Selecting Concepts for a Concept-Based Curriculum: Application of a Benchmark Approach

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**Abstract**

In response to a transformational movement in nursing education, faculty across the country are considering changes to curricula and approaches to teaching. As a result, an emerging trend in many nursing programs is the adoption of a concept-based curriculum. As part of the curriculum development process, the selection of concepts, competencies, and exemplars on which to build courses and base content is needed. This article presents a benchmark approach used to validate and finalize concept selection among educators developing a concept-based curriculum for a statewide nursing consortium. These findings are intended to inform other nurse educators who are currently involved with or are considering this curriculum approach.

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Nursing education is in a state of change. Although there has been a call to transform nursing education for more than two decades, the release of two landmark publications, *Educating Nurses: A Call for Radical Transformation* (Benner, Sutphen, Leonard, & Day, 2009) and *The Future of Nursing: Leading Change, Advancing Health* (Institute of Medicine [IOM], 2010), has further underscored the need to reconsider who we are teaching, what we are teaching, and how we teaching. Answering the call for nursing education transformation, faculty in many nursing programs across the country are examining their curriculum and considering alternatives.

One option that has gained increasing interest is the concept-based curriculum—a curriculum that uses concepts for the organization of content. As part of curriculum development, a process for the selection of concepts, competencies, and exemplars on which to build courses and base content is needed. This process can be challenging among any nursing faculty group for many reasons and often leads to significant disagreement. The purpose of this article is to describe the process used to validate and finalize concept selection among educators developing a concept-based curriculum for a statewide nursing consortium. We believe this information will help to facilitate the process among other faculty groups undergoing curricular revision, especially given the increased interest in conceptual curricula.

**Background: The Statewide Consortium**

Nurse educators across New Mexico have formed the New Mexico Nursing Education Consortium ([NMNEC] 2010), a university–community college program partnership, to design a statewide nursing education plan. Although many models of university–community college partnerships exist, one of the most widely recognized models is the Oregon Consortium for Nursing Education (Tanner, Grubrud-Howe, & Shores, 2008).

The NMNEC plan specifically addresses the IOM (2010) recommendation to increase the percentage of nurses with baccalaureate degrees. The plan provides qualified students in community colleges with an opportunity to earn a prelicensure baccalaureate nursing degree from the university at the community college site. Central to the NMNEC statewide plan is a concept-based baccalaureate curriculum.

**Concept-Based Curriculum and Conceptual Learning**

In a concept-based curriculum, concepts form the organizational framework and structure of the curriculum (Erikson, 2002). Students learn about nursing and health care from a conceptual perspective; the desired outcome is that students become conceptual learners and develop higher level thinking skills. Faculty teach through student-centered, integrated learning activities within a clinical or patient context, described by Benner et al. (2009) as signature pedagogies among expert faculty. This is in contrast to traditional instructor-centered classrooms in which the content is presented.

A hallmark of concept-based curriculum and conceptual learning is the formation of conceptual linkages to other situations. In any curriculum, students encounter many clinical situations before they are “covered” in the curriculum at the time of the encounter. Despite this, students are expected to provide care to individuals in these situations. The development of conceptual
thinking skills helps students recognize certain aspects of the presenting condition and attain a general understanding of what to do, even when specific content has not yet been presented in the classroom setting.

Conceptual learning is also a skill set that facilitates movement into graduate education (Giddens & Brady, 2007). One of the long-term NMNEC goals is to foster greater enrollment in graduate education. Conceptual curricula also interface well with most contemporary competencies, such as Quality & Safety Education for Nurses, end-of-life principles, genetics, and technology and informatics.

Concept-based curricula were common in the 1960s and 1970s. During that time, it was not unusual for a nursing program to align the curriculum with a nursing grand theory, such as Orem, Roy, or Rogers, to name a few (Marriner-Tomy & Alligood, 2006). In many cases, the concepts associated with these grand theories were used as a basis for the educational delivery of nursing. Although some programs did this successfully, faculty in many schools struggled to translate abstract theoretical concepts into practical application for teaching novice learners. In many schools, students and faculty struggled to make logical linkages in a purposeful way. Concept-based curricula today do not necessarily draw concepts from any one theory, but instead reflect contemporary literature and practice trends in health care (Giddens et al., 2008). The multiple concepts in the nursing literature provide a wide range of possibilities for nursing faculty; at the same time, the various options can present challenges to faculty groups attempting to select concepts for the curriculum.

**Identification of Concepts**

Many challenges are associated with the development of a concept-based curriculum (Brady et al., 2008), particularly when it involves faculty located in communities across a large rural state who represent both associate degree (AD) and BSN programs. An initial challenge was determining which and how many concepts to use as a basis for the curriculum. We formed a concept committee with representatives from multiple nursing programs to propose curricular concepts. Variability in expertise existed among members, related to concept curricula and conceptual teaching.

The chair of the committee led the faculty group in a series of meetings over several months, in which concept categories, parameters, themes, and specific concepts were debated. This process was very difficult at times because decisions made in one meeting were often overturned in a subsequent meeting (depending on who was present), and it became clear that the concept debates could potentially be endless. To finalize this stage of work, we decided to investigate which concepts were identified by other nursing programs that were in the process of or had developed, a concept-based curriculum. Compiling a list of concepts from multiple schools helped us to add, delete, and confirm those generated by the NMNEC concept committee.

**Data Collection Process**

A request was sent to nursing education leaders at 10 schools and consortiums that were known to have a concept-based curriculum asking them to share the concepts used in their curriculum.
We received a response from all schools and consortiums contacted. The sample represented seven BSN and three AD curricula. The most notable difference between BSN and AD curricula are the number and type of credit hours required for the degree. Specific differences in number and type of credit hours vary by program; however, BSN curricula have a broader scope of study in the arts and sciences and a greater emphasis on professional practice concepts. The geographic representation of the sample included the eastern, midwestern, southeastern, and southwestern United States. All schools and consortiums were publicly funded; four were affiliated with health science centers.

Findings

There was variability in the concept lists among respondents. The lists were sent in either a Microsoft® Word document or Excel® data file. The organization of the concepts varied from simple alphabetic lists to categorical groupings. Although many schools used a similar process for concept categories, some used a model or taxonomy as a basis for concept selection. The number of concepts reported by the schools ranged from 13 to 64, with a mean of 49.6 (SD = 15.2).

Concepts were entered into a database according to school for a comparison analysis. The concepts were further grouped into three major categories (previously identified by the NMNEC concept committee) for comparison purposes: (a) Attribute Concepts (concepts that described attributes of the health care recipient), (b) Health and Illness Concepts (concepts that affected the health and well being of the health care recipient), and (c) Professional Nursing Concepts (concepts that represented the professional practice of nursing). These concept categories emerged from the NMNEC committee as a result of previous experiences in concept curricula by some of the committee members. Some concepts shared identical names, making matching easy; other concepts had a similar focus, with slightly different names. For example, some lists showed the concept of Oxygenation, and other lists showed the concept of Gas Exchange. When concepts were clearly similar, they were viewed as one concept.

After combining like concepts, a total of 104 concepts were reported by the 10 schools and consortiums. Of these, 18 were unique to one list only and did not link to concepts from any other school. Another 32 concepts were reported on two to four curricula lists. The remaining 54 concepts (representing slightly more than half of all concepts reported) were present on at least 50% of curricula lists in our sample and thus became our benchmark of comparison concepts. Nearly half of the benchmark concepts (n = 26) appeared on seven or more lists. The benchmark concepts, presented in the Table, were organized by the three categories described previously: Attribute Concepts, Health and Illness Concepts, and Professional Nursing Concepts.
Benchmark Concepts

Concept

Advocacy
Culture
Development
Diversity
Family
Spirituality
Caring
Clinical judgment/critical thinking
Collaboration
Communication
Educator
Ethics

Table: Benchmark Concepts and Percentages
<table>
<thead>
<tr>
<th>Concept</th>
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<tbody>
<tr>
<td>Interpersonal</td>
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<td>relationships</td>
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<td>Mood</td>
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<tr>
<td>Self</td>
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<tr>
<td>Stress/coping</td>
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<tr>
<td>Violence</td>
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<tr>
<td>Acid base</td>
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<td>Cellular regulation</td>
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<td>Behavior</td>
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<tr>
<td>Elimination</td>
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<tr>
<td>Fluid and electrolyte</td>
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<tr>
<td>Gas exchange</td>
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<td>Immunity</td>
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</table>
In addition to a list of concepts, the Table includes the percentage of BSN and AD curricula that use the concept. Because only three AD curricula were represented in the sample, making strong inferences based on the comparisons was not possible. However, we noted similar average numbers of concepts between AD ($M = 45.5$, $SD = 4.5$) and BSN curricula ($M = 51.3$, $SD = 18.2$). The large standard deviation in BSN curricula was attributable to one BSN curriculum list with only 13 concepts; when this list was not factored, BSN curricula had a much larger number of concepts ($M = 57.6; SD = 7.6$) compared with AD curricula. When evaluating concepts with the widest differences in reported use (between AD and BSN curricula), eight of 12 were within the professional nursing concepts or patient attribute categories and were less frequently on the AD lists. Given some of the fundamental differences in AD and BSN education, these findings are not surprising.

**Findings Inform the Committee**

The analysis was used to generate a document for use by the NMNEC concept committee members. The committee used the benchmark list as a basis to refine the concept list and make final decisions. The committee was uncertain about including or excluding several of the concepts; thus, the benchmark list was helpful in confirming decisions.

The final NMNEC concept list included 54 concepts, 47 of which matched the benchmark list, representing 87% consistency (Table). Seven concepts that were on the benchmark list were not final concepts in the NMNEC list; of these, four were linked in some way. For example, the NMNEC committee views diversity broadly and used it as a theme (or mega concept) to represent five concepts (culture, spirituality, functional ability, development, and health disparities). As another example, the concepts Behavior, Violence, and Addiction were on the benchmark list; however, the NMNEC committee decided to use Addiction and Violence as exemplars of the concept behavior. The rationale for this decision links back to the original parameters for the concepts identified by the committee—that all Health and Illness Concepts should encompass a continuum of positive and negative functioning. Additional concepts identified by the NMNEC committee that were not on the benchmark list included Clotting, Individual, and Community.

**Discussion and Implications for Nursing Education**

Endless possibilities exist for concepts to be considered for inclusion in any concept-based nursing curriculum. No standard number of concepts exists, nor is there a single list of right concepts for nursing curricula. Faculty must make decisions about the concepts that represent contemporary nursing practice and address the unique attributes of their program while balancing the need to use concepts that are clear and understandable to the student.

Achieving consensus initially proved to be extremely challenging for our committee, but having the benchmark concept list greatly facilitated the committee’s ability to make final decisions. Having been through the concept selection process on two occasions as part of developing a concept-based curriculum, two of the authors (J.F.G., M.W.) can attest that getting faculty agreement in this process is time consuming and difficult. Too often, curriculum decisions are
emotionally based; thus, having a benchmark concept list provided an objective mechanism for
the decision-making process.

Concept identification is only one step in the process; NMNEC faculty are developing the
concepts using a concept-analysis framework and identifying exemplars for each concept. It is
just as critical for faculty to gain consensus about how the concepts will be applied within the
curriculum. This process often leads to further revisions to the concept list.

It is not the intent of the authors to suggest that the benchmark concepts presented in the Table
are the best concepts to use; rather, the intent is only to share concepts most commonly reported
in use within our sample. This information is intended to assist any curriculum committee in the
process of concept selection or revision.

As concept-based curricula and conceptual approaches to teaching and learning continue to
evolve, more information is needed. In addition to understanding the concepts used, the
organizing framework for concepts, how concepts are used within the curriculum, and
curriculum outcomes associated with concept-based curricula are needed.

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