter describes the evaluation process and application of the Framework and specific threshold concept Research as Inquiry to the nursing discipline in general, as well as baccalaureate nursing courses within the CONHP. Specific assignments directed at reinforcing and mastering the Research as Inquiry frame within the baccalaureate nursing program are presented.

Information literacy and evidence-based practice in nursing

An expectation of baccalaureate nursing education is to prepare nurses to implement evidence-based practice (EBP). There are numerous definitions of EBP, but utilizing research information, applying clinical expertise, and considering patient values are typically common elements among definitions. EBP is a process by which nurses must gather, analyze, and synthesize the appropriate research evidence related to a clinical problem. Using their clinical expertise, nurses must apply this information to the specific patient, considering their preferences and values.² The EBP process, which is so vital to nursing practice, is dependent on the acquisition of information literacy skills.

Though not always identified as information literacy, nursing organizations have developed clinical practice standards that include information skill components. The American Association of Colleges of Nursing (AACN) has developed three sets of guidelines for baccalaureate, master's, and doctorate-level programs. These documents, entitled *The Essentials*, guide the development of nursing curricula and include recommendations of core knowledge required of nursing professionals at the various levels of education. At the baccalaureate level, nine essential outcomes are delineated.³ Information literacy skills are included within these essential outcomes. For instance, Essential III, Scholarship, and Evidence-Based Practice emphasizes that nursing practice must be based on the best evidence. Specific

program outcomes are stated reflecting information literacy skills that graduates of baccalaureate programs must achieve. Example outcomes related to information literacy skills include that graduates must be able to evaluate the credibility of sources, retrieve, appraise, and synthesize evidence to improve patient outcomes, integrate the evidence into patient care, and disseminate evidence.

Although the acquisition of information literacy skills is foundational to creating EBP, nurse educators have found teaching these skills to be rather daunting. Historically, emphasis has been placed on teaching the research process with less emphasis on how to access, appraise, synthesize, or utilize evidence. In recent years, nursing programs have begun to emphasize EBP and information literacy skill development within undergraduate nursing research courses.⁴ Regardless of the level of EBP and information literacy instruction integrated within curricula, undergraduate nursing students habitually overestimate their information literacy skills, and some have negative attitudes regarding the need to be proficient at these skills.⁵ Students struggle to formulate clinical questions, identify related keywords or standardized subject headings, craft effective search strategies within databases, and critically appraise and synthesize search results.

The difficulty in teaching EBP process skills within nursing education programs is evident when investigating practicing nurses' EBP knowledge. Over ten years ago, Pravikoff, Pierce, and Tanner surveyed 1,097 practicing nurses regarding their readiness to participate in EBP.⁶ The researchers found that almost half of participants were not familiar with the term "evidence-based practice." Furthermore, more than half had never identified a clinical problem for research or searched a major database for evidence. Major barriers to implementing EBP identified by the nurses were a lack of time to implement and lack of value of the EBP process. Some movement has been made in recent years, as reflected in a descriptive survey performed by Melnyk and Fineout-Overholt.⁷ Nurses who were members of the American Nurses Association were sent a survey aimed at assessing the current state of EBP implementation across the United States. Some findings from this more recent survey were more encouraging than the earlier findings. In the more recent study, nurses indicated wanting more education about and increased access to EBP information. Although nurses identified some of the same barriers to EBP as indicated in the earlier study, such as not enough time, knowledge, or support for EBP, nurses also indicated new barriers, such as lack of available evidence and resistance from colleagues. This shift indicates that nurses are interested in implementing EBP but need additional education and support to achieve this goal.

Nurse educators must ensure that baccalaureate-prepared nurses are not only knowledgeable of EBP but prepared to implement EBP. Thus curricula

must be carefully designed to introduce foundational information literacy skills and concepts early in programs and gradually build to discipline-specific activities. Nursing and library science faculty who collaborate to design and implement a cohesive curriculum provide opportunities for students to practice these skills over time and thus facilitate students' ability to apply these skills to nursing practice.

Adaptation of ACRL Framework for Valparaiso community

While the new Framework and corresponding dispositions were being discussed within the broader information science discipline, Valparaiso University library faculty began internal discussions of how the Framework best suited the university's specific learning community. An Information Literacy Advisory Committee (IL Committee) comprised of six library faculty, the Director of Writing and the Director of Faculty Development was established along with a Curriculum Committee of six library faculty. The IL Committee agreed that a university-wide information literacy program based on the Framework should be developed. Building on IL Committee conversations, the Curriculum Committee met regularly to review the six original ACRL frames and develop a university-wide information literacy program, including objectives and learning indicators. The original frames, knowledge practices, and dispositions were adjusted, and an additional set of learning objectives for the Information Has Value frame were added to the Valparaiso University program document.⁸

Valparaiso University Information Literacy Program Objectives	The information literate student:
1. Scholarship as Conversation	Recognizes that scholarship is an ongoing communal conversation in order to negotiate meaning and ethically contribute to the scholarly discourse
2. Research as Inquiry	Conducts research across a spectrum of inquiry in order to ask increasingly complex questions whose answers develop new questions or lines of inquiry

Table 15.1. Valparaiso University Information Literacy Program Objectives, March 2015	
3. Authority is Constructed and Contextual	Weighs markers of authority in order to determine whether a source satisfies the information need
4. Information Creation as a Process	Recognizes how a source's format is influenced by processes of creation, production, and dissemination in order to fully evaluate quality, relevance, and perspective
5. Searching as Strategic Exploration	Approaches information gathering with a sense of adventure, persistence, and flexibility in order to access a broad range of sources that informs the inquiry
6. Information Has Value	Operates within the information creation and dissemination value system in order to ethically participate in scholarly and social conversations through synthesis and attribution. Accepts that information, including personal information, can be a commodity in order to recognize bias, consider excluded perspectives within the information marketplace and curate digital footprints.

Research as Inquiry and nursing

Due to parallels between information literacy and the EBP process, the threshold concept Research as Inquiry, with corresponding knowledge practices and dispositions, can be used as a foundation for teaching components of the EBP process to undergraduate nursing students. According to Melnyk and Fineout-Overholt, there are seven critical steps of EBP: (0) creating a spirit of inquiry, (1) asking the clinical question, (2) searching for the best evidence, (3) appraising and synthesizing the evidence, (4) integrating the evidence with clinical expertise and patient preferences, (5) evaluating outcomes, and (6) disseminating outcomes.⁹ The first four steps of the EBP process align nicely with the university's Research as Inquiry frame and learning indicators. Although Melnyk and Fineout-Overholt discussed the importance of laying the foundation for inquiry in the initial version of their EBP model, creating a spirit of inquiry was not identified as a specific step, due to the vital nature of this process, it was later added.

Table 15.2. Research as Inquiry within the Valparaiso University Information Literacy Program Objective and Learning Indicators, March 2015

Valparaiso University Research as Inquiry	<p>Conducts research across a spectrum of inquiry in order to ask increasingly complex questions whose answers develop new questions or lines of inquiry.</p> <ol style="list-style-type: none"> a. Formulates questions for research based on information gaps or reexamination of existing, possibly conflicting, information b. Breaks complex questions into simple ones and focuses the scope of the research c. Uses a variety of research methods, based on need, circumstance, and type of inquiry d. Draws reasonable conclusions based on the analysis and interpretation of information e. Uses research appropriately to make decisions and take action (i.e., uses evidence to inform practice) f. Is willing to refine or change the direction, method, or scope of research based on new insights g. Demonstrates intellectual humility by recognizing their own intellectual or experiential limitations, interpreting results and making claims appropriate to their level of knowledge (e.g., student does not have expertise after a cursory encounter with information)
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Step 0 of the EBP process, creating a spirit of inquiry, is foundational. For EBP to exist, the environment must be open to questioning. The culture must encourage asking, “Why?” Such an environment is consistent with educational settings. Liberal arts and sciences are the foundation of baccalaureate nursing programs. As part of the common first-year program, all Valparaiso University freshmen are encouraged to develop research questions and search for the best information to address their inquiries. As nursing students progress to discipline-specific courses in their sophomore year, questioning is encouraged and skills are refined. This initial stage of the EBP process is consistent with the Research as Inquiry frame, which welcomes questioning

and anticipates disagreement. Mastery of this frame requires an open climate where differences can be discussed freely and new ideas are readily considered. Unfortunately, this milieu does not consistently transcend beyond educational institutions into healthcare organizations. Practicing nurses do not always feel free to question practice within healthcare organizations. When questioning is discouraged, and support is lacking, EBP is unlikely to be sustained; however, when nurses implement EBP in a supportive environment, quality patient care is achieved.¹⁰ Educators must not only cultivate inquiry within students but also arm them with information about barriers to EBP in the real world and ideas to overcome them.

The next step of the EBP process, step 1, asking the clinical question, includes an iterative process of asking increasingly complex questions which are a direct parallel to the threshold concept of Research as Inquiry. Question formation typically begins with a general topic of concern or clinical problem and gradually morphs into a sophisticated question. A standard question format used in EBP is PICOT, which is an acronym that includes all the key components of a clinical question: population, intervention, comparison, outcome, and timeframe.¹¹ Identifying all these components focuses the clinical problem and thus the literature search. Searching for the best evidence, step 2 of the EBP process, involves finding the best information from a variety of sources to address a clinical problem. As students search, they modify their search elements until they have achieved their best search, which then can be duplicated in multiple information sources. A well-crafted PICOT question facilitates finding the best evidence to address a specific clinical problem. Reflection is a key component of this step. Each element of the PICOT question must be analyzed to determine the key factors regarding the clinical problem. There is overlap between the Research as Inquiry and Searching as Strategic Exploration frames in regard to the EBP process. Both frames address portions of step 2 of the EBP process, searching for the best evidence. Continual refinement of the PICOT or clinical question in regard to new evidence discovered while searching is a particular focus of Research as Inquiry.

Appraising and synthesizing the evidence, step 3 of the EBP process, and integrating the evidence with clinical expertise and patient preferences, step 4, directly engage the researcher with the evidence found. It is not enough to just locate evidence; the EBP process requires the appraisal, synthesis, and application of evidence to nursing practice. These EBP steps are fundamental to the Research as Inquiry and Searching as Strategic Exploration frames. Both frames address the need to draw reasonable conclusions based on the information found. Systematic reviews, integrative reviews, meta-analysis, and other forms of synthesis enable researchers to identify common research themes and findings efficiently. The Research as Inquiry frame encourages researchers to use information to take action. Depending on the clinical envi-

ronment in which they practice, the evidence utilization elements of the EBP process can be a significant challenge for students and nurses.

Curriculum mapping of Research as Inquiry

To better understand how the Research as Inquiry frame was integrated within the undergraduate nursing program, a visual representation of the curriculum in the form of a curriculum map was developed. Curriculum maps document how information is scaffolded throughout a program. Specific information regarding introducing concepts, teaching content, administering assessments, and examining outcomes are documented.¹² Recent campus-wide assessment initiatives used curriculum mapping, which provided a common format to follow.

The curriculum map aligned Research as Inquiry student learning indicators and assessments with each baccalaureate nursing course. During development of the curriculum map, extensive discussion about indicators occurred until consensus was achieved regarding how to interpret the indicator for the nursing discipline. For instance, *indicator a: formulates questions for research based on information gaps or reexamination of existing, possibly conflicting, information*, was contemplated considerably until it was agreed that formulating questions would not be narrowly restricted to a formulation of formal clinical or PICOT questions. The interpretation used for nursing would include activities where students analyze broad topics and narrow them to more manageable sub-topics or specific clinical problems. Additionally, independent interpretations of *indicator e: uses research appropriately to make decisions and take action, i.e., uses evidence to inform practice*, initially varied. After much deliberation, it was agreed that “inform practice” would be applied to overall nursing practice and not limited only to an application within a clinical environment.

Through an examination of course syllabi, assignments, and library lesson plans for each course, the nursing and library science faculty determined how content was being delivered and scaffolded across the curriculum. These artifacts were analyzed to determine if Research as Inquiry concepts were introduced *I*, reinforced *R*, or mastered *M* within each course. Placing an *I* within the curriculum map indicates students are introduced to the concepts/skills. An *R* indicates the concept/skills are reinforced, and students are provided opportunities to practice. Placing an *M* within the map indicates students will have mastered the concepts/skills at an appropriate level. A similar exercise had been accomplished previously by the Curriculum Committee for common first-year programs. The committee determined that all Research as Inquiry learning indicators were introduced within the first-year. Nursing

courses at Valparaiso University begin in the sophomore year, thus for this curriculum map, concepts were either reinforced or mastered within nursing courses. To determine which student learning indicators were achieved and at what level they were achieved within each nursing course, an independent analysis of course content was followed by the comparison of the individual assessments. If disagreements occurred, further re-evaluation of course artifacts and discussion took place until the pair reached consensus. Courses are noted by number in the map depicted in Table 3. The University uses a fairly standard system whereby courses numbered 200 are sophomore level, 300 are junior level, and 400 are senior level. Nursing 415 is entitled, Introduction to Nursing Research for Evidence-based Practice and contains much more comprehensive information regarding Research as Inquiry than previous courses. Nursing 460 Public Health Nursing is considered the capstone course of the program.

Research as Inquiry Student Learning Indicators	Undergraduate Nursing Courses								
	201	210	341	354	356	425	470	415	460
a. Formulates questions for research based on information gaps or reexamination of existing, possibly conflicting, information	R	R	R		R	R	R	M	M
b. Breaks complex questions into simple ones and focuses the scope of the research	R	R	R		R	R	R	M	M
c. Uses a variety of research methods, based on need, circumstance, and type of inquiry	R	R	R		R	R	R	M	M

Research as Inquiry Student Learning Indicators	Undergraduate Nursing Courses								
	201	210	341	354	356	425	470	415	460
d. Draws reasonable conclusions based on analysis and interpretation of information	R	R	R	R	R	R	R	M	M
e. Uses research appropriately to make decisions and take action		R	R	R	R	R		M	M
f. Is willing to refine or change the direction, method, or scope of research based on new insights	R	R	R			R	R	M	M
g. Demonstrates intellectual humility by recognizing own intellectual or experiential limitations, interpreting results and making claims appropriate to the level of knowledge	R	R	R	R	R	R	R	M	M

Teaching methods and assignments

Specific strategies targeted at reinforcing and mastering the Research as Inquiry frame are integrated throughout sophomore, junior, and senior-level

nursing coursework. Direct responsibility for teaching and reinforcing content is shared. At times, library faculty directly engage with students, and in other instances, nursing faculty oversees activities and assessments with support from library faculty.

Sophomore level coursework within Nursing 201: Professional Role in Nursing and Nursing 210: Therapeutic Interventions for the Professional Nurse reinforce the Research as Inquiry concepts introduced in the common first-year programs and focus on the concept's specific role within nursing. In Nursing 201, small groups of students select a topic, such as the self-care of nurses, from a list provided by their professor. Students then identify, access, and utilize professional nursing information sources to develop a ten-minute presentation used to teach their peers about the topic. Groups are expected to determine the scope of research needed to develop an informative presentation for other sophomore nursing students. As each group becomes knowledgeable about their topic, they examine the information found for conflicts or gaps. Groups are required to identify and utilize at least one primary research or EBP article within their multiple references.

The nursing librarian meets with Nursing 201 students for fifty minutes. The session takes place in the library's computer classroom. Students prepare for the in-person session by: reading a PowerPoint that describes the nursing information publishing cycle; viewing brief videos about identifying keywords, using standardized CINAHL and MeSH subject headings, developing search strategies within journal databases and the library's discovery tool; and reading an explanation of key elements of a scholarly, peer-reviewed journal article. During the in-person session, each student is given a recent print nursing journal to evaluate. Class discussion focuses on how a spirit of inquiry within nursing is encouraged and supported within nursing journals and information sources. Another in-class activity gives students an opportunity to break a topic into keywords, brainstorm synonyms, and develop a search for information using multiple keywords, phrases, and limiters within the CINAHL database. Throughout the activity, the need to evaluate and continually adjust research strategies as knowledge of the topic develops is stressed. Students struggle to accept that the first search for information probably will not yield the most relevant results. Working together to adjust multiple inquiries exposes students to an iterative process.

Junior level coursework, including Nursing 341: Psychiatric Mental Health Nursing, Nursing 354: Nursing Care of Adults I, and Nursing 356: Nursing Care of Adults II, further reinforce Research as Inquiry concepts. In Nursing 354, the librarian meets with students for fifty minutes. The session takes place in the standard course classroom. Class discussion focuses on the importance of a spirit of inquiry within evidence-based practice as outlined by Melnyk and Fineout-Overholt.¹³ Discussion focuses on the importance of

evidence, how evidence is analyzed within nursing, and various evidence hierarchy systems common within nursing. During the session, each student is given a print copy of a Cochrane Library systematic review, an evidence summary from the Joanna Briggs Institute EBP Database, and a National Guideline Clearinghouse guideline summary to evaluate. At first, students find it difficult to understand why and how information is categorized as evidence. They question the need to search for evidence in sources other than CINAHL. While reviewing each evidence type, students recognize that new insights can be identified through the use of multiple information tools. Throughout the session, the importance of applying evidence to nursing practice is emphasized.

In Nursing 356, students identify a clinical nursing problem or nursing intervention they have witnessed within a clinical experience such as the best practice regarding urinary catheter removal. Students are expected to use a variety of research methods to identify the current state of evidence related to the problem or intervention. Students interpret the information found and describe how the research was or was not incorporated into the care of their patient. This experience can be troublesome for students as it brings to light the dichotomy between research and practice. The reflective elements of this assignment encourage students to utilize research to inform and potentially adjust future nursing practice.

Senior-level coursework within Nursing 425—Nursing Care of the Childrearing Family, Nursing 470: Management and Leadership Strategies for the Professional Nurse, Nursing 415: Introduction to Nursing Research for Evidence-based Practice, and Nursing 460: Public Health Nursing—enable students to practice and master Research as Inquiry concepts. Students in Nursing 415 are asked to research a specific clinical problem individually, document the search strategy used to find primary evidence, and reflect on the research process. Throughout the process, students focus the scope of their research on elements within the clinical problem. While conducting their research, students complete a systematic search worksheet which helps guide and record their process.¹⁴ Reflecting on why evidence was selected, the difficulties encountered during the research process, and what the researcher will do differently the next time they conduct research helps students recognize the extent of their skills and opportunities for growth.

The culminating assignment in Nursing 415 requires students to work in groups on an evidence-based practice project. After groups are given a topic, they create a PICOT question, conduct an extensive search for varying levels of evidence, analyze findings, and compile an evidence summary of results. Transforming a topic into a PICOT question requires students to ask increasingly complex questions. For example, the topic of identifying intimate partner violence in pregnant women could result in the PICOT question, “In

pregnant women, how does the use of an established screening tool as compared to an in-person interview identify intimate partner violence over a six month period?” Students must include all components of the PICOT question (population, intervention, comparison intervention, outcome, and time-frame) which results in an extremely targeted question that greatly facilitates their literature search. While synthesizing information found, students learn new insights which enable them to suggest a change in nursing practice or a need for further research on the topic. Groups complete a systematic search worksheet that records their process and requires reflection of their work. In addition to creating an evidence summary and documenting their research process, each group develops and presents a scholarly poster summarizing their work. These assignments, and other 400-level course assignments, encourage students to use a variety of research methods and regularly appraise the information found.

The nursing librarian meets with Nursing 415 classes multiple times during the semester. Two thirty-minute sessions take place in the standard course classroom, and two fifty-minute sessions take place in the library’s computer classroom. A combination of lecture, small group instruction, and active learning exercises are utilized. During the first session, the discussion focuses on the importance of developing a systematic search for information across multiple information sources. The librarian reinforces systematic research methods within CINAHL, Medline, and other primary sources of information. In a large group, students brainstorm potential keywords, synonyms, and standardized subject headings. Students individually research a topic provided and document their research process and results. During the second session, systematic research methods within higher-level sources of information, such as The Cochrane Library, the Joanna Briggs Institute EBP Database, and the National Guideline Clearinghouse, are reinforced. Student volunteers demonstrate research strategies using multiple keywords, at least one subject heading, and multiple limiters across multiple information sources. Discussion focuses on the need to analyze and adjust the research process. Though similar content had been introduced and reinforced in sophomore and junior-level courses, students in their senior year still struggle to master these skills. Repeated exposure, practice, and reinforcement facilitates mastery of these abilities.

During the third session, student groups are assessed on their understanding of Research as Inquiry concepts and skills. Modeled after the television show *The Amazing Race*, groups compete to answer questions or demonstrate a process. Questions range from identifying appropriate MeSH headings within various information sources to leveling samples of evidence provided using a particular evidence hierarchy. Students reflect on the processes used to develop their conclusions. This session puts student skills on

display and exposes areas in need of improvement, but since students are working in groups and the activity is not graded, the session is a safe environment for experimentation. During the fourth session, a mini-lecture on the importance of a systematic search is followed by small group activity. Student groups finalize their PICOT, brainstorm potential keywords, synonyms, and subject headings related to their PICOT, conduct preliminary research, analyze the information found, and reflect on their research processes. The librarian and nursing professor are both present in the library's computer classrooms to provide feedback. Groups often have difficulty revising their PICOT question as more evidence is identified. Frustration leads to the realization that the research process can be a time-consuming one. Groups, and individual members, "get it" at different times, which makes individualized follow-up instruction key to helping all progress throughout the process.

Since Research as Inquiry concepts have been scaffolded throughout the nursing curriculum, graduating nursing students should be able to demonstrate they have mastered the university's information literacy program objectives and indicators. Course assessments, whether administered by nursing faculty or library science faculty, in the form of papers, projects, presentations, quizzes, and examinations provide evidence of student learning.

Lessons learned from collaboration

Long before the Framework was introduced, nursing and library science faculty at Valparaiso University partnered to integrate and assess information literacy skills within the undergraduate nursing program. This five-year collaboration introduced both faculty groups to concepts, practices, and standards of another discipline. Working together to identify mutual expectations enabled faculty to learn about and speak a shared language. After the Framework was introduced, nursing and library science faculty evaluated the existing information literacy program using the new approach. The Framework was viewed as an adaption of the previous ACRL standards, not as an entirely new entity. Thus, it provided an alternative way to think about, talk about, and assess faculty work and student learning. Due to the Framework's less prescriptive and more conceptual nature, the frames easily translated to the nursing discipline. The Research as Inquiry frame more completely captures the complex iterative process inherent in this questioning phase and thus better aligns with the initial steps of nursing's EBP process. Additionally, the Framework's use of threshold concepts highlights those difficult skills that students typically struggle to master. Nursing students habitually underestimate the complexity of the EBP process. After multiple attempts and continual refinement, students begin to "get" the process. This cyclical nature

was less evident in the ACRL standards. Although the standards were comprehensive in scope, they portrayed a more linear process that is less reflective of the EBP process.

In the end, faculty concluded that regardless of the label, whether a theory, a concept, a frame, a standard, or a step, the concepts defined within the Framework were being addressed within the existing nursing information literacy program. Although no major revisions to the information literacy program were warranted, use of the Framework validated the program's comprehensiveness.

Nursing, like library science, is a complex combination of theory and practical application. The university's Research as Inquiry frame, the overall ACRL Framework, the spirit of inquiry step within the EBP process, and the AACN Essentials for Baccalaureate Programs share similar complexities. To relate the Framework with student learning, librarians must first understand how information literacy applies to other disciplines. Once this groundwork is accomplished, information literacy skills can be integrated within specific programs of study and teaching methods and assignments to introduce, practice, and master the skills can be designed.

Lastly, assessment of student learning objectives by discipline and library faculty must be carried out continually to evaluate the effectiveness of the information literacy program. Utilizing common assessment tools, such as the university's curriculum mapping format, enables the work of the collaborating faculty to be incorporated into the broader university-wide assessment discussion.

Conclusion

Information literacy is as relevant to the nursing discipline as it is to the library science discipline. The Framework illuminates the similarities between library science's information literacy and nursing's EBP process. Key concepts that cause students to ponder and reflect are the focus of the Framework. This approach on threshold concepts facilitates collaboration between disciplines so that comprehensive information literacy programs for specific disciplines may be developed, implemented, and evaluated. Concepts and theories from disciplines outside of library science can be easily aligned with the Framework, allowing for the creation of information literacy programs that address multidisciplinary content. Integrating multiple learning experiences across curricula will build information literacy skills and facilitate students' ability to master critical EBP steps and the threshold concept of Research as Inquiry.

Notes

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