

Rescuing Nursing Education from Content Saturation: The Case for a Concept-Based Curriculum

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ABSTRACT

Nursing education has been plagued with a saturation of content for many years. The multiple contributing factors underscore the complexity of the problem and validate the need for educational reform. The purpose of this article is to discuss various factors contributing to content saturation and propose a conceptual approach for curriculum development and teaching in nursing education.

The health professions education crisis described by the Institute of Medicine (IOM) (2003) is multifaceted and complex and affects all health profession disciplines. Multiple issues related to educational preparation and entry into practice have been identified, instigating a call for major educational reform, although the IOM (2003) acknowledges difficulties associated with such reform. Changes in education systems traditionally occur slowly, further adding to the gap between the perceived market need and what is being delivered.

The need for curriculum reform is prominent in the nursing literature. The National League for Nursing (NLN) (2003) called for dramatic reform, suggesting that a paradigm shift in nursing education is needed. Most nursing leaders agree that significant curriculum reform is needed, although there are many opinions about the specific changes that should be made. Common themes in the literature that are associated with curriculum reform are related to the need for curricula that are responsive to

changes in the health care delivery system, are research based, are collaborative, and apply pedagogical innovation (e.g., Ben-Zur, Yagil, & Spitzer, 1999; Ironside, 2004; NLN, 2003).

A growing body of literature suggests that the management of curricular content is one of the key challenges of health professions education. The IOM (2003) specifically cites “overly crowded curricula” (p. 38) as one of many challenges of health education reform. In *The Essentials of Baccalaureate Education for Professional Nursing Practice*, the American Association of Colleges of Nursing (AACN) (1998) questioned whether it is possible to “prepare beginning-level professional nurses for the future in a 4-year-time frame” as knowledge and practice expand (p. 19). Tanner (1998) described the expectations set forth in the AACN *Essentials* as a “blueprint for the 21-year curriculum” (p. 383) but also noted that she believed none of the core knowledge and competencies identified could be eliminated. The student experience, captured by Diekelmann (2002), is frustrating and overwhelming, fueled by excessive reading assignments, content processing, and memorization.

The problem with content saturation is not unique to health professions education. The rapidly changing American society and rapid expansion of knowledge have also created challenges in primary, secondary, and postsecondary education systems. According to Erickson (2002), such changes have made it difficult to determine essential knowledge and skills. Similarly, one of the perceived challenges for nurse educators is to determine what aspects of traditional nursing practice to retain, what content to let go, and what new knowledge to incorporate; these issues relate to content management. Unfortunately, such decisions are not easy. Nurse educators could spend months debating content and still not achieve consensus. All too often, faculty members protect content associated with their own clinical expertise; thus, such attempts usually result in nothing more than a rearrangement of content.

Received: April 18, 2005

Accepted: December 6, 2005

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THE EVOLUTION OF CONTENT SATURATION

Content saturation has been an evolutionary process; the nursing literature provides ample evidence of this. Although no single event or cause can be blamed for the current situation, contributing factors include the shift from the industrial age to the information age, changes in health care delivery, teacher-centered pedagogy, content repetition, and the academic-practice gap.

Shift From the Industrial Age to the Information Age

At the beginning of the 21st century, American society finds itself in the midst of an information age, one of the factors contributing to content saturation in nursing education. This age is characterized by an explosion of new information, widespread access to data through Web-based information systems, and technological advances, and brings new changes and challenges to nursing education. Nursing faculty must teach nursing practice based on best-practice guidelines as determined by research; thus, new information is added to the curriculum. Authors of nursing textbooks must also incorporate new information, as is reflected by the continual increase in textbook size.

Changes in Health Care Delivery

Another factor contributing to content saturation has been the inability to adjust the amount of content within nursing curricula as new models of health care have emerged. Historically, nursing practice and education have been based on a provider-driven health care system and treatment-based health care model. In this model, the focus of health care is on interventions that occur late in the disease process; therefore, nursing education traditionally focused on treatments and tasks required to care for individuals late in the disease process. As health care evolved to a health-based model, the nursing profession responded by adding content related to community populations, health promotion, and outcomes to its curricula (Freeman, Voignier, & Scott, 2002; Hamner & Wilder, 2001; Reece, Mawn, & Scollin, 2003). However, nursing programs have also continued to teach disease-focused nursing care, resulting in a substantial increase of content in most nursing curricula.

Teacher-Centered Pedagogy

A third factor contributing to content saturation is the conventional teacher-centered pedagogy common to nursing education. Such a model incorporates outcome-based or competency-based education; the focus is on content supported by predefined learning objectives within the realm of a program's conceptual framework, objectives, and philosophy. According to the NLN (2003), underlying assumptions associated with this model include that "it is possible to learn all nursing content through a particular curriculum and...it is the teacher's responsibility to ensure that all content is 'covered'" (Background and Significance, ¶4). These assumptions reinforce the attitude held by many nursing faculty—if content is not covered, students will not

learn it—and their sense of personal responsibility to cover all of the content. Ironside (2004) suggested that the limits of conventional pedagogy have been reached in nursing education and explored the relationships among content, knowledge, and thinking.

Although core standards for baccalaureate nursing education are detailed in *The Essentials of Baccalaureate Education for Professional Nursing Practice* (AACN, 1998), there continues to be a lack of consensus regarding what constitutes essential content among nurse educators. This issue is compounded by the fact that faculty positions are often filled by nurses with clinical or research expertise, as opposed to educational preparation, resulting in many faculty lacking teaching expertise (Gelmon, 1999; Krisman-Scott, Kershbaumer, & Thompson, 1998). In many cases, inexperienced nurse educators initially lack the expertise to recognize the amount of content reasonable to present in a given class period. They may also struggle to identify important and relevant content; therefore, what is taught often directly reflects their own area of expertise or what is found in nursing textbooks. Although experienced nurse educators may not agree on what constitutes essential content, they tend to be more selective about the kind and amount of content included in a class.

Content Repetition

Content saturation also occurs as a result of content repetition within and between courses. For example, many students take anatomy, physiology, and pathophysiology as prerequisite or co-requisite courses. Many faculty teaching in health assessment courses believe a review of anatomy, physiology, and pathophysiology of the heart and vascular system is necessary before students can understand how to perform a cardiac and peripheral vascular assessment and interpret the findings. In another course involving heart disease among adults, faculty members review anatomy, physiology, pathophysiology, and assessment before discussing nursing care. Although it could be argued that some repetition is needed for students to attain deep understanding, the review of content coupled with new content results in a saturation of information for faculty and students to get through in a given class session or assignment.

The Academic-Practice Gap

A fifth factor associated with content saturation is the gap between academia and practice. To meet the current demands of the health care market, nursing graduates require a wide variety of skills and must be able to adapt to a number of settings; however, an ongoing perception is that graduates fall short of this expectation. Several studies have cited the concerns of employers regarding the preparation of nursing graduates; the common theme found in these studies is the view held by nurse administrators, nurse managers, and staff nurses that nursing graduates are inadequately prepared (Eubanks, 1992; Joyce-Nagata, Reeb, & Burch, 1989; Lowry, Timms, & Underwood, 2000; Smith & Crawford, 2004). These findings suggest a perceived gap between what is expected of nursing graduates

and their actual skill base. Nurse educators often interpret these findings as knowledge deficit issues and erroneously conclude that providing more information is the solution.

In addition, many specialty practice organizations recommend core competencies for their area of practice to be included within undergraduate curricula, although the effects on nursing curriculum development is not clear. Examples of proposed competencies from specialty groups include genetics (Lea, 2002), environmental health (Larsson & Butterfield, 2002), community health nursing (Association of Community Health Nursing Educators, 2000), and critical care (Porte-Gendron, Simpson, Carlson, & Van de Kamp, 1997). Many nursing faculty believe that incorporating such competencies will strengthen nursing curricula and perhaps lessen the perceived gap. Unfortunately, many competencies identified by specialty groups are consistent with the skill and knowledge base of experienced nurses; it would be unrealistic to expect new nursing graduates to have mastered such competencies, given the constraints of undergraduate curricula.

A CONCEPT-BASED CURRICULUM

Moving Past Barriers

Nursing programs have traditionally offered content-laden and highly structured curricula with an emphasis on behavioral outcomes fostering linear thinking (NLN, 2003). The organization of such models traditionally followed practice areas similar to those used by the medical model. Most nursing faculties are comfortable with this model because it is the one under which most faculty were taught and because clinical expertise usually falls into such areas. When the focus of content is presented in the context of population groups or settings (e.g., pediatrics), faculty feel the need to cover everything they can because of the perception that it may be the only course addressing care associated with that particular population. A common problem in such a model is the unintentional content repetition that occurs (e.g., pain) in each course across multiple population groups or settings. In addition, because of the emphasis on practice areas, faculty teach in relative isolation to other practice areas and often lack an understanding or interest in other aspects of the curriculum.

An organizational shift from a medical or practice model to a conceptual approach requires a complex curriculum design and is a "quantum leap" for faculty accustomed to working within the structures mentioned above. Reforming nursing education in this way requires educators to move out of their comfort zones. Young (2004) pointed out that positive course evaluations and high pass rates on the licensure examination further strengthen resistance to change.

The Conceptual Approach

Rescuing nursing education from content saturation requires a major paradigm shift: a shift away from the practice orientation that emphasizes content toward conceptual pedagogy that emphasizes concepts across environmental settings, the life span, and the health-illness continuum.

Concepts provide the organizational framework and structure for the curriculum and are the foci within courses. Carrieri-Kohlman, Lindsey, and West (2003) defined a conceptual approach as "a process that deliberately attempts to examine the nature and substance of nursing from a conceptual perspective" (p. 1). This requires nurse educators to think differently about curricular design (i.e., a concept-based approach) and teach differently by implementing student-centered, active learning activities that focus on conceptual learning.

Identification of Concepts. Nursing programs that adopt a concept-based curriculum must first identify the concepts to be used in the curriculum. Concepts can be identified in many ways. A faculty brainstorming session can be useful in generating initial ideas for concepts and concept groups (Carrieri-Kohlman et al., 2003); the resulting lists should be validated through a review of the nursing literature. Generating concepts from existing nursing frameworks, such as nursing diagnosis, outcomes, and intervention taxonomies, has also been reported (Freeman et al., 2002; Lee-Hsieh, Kao, Kuo, & Tseng, 2003).

After the concepts have been identified, their definitions must be established. The need for universal understanding and consistent use of concepts among faculty is critical for curriculum success. Concepts may be clarified by using a dictionary, reviewing the nursing literature, or conducting a concept analysis. In a concept analysis approach, critical attributes, model cases, and related cases contribute to clarity.

Organization of Concepts. As concepts are identified and defined, classifications for the concepts are identified. A logical grouping or organization of concepts provides direction for the courses in which concepts are likely to be taught. For example, one general category might be professional nursing care, to include concepts such as caring, communication, and leadership, whereas another general category might include concepts associated with clients, such as oxygenation, fatigue, and coping. The general concept categories facilitate decisions about courses and the presentation of concepts within and between courses so logical sequencing follows throughout the curriculum.

Faculty must be willing to shift from traditional nursing courses (e.g., pediatrics, maternity, mental health, medical-surgical, community health) to concept-based courses in which concepts are presented across the life span and across clinical settings, in both didactic and clinical courses. For example, students could learn about the concept of dyspnea in a didactic course, work with a young child experiencing dyspnea as a result of asthma in an inpatient setting, and investigate community resources for individuals with chronic respiratory disease who experience dyspnea in an outpatient setting. As another example, when infection is taught conceptually, students learn mechanisms, measurement, assessment, and management principles of infection and how these principles are applied in various populations, settings, kinds of infectious disease, and stages of illness. Students connect their broad understanding of infection as a concept to the many infectious diseases they

encounter in clinical practice. Students learn to interact with individuals related to health care needs as they appear, as opposed to viewing a patient or group of patients in a discrete context.

Exemplar Content. Although a large body of content exists for all concepts, exemplar content that best represents the concept is used to help students understand the concept. The exemplars selected should represent individuals across the life span and in various settings to allow students to apply concepts in a variety of contexts. Faculty must be very selective in the exemplars used to represent concepts; use of excessive exemplars could result in content saturation and defeats one of the benefits of the concept-based model.

Using incidence and prevalence is one suggested basis for selecting exemplars. For example, otitis media, pneumonia, and urinary tract infection might be the most appropriate content exemplars for the concept of infection because of their high incidence and prevalence in various population groups. Exemplar content for concepts such as nursing leadership and advocacy can also be selected on the basis of incidence and prevalence of topics as they appear in the literature. For example, health care organizations achieving Magnet status may be discussed as an exemplar of nursing leadership and its effect on patient care outcomes. Students learn about what attracts and retains nurses in these facilities in the midst of a severe nursing shortage, resulting in nurse-controlled practice and better patient outcomes (Hess, 2004).

Conceptual Teaching and Learning

Even the most carefully planned conceptually designed curriculum will fail unless faculty abandon their focus on content and embrace conceptual learning. In other words, a concept-based curriculum should be conceptual not only in structure but also in process. Conceptual learning is a process by which students learn how to organize information in logical mental structures, thus challenging students to become increasingly skilled at thinking (Timpson & Bendel-Simso, 1996). Conceptual teaching and learning complements the constructivist paradigm in fostering critical thinking and deep understanding through the connections students make to past learning, their application of concepts in multiple contexts, and their development of an understanding of interrelated concepts (Erickson, 2002). Although nurse educators can teach a class or course conceptually within a traditional curriculum, the absence of a conceptual foundation makes such an experience an isolated event for learners and limits students' ability to consider interrelated concepts within and between courses.

Conceptual teaching requires an active, learner-centered approach. The nursing literature has long called for a shift from teacher-centered teaching to student-centered learning. The connections students need to make in a concept-based curriculum must be supported by teaching approaches that allow students to construct deep meaning and understanding; this is not the typical outcome of a teacher-centered approach. The difference between a content-focused and a concept-focused lesson was aptly de-

scribed by Erickson (2002) as "the difference between facts of the Alaska oil spill and an understanding of the importance of environmental sustainability" (p. 50).

Moving faculty from a content-focused, teacher-centered learning environment to conceptual teaching approaches may be the greatest challenge faced by nursing programs wishing to adopt a concept-based curriculum. A comprehensive faculty development plan that includes consultants and faculty mentoring is necessary to successfully implement such a curriculum. Directing faculty to literature addressing conceptual learning and teaching strategies may also be helpful. Because the nursing literature is somewhat limited in this area, broadening a search to other disciplines, particularly education, is suggested.

SUMMARY

Health professions educators, including nurse educators, have long been reluctant to initiate changes so desperately needed in education. The call for educational reform has been clear and consistent in the literature for years. It is time for nurse educators to respond by actively considering alternatives to the typical content-saturated curricula.

Dramatic reform and innovation in nursing education are needed to prepare nurses for contemporary practice and to meet the current and future needs of the health care delivery system. Nurses must be knowledgeable, demonstrate reasoning capabilities, and be skilled at accessing and using information to keep pace with a fluid and uncertain health care environment. In addition, nurses must partner with other health care providers in problem solving and governance at the individual, population, organizational, and policy levels. Unless significant changes are made in nursing education, nurses will increasingly have difficulty providing and influencing health care.

A concept-based curriculum is one way to foster and enhance the capabilities mentioned above through conceptual learning. Because a great deal of content currently taught in nursing education programs will become quickly outdated, saturating students to the point at which learning is inhibited ill prepares them for nursing care in the future. A concept-based curriculum coupled with a conceptual learning approach can prepare nursing graduates who are skilled at conceptual thinking and learning; such skills are necessary to respond to a rapidly changing profession and health care environment.

REFERENCES

- American Association of Colleges of Nursing. (1998). *The essentials of baccalaureate education for professional nursing practice*. Washington, DC: Author.
- Association of Community Health Nursing Educators. (2000). *Essentials of baccalaureate nursing education for entry level community health nursing practice*. Pensacola, FL: Author.
- Ben-Zur, H., Yagil, D., & Spitzer, A. (1999). Evaluation of an innovative curriculum: Nursing education in the next century. *Journal of Advanced Nursing*, 30, 1432-1531.
- Carrieri-Kohlman, V., Lindsey, A.M., & West, C.M. (2003). *Pathophysiological phenomena in nursing: Human response to illness*

- (3rd ed.). Philadelphia: Saunders.
- Diekelmann, N. (2002). "Too much content..." Epistemologies' grasp and nursing education. *Journal of Nursing Education*, 41, 469-470.
- Erickson, H.L. (2002). *Concept-based curriculum and instruction: Teaching beyond the facts*. Thousand Oaks, CA: Corwin Press.
- Eubanks, P. (1992). Survey shows gaps in competencies of new RNs. *Hospitals*, 66(23), 49-50.
- Freeman, L.H., Voignier, R.R., & Scott, D.L. (2002). New curriculum for a new century: Beyond repackaging. *Journal of Nursing Education*, 41, 38-40.
- Gelmon, S.B. (1999). Promoting teaching competency and effectiveness for the 21st century. *AANA Journal*, 67, 409-416.
- Hamner, J., & Wilder, B. (2001). A new curriculum for a new millennium. *Nursing Outlook*, 49, 127-131.
- Hess, R.G., Jr. (2004). From bedside to boardroom—Nursing shared governance. *Online Journal of Issues in Nursing*, 9(1). Retrieved March 25, 2005, from http://nursingworld.org/ojin/topic23/tpc23_1.htm
- Institute of Medicine. (2003). *Health professions education: A bridge to quality*. Washington, DC: National Academies Press.
- Ironside, P.M. (2004). "Covering content" and teaching thinking: Deconstructing the additive curriculum. *Journal of Nursing Education*, 43, 5-12.
- Joyce-Nagata, B., Reeb, R., & Burch, S. (1989). Comparison of expected and evidenced baccalaureate degree competencies. *Journal of Nursing Education*, 28, 314-321.
- Krisman-Scott, M.A., Kershbaumer, R.M., & Thompson, J.E. (1998). Faculty preparation: A new solution to an old problem. *Journal of Nursing Education*, 37, 318-320.
- Larsson, L.S., & Butterfield, P. (2002). Mapping the future of environmental health and nursing: Strategies for integrating national competencies into nursing practice. *Public Health Nursing*, 19, 301-308.
- Lea, D.H. (2002). Position statement: Integrating genetics competencies into baccalaureate and advanced nursing education. *Nursing Outlook*, 50, 167-168.
- Lee-Hsieh, J., Kao, C., Kuo, C., & Tseng, H.F. (2003). Clinical nursing competence of RN-to-BSN students in a nursing concept-based curriculum in Taiwan. *Journal of Nursing Education*, 42, 536-545.
- Lowry, J.S., Timms, J., & Underwood, D.G. (2000). From school to work: Employer perceptions of nursing skills. *Journal for Nurses in Staff Development*, 16, 80-85.
- National League for Nursing. (2003). *Position statement: Innovation in nursing education: A call to reform*. Retrieved January 30, 2005, from <http://www.nln.org/aboutnln/PositionStatements/innovation.htm>
- Porte-Gendron, R.W., Simpson, T., Carlson, K.K., & Van de Kamp, M.E. (1997). Baccalaureate nurse educators' and critical care nurse managers' perceptions of clinical competencies necessary for new graduate baccalaureate critical care nurses. *American Journal of Critical Care*, 6, 147-158.
- Reece, S.M., Mawn, B., & Scollin, P. (2003). Evaluation of faculty transition into a community-based curriculum. *Journal of Nursing Education*, 42, 43-47.
- Smith, J.S., & Crawford, L. (2004). *Report of findings from the 2003 Employers Survey, research brief, vol. 14*. Chicago: National Council of State Boards of Nursing.
- Tanner, C.A. (1998). Curriculum for the 21st century—Or is it the 21-year curriculum? *Journal of Nursing Education*, 37, 383-384.
- Timpson, W.M., & Bendel-Simso, P. (1996). *Concepts and choices for teaching: Meeting the challenges in higher education*. Madison, WI: Magna.
- Young, P.K. (2004). Trying something new: Reform as embracing the possible, the familiar, and the at-hand. *Nursing Education Perspectives*, 25, 124-130.

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