

Final Report:

Nursing information literacy: Evidence-based approach integrated in the curriculum

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Introduction

The main purpose of this project is that I want to integrate the best practice of Nursing Information Literacy Curriculum into the two-year nursing program at the associate degree at the Roxbury Community College (RCC), Boston. The course is to enhance the nursing information literacy skills that the nursing graduates will need in a digital society. I have been teaching many 45-minute workshops of nursing information literacy at the first semester of this two-year program; unsatisfactorily, the nursing faculty members assigning a research paper at the last semester have complained of the students' poor competency of the nursing information literacy. I, as health sciences librarian with nine years at this college, have tried to educate the nursing students of the concepts of information literacy established by the American Library Association in 1989. The definition of information literacy is that a set of abilities allowing individuals to "recognize when information is needed; how to locate, evaluate, and use effectively the needed information" (Cunningham & Carr, 2014).

Nursing and Information Literacy

Information literacy has to be integrated in the nursing curriculum. The RCC nursing students have to develop their skills of information literacy by means of evidence-based practice. Nursing educators assert that information literacy is essential for the professional education and practitioners, "because health care is subject to the same forces determining workplace

practices throughout the global economy” (Barnard, Nash, & O'Brien, 2005). Also, they claim that the information literacy is considered as “concept and movement” which the current health care workplaces need for the best benefits. Information literacy is needed for the 21st century health care provision, which Yeoh confirms for one of the indispensable competencies: epidemiology, genetics, development of management, and information technology (2000). Clearly, Yeoh (2000) and Barnard (2005) indicate the relevance of the information literacy as: “the skills of analyzing and synthesizing the evidence of research and practice are crucial to the underpinning of these literacies” (p. 14).

Barnard, Nash & O'Brien (2005), as well as Shorten, Wallace, and Crooks (2001) mention that “delivery of safe, effective nursing care requires the use of an evidence-based approach to practice which requires adequate access to and the ability to synthesize information.” I agree with them, because my RCC nursing students are assigned to write nursing care plans for various types of patients, such as for intensive care, mental health, and community care. The nursing care plan is used for directing the nurses to provide an individualized care of the patient. Then, the students have to do a nursing diagnosis: “describing a patient’s physical, sociocultural, psychological and spiritual response to an illness or potential health problem” (Careplans, 2016) . They have to know how to access and retrieve information sources related to their patients’ various cultural and ethnic groups with illness and beliefs. Then, they are able to synthesize the information of evidence-based practice for the given patients. They are exposed to new clinical knowledge and assigned to apply their knowledge base from the courses. This practice helps them develop the skills of the nursing information literacy and prepare them to

become an information literate. Barnard, Nash & O'Brien (2005) observe that "[development] of information literacy not only facilitates engagement with effective decision making, problem solving, and research, it also enables nurses to take responsibilities" for their career development. When the RCC students graduate from the Roxbury Community College, they will become the nurses with responsibilities of lifelong learning in areas of personal or professional interest.

Thus, I want my nursing faculty to implement my project in the nursing curriculum. RCC nursing students need to develop an active experience of information literacy skills. RCC nursing educators have to collaborate with the librarians to enhance these skills so that we help the future nurses develop "a repertoire of information literacy skills, enhance the quality of teaching and learning, and foster the needed skills for clinical practice and lifelong learning" (Barnard, Nash & O'Brien (2005).

Research Review

In our rapid changes of information society, it is important that nursing information literacy are integrated in the curriculum. Designing a curriculum of nursing information literacy at the RCC need to consult the existing studies of teaching and learning. According to Argüelles (2016), I learn that there are four phases for designing the integrated information literacy: preparatory, planning, implementation, and evaluation. The librarians have to collaborate with the nursing faculty, driving students to acquire information literacy competencies. The students have to use information resources as part of their learning process.

I want to assure my students' learning and performance. Then, I have to find an evaluation tool. Basarab mentions the predictive evaluation which can ensure a training accomplishment (2010). Having been trained in instructional design and familiar with Kirpatrick's learning and training evaluation theory, I want to use his four levels of evaluation model as assessment tool of my nursing information literacy workshop at RCC. The four levels of Kirpatrick's evaluation model are used to measure: 1. Reaction (how learners felt about the workshop or learning experience); 2. Learning (the measurement of the increase in knowledge –before and after); 3. Behavior (extent of applied learning back on the assignment – implementation); 4. Results (the effect on the graduation and career development).

According to Fontaine (2011) I learnt that there are some examples of the steps prepared in curriculum development for associate degree nursing educational programs. The author shows the analysis of current regulatory, accreditation, political and social dimensions forming associate degree curriculum development. There are some examples of concepts used in curriculum development for associate degree nursing. Also, the author describes the current national issues affecting associate and baccalaureate pre-licensure nursing educational programs. I want to observe how to integrate the nursing information literacy in the associate degree nursing programs based on these factors above.

Assessment of library instruction is important to measure the delivery quality and accomplishment. According to Hobbs, Guo, Mickelson, and Wertc (2015) I learnt that the authors used the information literacy competency standards created by the Association of

College and Research Libraries, a division of the American of Library Association. I am interested in the pre-test and post-test, and particularly self-reflection assessment used to measure the learners in the workshop.

I am interested to find the best practice of information literacy evaluation. McClurg and others (2015) designed the tool to measure the undergraduate medical education students' information literacy: using a pre-and post-survey study design. The students had to complete this online survey before and after the information literacy workshop. This study design may be beneficial for my workshop project, because it helps me maximize learner engagement and comprehension of skills development, pertinent to Kirpatrick's four levels of evaluation model.

Nursing Faculty Interview

After consultation with the RCC nursing faculty interview about the nursing information literacy, I have found that the evidence-based practice is the indispensable skills of the nursing literates in the digital society. This practice and information literacy are recommended by the Accreditation Commission for Education in Nurse (ACEN) and New England Association of Schools and Colleges (NEASC). I have been told the nursing curriculum will be redesigned and based on the evidence-based practice, initiated by the Massachusetts Nurse of the Future Nursing Core Competencies. NEASC is an accreditation agency monitoring the overall of higher educational institutes; ACEN is an accreditation agency monitoring the nursing education.

Massachusetts Nursing of the Future Nursing Core Competencies is establishing the evidence-based practice in nursing. Evidence-based practice in nursing cannot be integrated into the 45-

minute nursing workshop; it must be designed into a series of learning module because it covers a process of locating, appraising, and applying the best evidence from nursing and medical literature to improve the quality of clinical practice.

Curriculum Design

Nursing information literacy with the evidence-based practice will be used for the curriculum integrated into some nursing courses in the two-year program. The e-learning modules are used to design this curriculum. My instructional design of the course development based on the nursing information literacy standards found in the literature review and the RCC nursing curriculum. I created five modules for the nursing information literacy curriculum. Applying my knowledge of the instructional design was necessary: the structure and length of content. The five modules developed were:

Module 1: Getting Ready for Research

Module 2: Basic Research Skills

Module 3: Identifying an Evidence-based Practice Source

Module 4: Writing Tips

Module 5: Dissemination of Research

I want to discuss about content structure, because this step has influences on the way how each module will be delivered. Each module contains learning objectives and various lessons. Both the learning objectives and the lessons must be congruent with the module. Each lesson provides a self-paced slide presentation with text-based information and tutorials. Also, various lessons provide PDFs that the nursing students will print as a take-away handout. In

order to facilitate their content retentions and learning feedbacks on the newly acquired knowledge, the students are provided with an assessment tool. When they receive an 80% or higher score on the assessment, they will print a certificate-of-completion. Each of the five modules is self-contained and is able to be assigned to students separately.

I plan to use an e-learning platform with reliable and scalable features which are easily accessible and available to the RCC students and faculty. I decide to choose RCC's learning management system (LMS), Jenzabar eLearning. Even though the RCC students and faculty have been using this RCC LMS for enrollment or course registration, they have never accessed its e-learning platform. According to the interview with the nursing faculty members, the Jenzabar eLearning will be integrated with the nursing curriculum. The nursing faculty, already with it, are able to incorporate nursing library instruction into their curriculum. Also, I plan to use other available online social media (Google presentations and Youtube) for the video tutorials contained in module lessons.

I have adapted learning objectives (Henry, Lynn, Lysiak, and Sutterlin) created for the Pennsylvania State University College of Nursing programs. I have changes some learning objectives and created them appropriately for the nursing program at the Roxbury Community College, because the nursing program at the Pennsylvania State University is intensive for the four-year undergraduates but the counterpart is for the two-year ones.

In Module 1, Getting Ready for Research

The Learning Objectives are:

- Identify the pros and cons of using free information on webpages and library-licensed resources.
- Apply evaluation criteria to websites, including health information sites;
- Access the RCC Library website using multiple methods;
- Locate library resources digitally (e.g., hours, LibGuides, Chat with Librarians, and how to get help).

The module 1 has four lessons with the specific learning objectives. For example, a video with comparison charts of pros/cons information on webpages and library-licensed resources facilitates students to understand the concepts of reliable information publications. The students are given a downloadable PDF of the criteria. Also, their understanding is assessed by the “Check Your Understanding” in a tool of true/false and multiple choice questions.

Immediate feedback is provided when they choose an answer: a correct answer affirms and expands upon the response to the question while an incorrect answer shows up an explanation of the correct answer.

In Module 2, Basic Research Skills

The Learning Objectives are:

- define a database;
- locate the RCC Library Nursing LibGuide

- search databases using basic Boolean operators, subject headings, filters; and
- find fulltext articles using the eJournals list, and interlibrary loan.

Module 2 consists of two lessons: the first lesson with a screenshot slide presentation on locating and defining a database; the second lesson with screenshot slide presentation describing an overview of database searching and techniques. To facilitate the students' virtual access, they are given the embedded links in the slides navigating to specific database tutorials from EBSCO's CINAHL and the National Library of Medicine PubMed.

In Module 3, Scholarly Article/Evidence-based Practice

The Learning Objectives are:

- able to identify a peer-reviewed article/evidence-based practice;
- locate evidence reports related to clinical practice topics and guidelines within appropriate databases.

The students are given a direct link to a three-minute educational video discussing a comparison of scholarly versus popular periodicals.

In Module 4, Writing Tips

The Learning Objectives are:

- apply research and evidence reports related to area of practice;

- understand the use of best practice and evidence at the patient level, clinical level, population level and across the system;
- construct an annotated bibliography;
- describe the components of a research paper;
- create citations using APA format;
- explain plagiarism;
- locate instructions on following common citation management styles.

This module includes multiple screenshot slide presentations with links to appropriate content.

In Module 5, Dissemination of Research,

The Learning Objectives are:

- use current evidence and clinical experience to decide when to modify clinical practice;
- describe the elements of a scientific poster;
- gain a basic knowledge of copyright;
- apply the concept of fair use;

Module 5 content format is the same as the other modules.

Assessment must be a tool of evaluating students' learning and performance.

When module content and structure are completed in Jenzabar e-learning, surveys are utilized to obtain feedback from the RCC students, nursing students, and librarians. The feedback is indispensable for me to review the project.

Conclusion

Nursing information literacy curriculum, with the evidence-based practice through the e-learning platform based on core competencies, is dispensable to reach students enrolled at the two-year higher education, Roxbury Community College (RCC) in Greater Boston. Collaboration with the department of nursing and my knowledge of instructional design proved integral to the creative process. The project required me to consult some practical literature reviews, some librarians in the Massachusetts Community Colleges system, some nursing faculty for insightful information, the regional and state accreditations, and the standardized nursing information literacy. Although the coordination process for the best model aiding in the development of the nursing information literacy workshop for the RCC nursing students was complex, the resultant product and established relationships with the faculty could contribute to a richer educational experience for the students.

The benefits of creating the nursing information literacy course are:

- the creation of a RCC nursing information literacy course based on core competencies;
- the opportunity for the RCC librarians and nursing faculty to provide optional classroom instruction;

- the learning delivery of a self-paced nursing information literacy course for the RCC nursing students to access anywhere, anytime; and
- the course provides an avenue for continuing students to update their information literacy skills.

Issues that need to be addressed in my future courses (CCT 693- Action Research and CCT 694-Synthesis) includes the pilot launching, evaluations of the implementation at the RCC and identifications of options related to the project. Even though my completion of the research and engagement process covered only the preliminary existing resources, the resultant product provides an adaptable model for further collaborative library course development.

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