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2017

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### Recommended Citation

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# THE COLLABORATIVE IMPROVEMENT MODEL: AN INTERPRETIVE STUDY OF REVISING A CURRICULUM



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Curriculum revisions in nursing programs are necessary to maintain currency and ensure that nursing students are prepared to competently practice nursing. Yet, the research for curriculum revisions in nursing education is sparse, leaving nursing educators with a thin evidence base upon which to revise curricula. The purpose of this phenomenological and hermeneutical study was to understand the experiences of faculty members and students who used the Collaborative Improvement Model (CIM) at a midwestern nursing department as an approach to revise their curriculum. The findings of this study demonstrate how the CIM (a) promoted student involvement in revising a curriculum, (b) facilitated faculty collaboration across two campuses with different campus cultures, (c) encouraged the Scholarship of Teaching and Learning, and (d) emphasized the need to use external facilitators when revising a curriculum. Faculty members in nursing programs can use this study when considering the CIM as a framework for revising their curricula. (Index words: Interpretive research; Phenomenology; Hermeneutics; Collaborative improvement model; Curriculum; Curriculum redesign) *J Prof Nurs 33:38–50, 2017. Published by Elsevier Inc.*

**U**NDERGRADUATE NURSING CURRICULA are an expression of nursing's disciplinary values, reflective of nursing schools' culture, and a beacon for nursing student's safe entry into nursing practice. Faculty members in nursing programs recognize the imperative

and persistent need to revise curricula to ensure that nursing students are prepared to care for the public. They know, for example, that the evolving nature of health, technology, demographics, fiscal climates, and nursing workforce trends (Veltri & Warner, 2012) influences the need to revise curricula. They often rely on principles of curriculum and instruction, nursing education standards and guidelines, and regional, national, and international health care issues to guide their revisions. In addition, they use a variety of models, frameworks, and processes to develop and implement new curricula (Dillard & Siktberg, 2012). Despite faculty members' understandings of the needs driving curriculum change and the resources available to them, there is a lack of nursing education research about best practices in curriculum redesign. The purpose of this phenomenological and hermeneutical study was to understand the experiences of faculty members and students who used the Collaborative Improvement Model (CIM) (Waterbury, 2010) at a midwestern nursing department as an approach to revise their curriculum. This study contributes to an evidence base for curriculum change by providing insight on how the CIM facilitated the department's curriculum revision.

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Faculty members can use this study as a guide for curriculum change in their respective nursing programs.

### Literature Review

Much of the literature about curriculum revisions for nursing programs provides guidance on how to revise curricula. One approach that many schools of nursing are adopting is the concept-based curriculum, which aims to facilitate conceptual thinking and promote conceptual linkages, thereby decreasing content saturation (Brandon & All, 2010; Giddens & Brady, 2007; Giddens, Wright, & Gray, 2012; Hardin & Richardson, 2012). A major assumption of a concept-based curriculum is that students learn concepts such as pain, oxygenation, and acid–base balance across environmental settings, the life span, and the health–illness continuum rather than repetitively within each course and its clinical setting (e.g., maternity, pediatrics, adult health, etc.) (Giddens & Brady, 2007). Giddens et al. (2012) suggest that using learner-centered pedagogies within a concept-based curriculum facilitates integrated learning so that students use conceptual thinking skills in clinical encounters before they learn them in a didactic course.

There is also literature about using frameworks and strategies to facilitate curriculum revisions. Hull, St. Romain, Alexander, Schaff, and Jones (2001) described using Lancaster's collaborative framework for research to revise a curriculum. The foci of the framework are commitment, compatibility, communication, contribution, consensus, and credit. The authors contend that, in addition to providing a framework for a curriculum revision, using the framework can decrease faculty anxiety and fear about changing familiar curriculum approaches. Holloway, Polaschek, and Pool (2010) used a framework consisting of discovery, interpretation, facilitation, and evaluation to situate a curriculum in humanistic rather than empirical behavioral traditions. The authors claim that the discovery, interpretation, facilitation, and evaluation help prepare students to provide nursing care within culturally and socioeconomically diverse communities. Kramer (2005) used a leadership framework consisting of commitment, change, collaboration, collegiality, consensus, communication, closure, and celebration to revise a curriculum. The framework's concepts, the author contends, harness faculty members' strengths in revising curricula and mitigate resistance to change during a curriculum revision. Brady et al. (2008) discussed Kanter's seven skills for change, which delineated strategies for successfully revising a curriculum. For example, one skill, "challenging the prevailing organizational wisdom" (p. 199), resulted in faculty representatives making a site visit to another university to understand an innovative curriculum. This visit provided these faculty members with new perspectives on how to revise their own curriculum.

Some literature on approaches to curriculum change focused on theories or models and/or national standards or guidelines. Thomas and Carroll (2006) used Bronfenbrenner's Model of Human Ecology and *Healthy People*

2010 to develop a curriculum with an increased focus on community health nursing. Kumm and Fletcher (2012) used Rogers' Diffusion of Innovations and Bridges' theory of transitions to guide a curriculum revision that reflected *The Essentials of Baccalaureate Education for Professional Nursing Practice*. Similarly, Hickey, Forbes, and Greenfield (2010) used the principles of the nursing process, *The Essentials of Baccalaureate Education for Professional Nursing Practice*, and the five core competencies for health professionals outlined in the *Institute of Medicine's Health Professions Education: A Bridge to Quality* as an organizing framework for curriculum change.

Despite the robust literature on approaches to revising curricula, little research has been conducted on these approaches. Existing research about curriculum revisions focuses only on aspects of the curriculum to change. For instance, studies demonstrate ways to increase nursing students' preparation to care for older adults (Baumbusch, Dahlke, & Phinney, 2012; Clendon, 2011; Walton & Blossom, 2013), increase their genetics and genomics knowledge (Hsiao, Van Riper, Lee, Chen, & Lin, 2011; Kirk, Calzone, Arimori, & Tonkin, 2011; Kirk, Tonkin, & Skirton, 2014), and use simulations to learn clinical nursing practice (Brewer, 2011; Hayden, Smiley, Alexander, Kardong-Edgren, & Jeffries, 2014; Mills et al., 2014; Norman, 2012). These studies are relevant, timely, and important for inclusion in any curriculum revision. However, their focus is narrow. There remains a need for more research about approaches to curriculum revisions reflected in this review of literature.

## Methods

### Collaborative Improvement Model

The CIM (Waterbury, 2010) is situated in three quality improvement methodologies: (a) Deming's (2000) system of profound knowledge (SoPK®); (b) lean production (Womack, Jones, & Roos, 1990); and (c) Reid's (2006) process improvement perspective. As described in Table 1, Deming contends that the SoPK® demonstrates that understanding organizations occurs through knowing about interactions among "outside views" of appreciation for the system, knowledge about variation, theory of knowledge, and psychology (Deming, 2000, p. 93). These outside views promote the 14 Points of Management (Table 2), which help individuals set good examples, listen to and learn from one another, and adopt new work philosophies (Deming, 1986). Lean production focuses on eliminating wastes (e.g., duplicative work and data entry errors [Waterbury, 2010]). Waste elimination occurs through "pushing responsibility far down the organizational ladder" where employees must learn more skills and use them creatively in team settings (Womack, Jones, & Roos, 1990, p. 14). Reid (2006) recommends that teams use quality improvement tools (e.g., quality metrics) to improve situational learning, which increases collaboration and contributions of team members. Waterbury's (2010) use of these three quality improvement methodologies resulted in the CIM, which consists of four

**Table 1.** SoPK® Outside Views

View	Description
Appreciation of systems	Interrelated parts that work in tandem to accomplish the goals of a system. These parts involve interdependence (e.g., a good orchestra), obligation to system components (e.g., the hospital system and its patients), and a basis for negotiation that includes all stakeholders
Knowledge about variation	Life is replete with variation, and understanding causes of variation is important to knowing and responding thoughtfully to a process and the people it impacts (e.g., how does data of course grades inform pedagogical practice and prevent blaming students or teachers for poor grades?)
Theory of knowledge	Involves prediction, which requires theory that can be revised and used based on experience with the theory, interpretation of valid and reliable data, and operational definitions (i.e., information alone does not produce knowledge)
Psychology	People are different and will perform best if intrinsically rather than extrinsically motivated, and value appreciation (e.g., satisfaction in knowing one is contributing to the systems means more than monetary rewards)

Note. Adapted from “A System of Profound Knowledge” by W. Edwards Deming (2000), *The New Economics for Industry, Government, Education*, Second Edition, pp.92–115. Copyright 2000, The MIT Press, Cambridge, Massachusetts.

phases: (a) preparation, (b) discovery, (c) interpretation, and (d) implementation (Figure 1). As described later, the department of nursing in this study used all four of these phases to revise their curriculum.

**Preparation Phase.** The preparation phase involved obtaining leadership commitment for the revision, ensuring alignment of the CIM with the institution's and department's missions, and organizing teams to use the model in guiding the revision. The dean and faculty members were committed to revising the current curriculum because it was 12 years old and not keeping pace with changes in health care and nursing practice. In comparing the CIM with the institution's and department's missions, faculty members and the dean recognized the alignment of the missions with the model. For example, each mission focused on promoting communities of learners, which aligned with Deming's (2000) views (“Appreciation of Systems” and “Psychology”); Deming's (1986) fourth, ninth, and fourteenth “Points of Management;” and Reid's (2006) focus on teamwork.

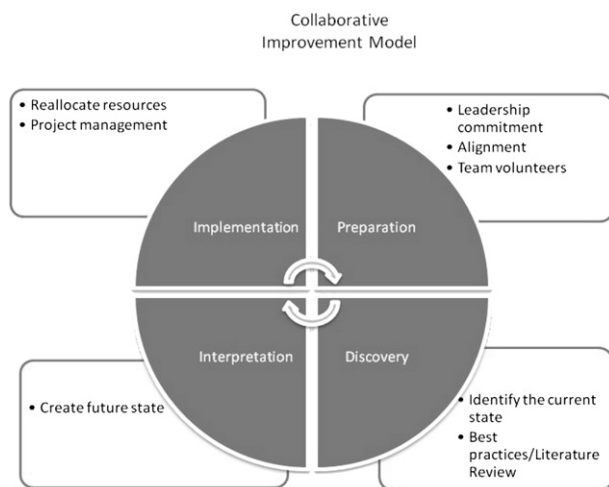
Team organization occurred when the curriculum committee asked seven faculty members who expressed an interest in assuming a leadership role in the revision to form a curriculum revision task group, all of whom accepted. This set the stage for the discovery phase.

**Discovery Phase.** According to Waterbury (2010), the discovery phase facilitates developing the “current state” (p. 80). In relation to the curriculum revision, the aim of the current state was to provide a comprehensive understanding of relevant and timely information necessary for updating a curriculum (Waterbury, 2010). Before commencing this phase, the task group developed a scope statement (Waterbury, 2011). The scope statement, “Redesign the Curriculum using an Evidence-Base to Prepare Students for Successful Practice in the 21st Century,” served as a focal point for the revision. The statement reflected task group members' belief that they could effectively prepare students for contemporary nursing practice through designing and implementing a curriculum that was developed from “evidence.” They

**Table 2.** “14 Points for Management”

1. Create constancy of purpose for improvement to stay in business and provide employment
2. Adopt a new philosophy where management responds to challenges, learns responsibilities, and leads change
3. Eliminate inspection processes through by building in quality to begin with; use of inspection assumes planning for defects
4. Minimize costs and focus on building relationships of loyalty and trust
5. Improve constantly to decrease costs
6. Provide on-the-job training
7. Provide leadership to help people do a better job
8. Eliminate fear to help people work effectively
9. Eliminate barriers between departments to promote team work
10. Recognize that low quality and productivity originate from the system and cannot be corrected by slogans and benchmarks asking for zero defects, which can create adversarial relationships
11. Eliminate quotas, management by objective, and numerical evidence of goals; instead focus on leadership
12. Preserve the right to have pride in workmanship
13. Ensure dynamic programs of education and self-improvement
14. Spur everyone into action to ensure transformation; everyone is accountable for transformation

Note. Adapted from the “Principles for Transformation of Western Management” by W. Edwards Deming (1986), *Out of the Crisis*, pp.23–24. Copyright 1986, The MIT Press, Cambridge, Massachusetts.



**Figure 1.** The collaborative improvement model.

defined *evidence* as relevant curricular and instructional research, standards, and guidelines related to nursing education and expert opinion from educators and clinicians.

The task group proceeded with the discovery phase by organizing four workgroups where members were responsible for gathering, analyzing, and drawing conclusions about sources of evidence. The workgroups were (a) curriculum mapping and diversity; (b) evidence/best practices; (c) external guidelines; and (d) past and present curriculum data. Each workgroup included stakeholders (i.e., those internally and externally impacted by the revision; Waterbury, 2010). The stakeholders consisted of 26 faculty members and seven senior nursing students. Faculty members chose the student stakeholders because they were in a clinical group of one of the task group members who was teaching a final leadership clinical course. The course focused leadership concepts such as teamwork, collaboration, change theory, and systems level thinking. Stakeholders also included four clinical partners and four alumni. The faculty members and students were divided among workgroups based on their interests, with each group consisting of six to seven faculty members and one to three students. One clinical partner and one alumni were assigned to each workgroup. The workgroups met 3 hours per week over a period of 2 months to discuss the evidence. Faculty members and students were consistently present at the meetings. Alumni and clinical partners were intermittently present to provide input and feedback on workgroup activities.

To promote workgroup efficiency and effectiveness, each workgroup had content and process facilitators. Content facilitators consisted of faculty members (one faculty member per workgroup) who volunteered to focus on facilitating what their workgroup was working on (Schwarz, 2002). For instance, the evidence/best practices content facilitator helped her workgroup differentiate evidence-based nursing practice from evidence-based nursing education and guided them toward gathering evidence on best practices in nursing education. There were two process facilitators, both of

whom were university administrative service faculty. They were trained in using the CIM and facilitated group process across workgroups (e.g., facilitating appropriate group communication, problem solving, and decision-making skills) (Schwarz, 2002). Table 3 outlines the purposes of each workgroup and provides examples of evidence each workgroup gathered and analyzed. The table also illustrates examples of conclusions from each workgroup's analysis of the evidence. The conclusions guided the development of the current state, which workgroup members summarized and presented at a curriculum revision retreat. The retreat served as the initiation of the interpretation phase.

**Interpretation Phase.** The interpretation phase involved a weeklong retreat where all workgroup members and department of nursing faculty and administrators listened to presentations from each workgroup. The presentations consisted of detailed descriptions of the content reflected in Table 3. Retreat attendees used information from the presentations to develop the "future state" (Waterbury, 2010 p. 81). In the context of the curriculum revision, the aim of the future state was to create a new curriculum based on the evidence.

To ensure effective group process during this phase, the curriculum task group received assistance from the process facilitators who ensured equilibrium of group dynamics among retreat attendees and helped them focus on the information from the presentations. For instance, during discussions following the presentations, the process facilitators ensured that attendees had opportunities to speak about one topic before moving on to the next, and when emotions ran high, the process facilitators promoted respectful dialog. They also used problem-solving tools to help attendees interpret the evidence and make decisions about curriculum development (Waterbury, 2010). For example, following the workgroup presentations, the facilitators created a table summarizing findings from the presentations. The summaries allowed attendees to review, reflect on, discuss, and use the findings to make decisions about the new curriculum. Table 4 outlines the curriculum structure developed during this phase. The structure was developed within a four-semester upper division nursing course sequence.

**Implementation Phase.** The implementation phase followed the retreat. This phase involved identifying tasks and allocating the resources required to ensure development and implementation of the new curriculum (Waterbury, 2010). For instance, faculty members formed new task groups to develop curriculum components, such as course descriptions, course outcomes, syllabi, and a program evaluation plan. The process facilitators continued to work with the new task groups during periodic retreats, which provided ongoing opportunities for faculty members to be involved in giving feedback about operationalizing the curriculum. The implementation phase concluded when the new program of study and its components were vetted through all of the approval processes (e.g., approval from the

**Table 3.** Workgroups Development of the Current State of the Curriculum

Title	Purpose	Example evidence gathered and analyzed	Example conclusions
Curriculum mapping and diversity <sup>a</sup>	Create a graphical view of current core and elective curriculum and identify cultural needs in health care and student diversity issues	Course objectives Outdated topics Repetitive topics Duplicated assignments Definitions of diversity Cultural diversity guidelines Diversity consultant guidance Student demographics	Improve patient safety content Increase pharmacology credits Increase adult health content Provide faculty and student development related to diversity Provide faculty development about generational differences
Evidence/best practices	Describe the literature related to best practices in curriculum and instruction	Learning theories AACN Essentials Faculty survey on innovations in nursing education Evidence-based teaching literature	Develop memory and conceptual thinking Use case studies and simulation Develop interprofessional learning environments Use available literature plus guidelines related to nursing education
External guidelines	Summarize current nursing education standards	AACN Essentials CCNE Criteria Essentials for specialties (e.g., public health) NCSBN-NCLEX RN test plan	All documents reviewed must be used in developing a baccalaureate curriculum Use a lifespan focus to include learning experiences about various population groups Essential IX about generalist nursing practice reflects the NCLEX-RN test plan; however, all of the Essentials need to be included in the curriculum
Past and present program data	Summarize assessment and evaluation data past 10 years	Student satisfaction surveys Alumni surveys Clinical site evaluations NCLEX pass rates	Students concerned about redundant assignments Alumni believe students need more leadership and management content Clinical sites prefer students have increased skills in delegation and prioritization NCLEX pass rate 7-year average > 87%

Note. AACN Essentials = The Essentials of Baccalaureate Education for Professional Nursing Practice (AACN, 2008); CCNE = Commission on Collegiate Nursing Education; NCSBN-NCLEX RN test plan = National Council of State Boards of Nursing.

<sup>a</sup> Curriculum Mapping and Diversity were included together because the curriculum revision task group wanted to identify evidence that would inform the inclusion of diversity in the new curriculum. They identified diversity as a priority construct needed in nursing curricula and conceptualized it broadly, asking the workgroup to examine diversity in relation to teaching culturally competent care, caring for diverse populations, and understanding trends about student diversity issues influencing learning.

department of nursing, university curriculum committee, and regulatory bodies).

### Research Design

The investigators used phenomenology and hermeneutics as the research design. Phenomenology is the science ontology, which focuses on explicating the meanings of experiences to understand phenomena (Heidegger, 1993). In this study, the investigators sought to understand the meaning of participants' experiences using the CIM for a curriculum revision. They used hermeneutics to interpret these meanings to reveal "hidden meaning" (Palmer, 1969, p. 147). In other words, in using hermeneutics, the investigators attempted to move beyond the "explicitness" of what participants

themselves said in order to provide warranted, insightful interpretations (Palmer, 1969). In the context of this study, such interpretations helped to deepen and strengthen understandings to promote new or different ways of viewing and revising a curriculum (Moules, McCaffery, Field, & Laing, 2015).

### Setting and Sample

This study took place within a university department of nursing at a mid-sized state college and university system in the midwest. The undergraduate nursing program is delivered on two campuses. One campus is located in an urban setting, and the other is located in a rural one. The

**Table 4.** Curriculum Structure Following the Interpretation Phase

Semesters	Course foci
First semester junior	Skills and assessment Medical/Surgical nursing Basic leadership in nursing Pharmacology Pathophysiology
Second semester junior	Older adults Medical/Surgical nursing Leadership in research and evidence-based practice Psychosocial adaptation and diversity
First semester senior	Childbearing families Childrearing families Clinical prevention and population health Leadership in contemporary nursing practice High acuity and progressive care
Second semester senior	Complex mental health Advanced clinical prevention and population health Leadership within precepted practice experience

urban-based campus admits 50 students per year into the nursing major while the rural-based campus admits 100 students per year. Following institutional review board approval and the completion of the interpretation phase of the CIM, the investigators recruited faculty and student workgroup members to participate in the study. The rationale for recruiting these particular workgroup members was that they had the most indepth knowledge of the CIM by being involved in the revision process from its inception through development of the new curriculum at the retreat (interpretation phase). This involvement meant that, as compared to others who were part of the revision, they had the most potential to provide “richly textured understandings of experiences” (Sandelowski, 1995, p. 182) of using the CIM for a curriculum revision.

The investigators recruited the workgroup members by e-mail invitations, which included the study description and consent form. Twelve of 26 faculty workgroup members and all seven student workgroup members agreed to participate in the study ( $N = 19$ ). The students received credit for participating in a workgroup as part of their final nursing leadership course. However, the investigators did not recruit or interview them until they received their final grade for the course. The small sample size is appropriate for a phenomenological and hermeneutical study where the aim is to “listen for particulars of experiences and thoughts that are not based on repetition to authenticate their authority to speak to the topic” (Moules, McCaffery, Field & Laing, 2015, p. 119).

#### Data Collection

The investigators collected data using unstructured, audiotaped interviews. Data collection began within 1 week of the end of the weeklong retreat. Based on participants' preferences, the investigators completed

interviews face-to-face or by telephone. All interviews were conducted in private. The investigators began each interview with an open-ended question, asking participants to describe their experiences using the CIM for the curriculum revision and the meaning these experiences had for them. To elicit robust descriptions of their experiences, the investigators asked follow-up questions such as “Can you give me an example?” or a “For instance?” or “Can you tell me what [a particular experience] meant to you?” Each interview lasted 30–60 minutes. Following each interview, the investigators labeled the audio-recordings with an identification code. A professional transcriptionist transcribed the data verbatim, removing identifying information and replacing it with pseudonyms.

#### Data Analysis

The investigators began the data analysis by reading the transcripts numerous times, which gave them a comprehensive understanding of the data (Benner, 1994). They coded the data by excerpting exemplars, which are strong instances (stories) of participants' experiences of being involved in the curriculum revision (Benner, 1994). They placed similar exemplars into categories and wrote interpretations of the meanings embedded in the exemplars. They supported their interpretations using relevant literature (Diekmann & Ironside, 1998). They agreed on interpretations that best explicated the experiences of using the CIM for the curriculum revision and assigned themes to these interpretations. They continued to rewrite interpretations until they were well articulated (Moules et al., 2015).

#### Rigor

The investigators maintained rigor by drawing upon the following principles for evaluating interpretive research: coherence, comprehensiveness, appropriateness, agreement, and suggestiveness (Madison, 1988). They achieved coherence by relating interpretations to the central question about the meaning of participants' experiences of using the CIM for revising the curriculum. They ensured comprehensiveness by thoroughly reading and rereading the data and excerpting salient exemplars that told a cogent “story” about using the CIM for the curriculum revision. They maintained appropriateness by addressing meanings arising from the data rather than constructing meanings that would address their own concerns about revising curricula. They adhered to an agreement by ensuring that interpretations were derived from participants' accounts and by ensuring agreement among the investigators that the interpretations were warranted. They maintained suggestiveness through interpretive work that was thought provoking and revealed novel insights about revising a curriculum.

#### Findings

##### Theme 1: Decentering Differences Through Collaborating.

In this study, students reported that being involved in the curriculum revision meant decentering or lessening the importance of differences they commonly experienced in student–teacher roles. On the other hand, faculty participants reported that being involved in the curriculum

revision meant decentering or lessening the differences they commonly experienced between campus cultures. For both student and faculty participants, collaborating was crucial to decentering experiences of difference. Collaborating provided new ways of and insights about working together to revise the curriculum. The subthemes of Theme 1 described next provide understandings of student and faculty experiences of decentering differences through collaborating.

*Subtheme 1. Collaborating: Shifting Teacher Roles From Authoritative to Collaborative.* Student participants were able to decenter differences through collaborating when teachers shifted their roles from authority figures over their learning to collaborative partners to codevelop the curriculum. Students are often accustomed to “teacher talk,” whereby they receive information and skills from teachers with presumed authority over the curriculum (Aukerman, 2012; Kavanagh, 2003; Shor, 1992). Teacher talk places students on the margins of the curriculum where they are still a part of it but do not play a role in its development (hooks, 1984). In this study, student participants' expectations of this marginalization were evident: Being involved in the revision was akin to, in the words of one student, “Doing the professor thing.” Viewing their participation in the revision within the professor's domain created fear and uncertainty among some student participants about their role. Alyssa explained her experience attending her first workgroup meeting:

There were a lot of professors and it was intimidating. We didn't know what to expect and what exactly [name of workgroup] meant. I just snuck in [to the meeting]. I didn't know how they [professors] felt about having students involved with their program—do they really want our input or do they just want us to sit there and listen?

Alyssa's statements about “their program” and “do they really want our input” reflects her perception that curriculum development is only within the purview of faculty members. She subsequently questions her role in the curriculum revision. She wonders if her purpose in the workgroup is to provide input or to be a silent bystander (Shor, 1992). However, once some student participants recognized how faculty members involved them in curriculum development, their focus on differences in teacher–student roles diminished. One student participant said, “It was interesting working side-by-side with faculty. I felt more like a peer instead of a student-to-teacher kind of thing.” Another student said that “teamwork” was one of the most meaningful experiences she had in working with faculty members. Decentering student–teacher role differences, therefore, helped students and teachers understand the meaning and significance of collaboration during the curriculum revision. Suzanne explains:

We [workgroup members] broke into smaller groups and compared the NCLEX-RN® [web site] with the AACN (American Association of Colleges

of Nursing) guidelines. The faculty members started referencing the NCLEX®, and then we [the students] had to find each [corresponding AACN] Essential. It [working with faculty members] was at a completely different level than I've been at with the professor before. Most of the time, when you are with your professor, they are above you telling you what to do, but we were all in the same group and we were all on the same level because we were all working for the same kind of purpose. There wasn't authority.

Suzanne's experience demonstrates that she followed faculty members' directions (i.e., their authority) when comparing guidelines, but she said that she was working with faculty members at a “different level,” which suggested that she experienced a shift from an authoritative to a collaborative student–teacher relationship. She describes this level as one where her teachers were not “above” her. Viewed this way, the power of solidarity rather than the power of hierarchy emerged through understanding that “they” (teachers and students) had equal responsibility and shared purpose in revising the curriculum (Chinn, 2008).

*Subtheme 2. Collaborating: Clarifying and Resolving Campus Cultures Differences.* Faculty participants communicated their experiences of decentering differences through collaborating by clarifying campus culture differences and resolving these differences within workgroups and at the retreat. For the purposes of this study, campus culture entails the organizational culture of each campus. Organizational culture is shaped by ecological contexts (e.g., physical setting, historical influences, and social expectations for conduct), patterns of interactions, and collective understandings of work patterns (Grau & Wellin, 1992; Schein, 1992; Van Maanen & Barley, 1985). For instance, some faculty participants clarified campus culture differences in relation to physical setting—or in the words of one faculty participant, “Where people live. . . where people work.” Other faculty participants noted additional contexts such as, “[Campus #1] has access to more hospitals where [Campus #2] does not. [Campus #1] has different ground rules; it's very competitive. [Campus #2] is a small-town kind of thing.” Another faculty participant, remarking on differences in clinical placements between campuses, said, “That's not to say you [faculty members] can't have differences in teaching courses because the communities of each campus are different.” Other faculty participants described campus culture differences with statements such as, “Our needs are a little bit different than our sister campus” and “Forever we are saying [Campus #1] is different than [Campus #2].”

Amid the amicable differentiations faculty participants made about campus cultures, they also conveyed tensions arising from the differences. One faculty participant said, “For some years, it [working with faculty members from the other campus] felt like a tug of war.” Another faculty participant remarked, “They [faculty members from the “other” campus] seemed closed and foreign.” Another



faculty participant commented, “I know, at times, it would seem like [name of campus] faculty is against [name of campus].” These tensions influenced how faculty participants took part in the curriculum revision. For instance, in anticipating the retreat, one faculty participant, new to the nursing department, said, “I had people [on my campus] telling me how I should react to these individuals [faculty members from the other campus].” Another faculty participant explained that, after the first workgroup session, she was “just depressed” that her perspective varied from a faculty member on the other campus. Nonetheless, as faculty continued to meet in workgroups and at the retreat, collaborating facilitated resolution of campus culture differences. Carla explains further:

[At the retreat] it was amazing how many times her [faculty member from the other campus] and I saw eye to eye. Here, this whole time, I was thinking I was opposite of all these people [faculty from the other campus]. There are differences between our campuses because of our location and student populations. As a group we are very similar. We have the same passions. We have the same interests. We are all here for our students.

Carla noted how surprised she was that a faculty member from the other campus agreed with her views. She realizes that faculty members from each campus are more alike than different in what they want for students. Her acknowledgement that faculty members from each campus were not “opposite” exemplified how the curriculum revision created conditions for a “common culture”—a culture where faculty members from both campuses realize the shared meaning and value of being “here” for students, placing student needs at the forefront of the curriculum revision (Apple, 2004).

**Theme 2: Engaging in Curriculum Scholarship: Gathering, Analyzing, Sharing, and Using Evidence to Revise the Curriculum.** When describing their experiences with the CIM, many faculty and student participants described gathering, analyzing, sharing, and using evidence to revise the curriculum. These practices mirror literature about the Scholarship of Teaching and Learning (SoTL) (Boyer, 1990; Hatch, 2005; Huber & Hutchings, 2005; Shulman, 2004), which emphasizes exploring questions about teaching and learning through gathering and analyzing evidence and trying and refining new insights to improve teaching (Huber & Hutchings, 2005). A major assumption of SoTL is that, through sharing, discussing, and critiquing teaching scholarship, it becomes community property (Shulman, 2004). Making SoTL community property can “lead to rich new discoveries” (Edgerton, 2004, p. 4) about teaching and learning, preventing teachers from using pedagogical innovations in isolation.

In this study, engaging in curriculum scholarship reflects SoTL and is evident through the following subthemes of Theme 2, gathering and analyzing, sharing,

and using evidence to revise the curriculum. The subthemes are presented separately; however, they will overlap in some places.

*Subtheme 1. Engaging in Curriculum Scholarship: Gathering and Analyzing the Evidence.* Many participants engaged in curriculum scholarship through gathering and analyzing evidence related to the topic(s) of their workgroup. One faculty participant said, “We looked into what's important, what guides us—all that evidence-based material just brought everything together.” A student participant said, “It [gathering and analyzing the evidence] made me realize the whole picture—how many different things [pieces of evidence] need to be looked at.” Another student noted how “interesting it was to see trends” within the evidence and how the “clearness” of data showed deficits in the current curriculum, highlighting needs for curriculum change. Another faculty participant said that gathering and analyzing the evidence enabled her to go into the classroom with “not authority, but knowledge.” This knowledge provided her with a sense of competence and purpose in educating nurses. She said, “Before [participating in the curriculum revision], I just came in [to the classroom] and did my thing, but now this [the evidence] is why I am in this [nursing education] because I know what they [students] need to know.”

Samantha, a faculty participant, described her experience obtaining information from the National Council of State Boards of Nursing (NCSBN):

I came across the National Council of State Boards of Nursing [website]. I've been there before but never looked at that site in light of what I was looking for. It was a huge ‘aha’ that things were out there that we didn't have to recreate. They [NCSBN] had done some surveys that we [the workgroup] were looking to for answers. Some of the survey information they had done, we could look at from a national perspective. That was helpful to see what they had accomplished and what should be a focus in nursing education.

In exploring the NCSBN Web site, Samantha viewed the information through the lens of the curriculum revision. In doing so, she gathered and analyzed survey data that provided the workgroup with the information they needed. She finds this experience enlightening (an “aha” moment) and is reminded of the importance of searching for existing data as important sources of evidence in revising the curriculum that did not have to be “re-created.”

*Subtheme 2. Engaging in Curriculum Scholarship: Sharing the Evidence.* Other participants conveyed their experiences sharing the evidence they gathered and analyzed. A faculty participant said that sharing the evidence was an opportunity to make visible the collective wisdom and multiple perspectives crucial to building a new curriculum. She said, “It [the retreat] was a good coming together of informed minds. We shared information. We

came from different perspectives and a good foundation was laid for the curriculum revision.” A student participant said sharing findings from the evidence gathered in her workgroup at the retreat promoted “active listening” and “questions” that were “helpful” to everyone. Similarly, Kelsey, another student participant, recalls her experience mapping the curriculum by examining course outcomes' alignment with assignments and sharing this information with faculty participants. She was surprised by how sharing this experience with them enhanced everyone's understanding of and approach to developing the new curriculum:

We [student workgroup members] took these binders [containing course syllabi] and tried to remember, how do we meet these [course] outcomes? I tried to remember assignments and lectures and match them up with the [course outcomes]. Some of them were met, some of them weren't. We put a PowerPoint together to present our ideas and thoughts [to faculty members]. [Faculty members] were very receptive. What was amazing is they led this discussion [by questioning], ‘Let's say a person doesn't pass the assignment, is that outcome met?’ That was so interesting to me to have so much discussion on outcomes in a class and curriculum mapping. I didn't realize the different areas that would benefit the curriculum.

This exemplar underscores the meaning of engaging in curriculum scholarship through examining pedagogical artifacts and sharing thoughts and conclusions about this examination with others. In this case, examining course outcomes and their alignment with lectures and assignments helped faculty members and students challenge their utility and validity in determining a student's progression in a course.

*Subtheme 3. Engaging in Curriculum Scholarship: Using the Evidence.* Some participants discussed the meaning and significance of using evidence. A faculty participant, commented on how the CIM offered a level of analysis that provided a “good background to make decisions” regarding the new curriculum. A student participant remarked that she, “Didn't think you could really talk about a subject [evidence] so much that you kill the subject”; however, she related that “it” [discussing the evidence] led to understanding the usefulness of evidence in changing curriculum “outcomes.” Likewise, Allison, a faculty participant, recounted her experience listening to an inclusion and diversity specialist. The specialist discussed with her workgroup ways of thinking about culture and diversity, and using this thinking to develop approaches to integrate diversity into the curriculum.

[Name of inclusion and diversity specialist] did a good job of promoting what she thought she heard us talking about with diversity. [She said] ‘It's not just learning about the Hmong population and the Hispanic population, but how every one of us has our own culture and our own diversity. If we infuse

it [diversity] into the curriculum? What if we infuse it [diversity] into our lives?’ I was excited how she took her expertise and assisted us with suggestions to think about. She was an incredible expert.

For Allison, the specialist provided a way to use information from “expertise.” In this case, the specialist emphasized that culture and diversity were less about ethnicity and more about acknowledging the culture and diversity in everyone. She also noted how the specialist helped the workgroup think about diversity as a way of being rather than simply something one learns about within a curriculum. Allison found her expertise “exciting” and facilitative of suggestions for consideration in the new curriculum.

### Theme 3. Promoting and Maintaining Engagement in the Curriculum Revision: Using Facilitators and Facilitation Techniques

A less prominent but still key theme pertained to the use of process facilitators at the retreat and their facilitation techniques, which can range from facilitative listening skills to strategies to manage difficult group dynamics (Kaner, 2007). Several participants remarked on how the facilitators and facilitation techniques promoted and maintained retreat attendees' engagement in the revision. In this study, engagement involved shared moments where retreat participants collectively discovered positive ways of being with one another to successfully develop the curriculum revision (Bergum & Dossetor, 2005). A student participant said, “It was neat how the [the facilitator's] had a place for you to write [comments] if you didn't have time to comment” and how much that technique allowed issues to be “brought to the table.” One faculty participant said that she appreciated the facilitator's use of a simple technique that involved “moving tables around so that we could face each other.” She said, “The open space allowed us to be creative.” Megan, another faculty participant, elaborated on the experience of changing seating arrangements in small workgroup sessions:

It was interesting how we had to be seated with our workgroup and then the next day we were told [by the process facilitators] not to sit with our workgroup. Small things like that are important. I noticed that I was sitting between [names of faculty], which never happens. We were conversing more freely than normal. That [faculty conversation] was nice to see and that we deliberately changed that [seating arrangements] the next day. On the Monday I was happy and excited! On the Tuesday it got muddy, strange, and uncomfortable. Then on Wednesday we did pull it [the curriculum] together.

Megan's remarks demonstrate how facilitation techniques promoted dialog and progress toward developing the new curriculum. In particular, she said how sitting with faculty members she did not usually sit with encouraged conversation that was less constrained than

“normal.” Her remark about the “excitement” of beginning the retreat on Monday, the discomfort she experienced on Tuesday, and the experience she had on Wednesday of bringing order out of perceived chaos (Wheatley, 2009) exemplifies the influence of the facilitators and their techniques on promoting engagement in the revision. She said that facilitation techniques seemed like “small things” [emphasis added] and yet were vital to retreat attendees’ ability to create a cohesive curriculum.

Allison, another faculty participant, described the importance of the process facilitators using facilitation techniques to maintain engagement during times of conflict or dissent. During a contentious discussion about requiring students to become certified nursing assistants (CNAs) before being accepted into the nursing program, she supported the requirement while others were against it. She said:

I was passionate about the CNA issue. When we first started talking about it, I felt that we [faculty members] were not going to have a CNA [requirement]. There were so many people that were against it. We [the process facilitators along with retreat attendees] developed a pros and cons list. It was great. Then everyone went home that night. [When we] came back the next day everyone said, ‘Let’s have the CNA!’

Allison explained how using a pros and cons list without making a decision about the CNA requirement until the next day resulted in its approval. This exemplar demonstrates that a simple facilitation technique, such as a pros and cons list coupled with suspending judgment before making a decision, may have maintained faculty members’ engagement in this aspect of the revision by allowing them time for thoughtful consideration about whether to approve the CNA requirement (Dewey, 2005/1910).

Another facilitation technique the process facilitators used was management of open discussions. Kaner (2007) writes that open discussions are often synonymous for “groan zones”—meaning that they often involve domination by some participants and “meandering” or “drifting” by other participants (p. 76). Open discussions threaten engagement in any change process. However, this curriculum revision study reveals that the process facilitator’s management of open discussions promoted and maintained engagement in the revision. A student participant said the facilitator’s use of “asking certain questions” “kept the discussion going.” In addition, Sabrina, a faculty participant, explained:

I really appreciated having [names of process facilitators] facilitate conversation, especially during some of the tough times and to record things. To be able to have somebody else take a role of people [provide facilitation] with their hands up and calling order helped in some of the decision-making modes. When we were really arguing for positions and doing a lot of processing aloud, it freed us up about what was being said and what makes the most sense.

Sabrina talked about the facilitation technique used to manage open discussion involved someone else outside of

the retreat participants taking notes, particularly during difficult conversations. She also remarked on the facilitator’s taking on the “role of people” to maintain order when many participants signified wanting to speak by raising their hands. She said the use of facilitators meant that retreat participants were “freed” up to listen to participants’ comments and interpret aspects of commentary that “made the most sense.” Such facilitation techniques encouraged optimal participation in open discussions.

## Discussion

This study provides evidence for using a model to revise a curriculum. Specifically, findings reveal how the CIM fostered student–faculty and faculty–faculty collaboration, promoted the use of SoTL to engage in curriculum scholarship, and demonstrated the importance of employing facilitators when revising a curriculum.

The CIM fostered student–faculty collaboration in ways that align with the plethora of literature about learner-centered teaching (Colley, 2012; Doyle, 2008; Greer, Pokorny, Clay, Brown, & Steele, 2010; Weimer, 2013). In learner-centered teaching, the teacher facilitates students’ knowledge acquisition, alters the balance of power so that students take responsibility for learning, and promotes active learning, rather than coverage of content to develop knowledge (Weimer, 2013). Learner-centered teaching was evident in student participants’ narratives when they described experiencing teamwork and collaboration with teachers in the workgroups. In particular, they learned what they needed to know to contribute to the revision by following the lead of faculty members and assuming responsibility to participate. Students who were initially intimidated by the revision process, quickly gained confidence as faculty member’s role modeled welcoming practices that helped students understand they were working in partnership with them (Diekelmann & Diekelmann, 2009). As they learned alongside faculty members, they understood how to use evidence to build the knowledge needed for designing the new curriculum. Learner-centered teaching was so powerful in actively engaging students that one student commented that being involved in the curriculum revision, “Added to my confirmation, that I *do* want to be a professor.”

The CIM also promoted faculty–faculty collaboration across the two campuses by enabling them to clarify and then decenter campus culture differences. This outcome corresponds with literature about how models, frameworks, or theories can positively influence organizational culture when developing or changing a multicampus curriculum (Gaines & Spencer, 2013; Magnussen et al., 2013; McBride, Yeager, & Farley, 2005). The most well-known example of using a theory to develop a multicampus curriculum is the Oregon Consortium for Nursing Education’s use of Robert Quinn’s work on deep change (Gaines & Spencer, 2013). In developing a common curriculum among Oregon’s community college and university nursing programs, Gaines and Spencer (2013) said that the culture had to be “re-framed” to

bring together “historically disparate groups” (p. 199). These authors emphasized that using Quinn's (1996) paradigm promoted a unified and respectful multicampus collaborative academic culture for nursing education.

As far as promoting the use of SoTL to engage in curriculum scholarship, the findings mirror the literature on evidence-based teaching (Cannon & Boswell, 2016; Emerson & Records, 2008; Josephsen, 2012; Patterson & Klein, 2012). Evidence-based teaching focuses on using the best available evidence to make decisions about the processes of teaching and learning (Cannon & Boswell, 2016). In this study, the evidence used for the curriculum revision was multifaceted and included curricular and instructional research, standards and guidelines related to nursing education, and expert opinions from educators. This multiplicity of evidence provided a well-informed comprehensive foundation upon which to build a new curriculum. Grounding the curriculum in evidence also developed students' knowledge, skills, and attitudes in evidence-based practice or, in the words of one student, develop curriculum, “in a timely and good research-based manner.” The evidence-based approach to the revision also prevented the most vocal teachers from expediting curriculum revision decisions based upon mere opinion or practical knowledge alone (Oermann, 2009). The CIM was therefore pivotal in promoting SoTL for evidence-based education.

Finally, in relation to employing facilitators for a curriculum revision, this study underscores the importance of the role of facilitators in ensuring a successful curriculum revision. Literature on curriculum revisions discusses the use of facilitators, including “best” facilitator qualities (Brady et al., 2008) and facilitation techniques (Hickey et al., 2010; Kumm & Fletcher, 2012) and processes (Holloway et al., 2010; Kramer, 2005). However, the authors of this research discuss facilitators and their techniques and processes in the context of the entire revision process, which often obscures the importance of facilitation. This study sheds light on the significance of facilitators' promoting curriculum revisions in ways that overcome the frequently quoted phrase from Woodrow Wilson: “It is easier to move a cemetery than to change a school curriculum.”

### **Educational Implications and Future Research**

Educational implications of this study go in tandem with future research needs in revising curricula for nursing programs. The themes of this study demonstrate the benefits of using the CIM in revising a curriculum. Nonetheless, it is important for nursing programs to select frameworks, models, and/or theories for curriculum revisions that are congruent with their mission, philosophy, and the aims of their revision. Thus, it is important for nursing education scholars to develop a robust research base of the frameworks, models, and theories delineated in the anecdotal literature and other novel approaches to revising curricula. This research would allow faculty members in a nursing program to

select an evidence-based curriculum revision approach that best suits their program.

The themes of this study also convey the significance of students collaborating with teachers to revise a curriculum. However, more research about student participation in curriculum revisions could further explicate if and to what extent their involvement in creating curricula fosters the development of critical nursing abilities, such as teamwork and collaboration, leadership, critical thinking, and evidence-based practice skills. In addition, the themes demonstrate the need for research on learner-centered teaching when students are working with teachers to revise a curriculum, which could provide tangible evidence-based examples of learner-centered teaching to model or replicate in curriculum and instruction.

Another educational implication and future research need relates to curriculum revisions that occur within multicampus universities. The first theme demonstrated that different campus cultures were initially a barrier to revising the curriculum. Faculty members in multicampus nursing programs must anticipate and address potential problems arising from campus culture differences before embarking on a curriculum revision. Further research could focus on faculty development needs for curriculum revisions when these revisions occur within multicampus environments.

This study also underscores the importance of using SoTL for curriculum scholarship. Much of the literature about SoTL examines it through the lens of instruction rather than curriculum. Emphasizing curriculum as the SoTL creates a space for the scholarship of curriculum revisions to be visible, accessible, and useable. Another important avenue of SoTL for curriculum scholarship may involve considering it as a framework for curriculum committees. Curriculum committees that practice from an SoTL perspective and make this perspective visible to others communicate the importance of basing curriculum work on evidence. Research could then focus on using an SoTL framework for curriculum committees or other committee work in nursing programs.

Finally, this study indicates a need for using facilitators and their techniques for curriculum revisions. It is important to note that participants' narratives pertained to the process facilitators, not the content facilitators. The process facilitators were from outside of the nursing department, whereas the content facilitators were faculty members. The study findings suggest then that external facilitators may be more impactful in mobilizing those involved in curriculum revisions and moving curriculum processes forward in efficient and effective ways. Faculty members in nursing programs who are revising their curriculum, therefore, should consider having external rather than internal facilitators, or a combination of both. More research is needed to ascertain the type of facilitator (external, internal, or both) that is most effective for a particular program.

### **Limitations**

A limitation of this study was its qualitative, single-site design. A quantitative study could have measured variables

of using the CIM for a curriculum revision (e.g., faculty and student satisfaction, learning outcomes, or the efficacy of the CIM's phases). Another limitation was that the participant interviews were conducted both by telephone and face-to-face. Each interview type has its strengths and limitations. For instance, a face-to-face interview can help build rapport between the interviewer and interviewee, whereas a telephone interview limits that (Roller & Lavrakas, 2015). The latter could have resulted in thinner rather than richer data for analysis. This study was also limited by including only student and faculty workgroup members. The rationale for this sampling decision was based on the student and faculty workgroup members' in-depth working knowledge of the CIM. However, including alumni and clinical partners who were a part of the workgroups and faculty members who were at the retreat but not part of the workgroups would have provided additional information and perspectives to the study.

## Conclusions

Curriculum revisions are a mainstay of nursing programs. Yet, the research base for curriculum revision approaches in nursing education is weak at best. The ability of nurse educators to practice from an evidence base to revise curricula hinges upon developing a science for nursing education in the area of curriculum development. Without it, nurse educators will continue to rely on intuitive approaches to curriculum revisions, those constructed solely on practical knowledge, or anecdotal approaches available to them in the nursing literature.

## Acknowledgments

The authors wish to thank Winona State University for funding and supporting this study.

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