
DISTANCE EDUCATION IN NURSING

THIRD EDITION



KAREN H. FRITH & DEBORAH J. CLARK
EDITORS

Distance Education in Nursing

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Third Edition

Karen H. Frith, PhD, RN, NEA-BC

Deborah J. Clark, PhD, MSN, MBA, RN, CNE

Editors


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Finally to my students—you keep me on my toes! This book is really about you . . . thinking about how to put you in the center of the teaching–learning experience.

Karen H. Frith

I would like to dedicate this book to my family, friends, colleagues, and students who supported me over the many years of schooling and teaching, day and night, in classrooms and online.

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Deborah J. Clark

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Foreword

Writing a book on distance education in nursing is a difficult and challenging task. Writing any book is difficult, but writing a book on a topic that is changing daily is essentially a never-ending journey and a continuous work in progress. This third edition of *Distance Education in Nursing* is intended for every nurse interested in where we are today in this amazing journey into the future. It addresses issues that cut across a wide range of best practices and the effect of technology on learning. In addition, it gives basic information for those who are thinking about applying some part of technology to their educational, clinical, and research endeavors.

Degree-granting institutions and continuing education programs are facing critical challenges. It is important to understand these challenges. Educational programs must be able to provide quality instruction in rapidly developing areas of knowledge and specialization, meet the learning needs of an increasingly diverse student population, hire faculty that are flexible and have the ability to incorporate research findings and technology into everyday instructional practices, and ensure quality learning standards and professional accreditation criteria. Technology is making it not only possible but also necessary to build evidence in practice that clinical work is truly making a difference in the lives of those we serve. Because of these factors, new ways of addressing the way we teach and how we learn are vitally important.

Although nursing today remains rooted in traditional curriculum models, we are embracing technology as part of mainstream education with new methods of curriculum design and delivery. Technology gives us ever-expanding choices that encourage life-long learning. Also, academic rigor is maintained as we have customized education based on student needs, available technology, and institutional resources.

As you read the chapters in this book, you will discover sound principles and new and creative ideas. There are many implications for future research. What can and cannot be taught online? How are faculty best assisted in learning a new role? Who are the students in this geographically and culturally diverse learning community? When and how are the relationships with students and others changing? How can institutions and students bear the costs?

As I have moved into a new chapter in my life, I have turned my original work in the development of this book over to Dr. Karen Frith. I had the distinct honor of meeting Karen online when we were asked to work together on a committee on online education in academic nursing. Actually, Karen and I have never met face to face. I believe that we are a perfect example of how shared interests and ideas can be created in an online format. In our work together, I came to know that Karen is an expert in the use of technology and informatics and is the perfect person to continue this book. Karen combines her educational role with clinical expertise in nursing administration and leadership, cardiovascular nursing, and nursing research. She has written numerous publications and has been an invited to speak at national and international conferences.

Dr. Deborah Clark is the co-editor of this book and long-time colleague of Karen. She brings not only expertise in online teaching and learning practices to the book, but also administrative experience from serving as the director of an online BSN program and an NLNAC accreditation site visitor. Deborah has examined online experiences of college students and older adults, which gives her a unique perspective about the needs of online learners.

I know that you will enjoy this book because it combines current practices and research with building a foundation of knowledge that takes us into the future. With Karen and Deborah at the helm, the book reflects the best thinking on the state of the art of technology and contemporary leadership.

Jeanne M. Novotny, PhD, RN, FAAN
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Preface

In this third edition of *Distance Education in Nursing*, we expand the content and evidence-based practice from the prior edition to represent the explosion of distance teaching and learning over the past several years. Nurse educators are taking advantage of distance learning technologies to make higher education more accessible to potential students and to meet the needs of undergraduate and graduate students in terms of flexibility and learning preferences. Nursing education programs at all levels are incorporating wired and wireless opportunities in traditional classrooms and online. This text is aimed at helping nurse educators of the 21st century in understanding and applying the theoretical bases for distance teaching and learning, while remaining open and interested in cutting-edge technologies. Current educators, new nursing faculty, and students studying nursing education will all benefit from reading this text and applying the concepts to their teaching practices.

There are major differences between the third and second editions. The former edition's chapters retained here (Chapters 2, 3, 5, and 7) have been updated and expanded. New chapters include the first chapter, "Educating Nurses," by Marilyn Lombardi, Molly Sutphen, and Lisa Day. This chapter ties the call for transformation in nursing education to distance education for nursing students. Nurse educators must mindfully design courses and facilitate learning by employing the recommended paradigm shifts. Specific suggestions for overcoming barriers to the paradigm shifts in nursing education, particularly online classes, are discussed in this first chapter.

New chapters on exemplars of faculty preparation (Chapter 4) and student support (Chapter 6) illustrate the journeys of real-life nurse educators in designing, implementing, and evaluating distance education courses and programs, and becoming an expert nurse educator using distance modalities. Their challenges and accomplishments were many

and demonstrate the concepts discussed in Chapters 3 and 5. For novice educators, reading the words of these nurses should inspire an appreciation to challenge oneself and continue life-long learning in nursing education.

Leading nurse educators contributed to this text and expanded the discussion on learning objects (Sewell), clinical reasoning and judgment (Jeffries et al.), writing in online education (Oermann), and faculty preparation (Johnson and Meehan). For those considering quality and accreditation needs, Chapter 11 (Billings et al.) answers questions and expands knowledge on measuring quality in distance education and the many challenges of accreditation and regulation. Finally, the last chapter, "There's an App for That!," wraps up current knowledge in wireless and mobile computing for nursing students and educators. Our hope is to continue the community of learning started with this text within the international nurse educator community using a blog and website that will disseminate new evidence-based practice in distance education; new apps and technologies; and shared stories of nurses becoming educators in this wireless world.

Follow our blog at deinnursing.blogspot.com.

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ONE

Educating Nurses *The Call for Transformation of Nursing Education*

MARILYN M. LOMBARDI, MOLLY SUTPHEN,
and LISA DAY

Nursing education is at a crossroads. With the recent publication of the Carnegie National Study of Nursing Education (Carnegie Foundation for the Advancement of Teaching, 2010) and the Institute of Medicine's (2011) report on the future of nursing, a growing number of nurse educators are questioning whether the models of teaching and learning that currently predominate are sufficient to accomplish the complex, layered, and intellectually challenging learning for practice that student nurses require. For example, in the Carnegie National Study of Nursing Education, Benner, Sutphen, Leonard, and Day (2010) found that the breadth and depth of classroom teaching are weak and that students receive too little help in integrating what they learn in the classroom, the skills lab, and clinical settings. Too often, faculty members in the classroom and clinical setting teach as though they inhabit parallel and separate spheres.

Yet nursing practice requires that students pull together and integrate what they learn in different domains. The domains essential to learning the practice of nursing fall into three general areas of teaching and learning, or what Benner et al. (2010) term *apprenticeships*. In one domain, students learn the knowledge they need for nursing, including knowledge from nursing science, natural sciences, humanities, and social sciences. In another, the apprenticeship of skilled know-how and clinical reasoning, students learn to reason across time about changes in a patient's trajectory as well as the skilled know-how they need to act.

In the third domain, they learn the values, behaviors, standards, social roles, fundamental purposes, and responsibilities that are highly respected in nursing. Benner et al. (2010) refer to these as apprenticeships of knowledge, clinical judgment, and ethical comportment.

The authors of the Carnegie study found a predictable distribution of these three apprenticeships, with knowledge taught in the classroom and skilled know-how taught in the skills/simulation laboratory and clinical settings. Often, the only place where students were consistently asked to learn and integrate their abilities in all three apprenticeships was in the clinical practice setting. The authors call for a radical transformation in how nurses are prepared for practice. To fundamentally transform nursing education, nurse educators must commit to important changes in teaching strategies and pedagogies. Such changes will require considerable commitment on the part of the nursing community including nurses, nursing administrators, faculty, preceptors, and students (Benner et al., 2010). These changes will require all involved to shift approaches, attitudes, assumptions, and goals for nursing education. To this end, Benner et al. (2010) recommend that nurse educators make four fundamental shifts in teaching and learning practices:

1. From a focus on covering decontextualized knowledge to an emphasis on teaching for a sense of salience, situated cognition, and action in particular clinical situations
2. From a sharp separation of clinical and classroom teaching to integration of classroom and clinical teaching
3. From an emphasis on critical thinking to an emphasis on clinical reasoning and multiple ways of thinking that include critical thinking
4. From an emphasis on socialization and role-taking to an emphasis on formation

The focus of this chapter is the four paradigm shifts needed to transform nursing education, the barriers nurse educators face, and the boundaries they must cross in order to make the changes. Then, using each of the paradigm shifts, the current state of the art in distance learning technologies and future education technologies are discussed as they relate to helping teachers overcome barriers and work across boundaries to begin the radical transformation needed in nursing education.

RECOMMENDED “SHIFTS” FROM THE CARNEGIE NATIONAL STUDY OF NURSING EDUCATION

From a Focus on Covering Decontextualized Knowledge to an Emphasis on Teaching for a Sense of Salience, Situated Cognition, and Action in Particular Clinical Situations

Currently, a ubiquitous strategy for presenting nursing theories and clinical knowledge is to provide students with a taxonomy—a classification system of signs, symptoms, and nursing diagnoses related to specific diseases. A taxonomy may be useful for organizing large amounts of information, but few students can figure out how isolated facts presented in lectures are supposed to be used in particular situations when caring for patients whose needs may not fit neatly into such a classification system.

Students need help in learning how to use the nursing knowledge and science presented in lectures, during simulations, and in the clinical setting. Part of learning a practice is developing a sense of salience or a sense of what is important in complex, relatively unstructured clinical situations in which patient care takes place. To act, nurses must learn to grasp the nature of the situation and be able to distinguish what nursing care is needed. Students develop a sense of salience through ongoing coaching, where preceptors, faculty, and nurses coach students through questions about particular situations and the changing relevance, demands, resources, and constraints they encounter.

From a Sharp Separation of Clinical and Classroom Teaching to Integration of Classroom and Clinical Teaching

Currently, student nurses experience a sharp divide between classroom and clinical teaching and learning. Such a structural separation of clinical settings from the classroom often means students are left on their own to integrate what they learn in each setting. Students, however, need help with the integration of clinical and classroom teaching and learning. By integrating clinical and classroom learning into a seamless whole, nurse educators could prevent the fragmentation students currently experience. This integration would also potentially take some of the burden of content overload off teachers and students by limiting the discussion to the concerns and problems of actual clients/patients and communities. Better integration can be accomplished by bringing clinical situations into the classroom and lab with simulation and case

studies, by bringing classroom learning and assignments into clinical settings, and by involving faculty in all teaching/learning settings.

From an Emphasis on Critical Thinking to an Emphasis on Clinical Reasoning and Multiple Ways of Thinking That Include Critical Thinking

Currently, “critical thinking” has become the catchall phrase to describe how nurses think in practice, and many teachers and students believe that critical thinking is the only way nurses think. However, the term does not begin to capture the many ways nurses think—creatively, analytically, imaginatively, and narratively, for example. Although student nurses must be able to use critical thinking, they also need to be able to distinguish when and why this kind of thinking is required. Critical thinking is important in situations of practice breakdown or if a situation prompts reflection on outmoded theories, received ideas, and practices that need reform or innovation.

In order for student nurses to learn and practice all the different kinds of thinking that make up clinical reasoning and judgment, nurse educators must be more direct in the ways they talk about their own thinking and more explicit in how they teach students how to think like nurses. Much of nursing practice requires action in underdetermined situations where there is neither sufficient information nor time to critically think through every possibility. Through careful coaching in particular clinical situations, nurses, faculty, and clinical preceptors help students learn the different ways of thinking nurses use and help students develop a clinical imagination to see possibilities, resources, and constraints in patient and family situations that demand action. Especially effective are “what-if” questions posed by faculty about a particular clinical situation that ask students to grasp the nature of patients’ needs as they change over time. Likewise, helping students develop a narrative understanding and interpretation of clinical situations can enrich clinical imagination and reasoning about changes in the patient’s condition over time.

From an Emphasis on Socialization and Role-Taking to an Emphasis on Formation

Student nurses describe their work with clients, patients, and families as transformative of how they see the larger world, their future, and themselves. Despite the students’ experiences of transformation, formation in nursing education is often overlooked in favor of discussions of role transition. Foster, Dahill, Golemon, and Tolentino (2006) define

formation as the pedagogies used by educators to form in students the “. . . dispositions, habits, knowledge, and skills that cohere in professional identity and practice, commitments and integrity” (p. 100). In this sense, the formation of new nurses is closely tied to their internal identification with the values of nursing practice and is different from socialization into a role. When one is socialized or takes on a role, expectations are externally imposed, and good performance is demonstrated by acting in accordance with a set of externally defined criteria. As such, it is assumed one can put on the role of nurse when it is needed and other times step out of this role. In contrast, when the values of a practice are internalized, new nurses develop an inner sense of good that influences their judgment of right and wrong action in all situations. Educating nurses as professionals with a commitment to service and advocacy requires attending overtly and deliberately to formation in the curriculum and in teaching and learning.

BARRIERS TO ACCOMPLISHING THE FOUR PARADIGM SHIFTS

In the past, there have been many calls for reform in nursing education from curriculum reform to pedagogical innovation (National League for Nursing, 2003). There are many reasons why reform efforts have been neither widespread nor lasting. In order to accomplish the transformation called for by the authors of the Carnegie study, it will be important to identify barriers to change within teachers, students, and schools. Such barriers include the overwhelming amount of content teachers and students feel compelled to address in classroom teaching and learning, the absence of generalist knowledge among nursing faculty, and the hierarchical relationships that have been established between teachers and students.

The information explosion in health care is overwhelming to many nurses, nurse educators, and student nurses (Benner et al., 2010). Medical–surgical nursing textbooks are now multivolume tomes with an accompanying CD-ROM and website. The Internet is a sea of clinical practice guidelines and websites for health care providers and the general public, providing information on wellness, illness, and diseases. In sorting through all of this content, many nurse educators are most comfortable constructing a slide-based lecture followed by multiple-choice tests to assess student learning. Teachers who may have limited teaching skills and feel pressured to cover large amounts of content often rely exclusively on lecture; students come to expect this format and get nervous when there is a change. Likewise, school administrators are

fearful that without lecture and multiple-choice exams, students will not be prepared adequately for the national licensing exam (NCLEX-RN®). Thus, reliance on lecture and on multiple-choice testing acts as a barrier to improvement in teaching and learning.

Another important barrier occurs when the teacher overlooks the type of practice that a novice could enter. Because there is a division of classroom and clinical teaching/learning in many schools of nursing, the teachers in the classroom often do not have any connection to the clinical sites where students practice. In addition, many faculty members are experts in a particular clinical practice but lack the generalist knowledge required to cross clinical specialties even within a larger specialty. For example, a cardiovascular nurse practitioner who is teaching a class on acute care of adults may be comfortable covering the content associated with cardiac disease but not with neuroscience. For topics outside of the specialty, nurse educators typically use taxonomies of signs, symptoms, and treatments, rather than teaching with rich case studies derived from their clinical experience. This specialty clinical practice makes it difficult for teachers to move away from classroom teaching that relies on classifications of diseases and treatment options.

Another important barrier to making the paradigm shifts is the hierarchy in place in many schools, with teacher as knowledge-giving expert and students as empty receptacles. Moving from a programmed lecture to a less predictable learning environment where students and teacher work together to think about and respond to contextualized clinical problems will require a different understanding of and approach to student-teacher relationships. In the current model in place in many nursing schools, the classroom teacher is responsible for filling the students up with the content they need for practice; the students are expected to then take this content and apply it in their clinical settings. This passive learning environment reinforces a separation of teacher and student, encourages competition among students, and prevents more collaborative relationships from forming.

BOUNDARIES ON THE WAY TO TRANSFORMATION

In moving toward integration of the three apprenticeships of professional education in nursing, faculties in schools of nursing will have to make conscious efforts to dismantle three closely related boundaries: the boundary between theory and practice, the boundary between knowledge acquisition and knowledge use, and the boundary between classroom and clinical learning. Breaking through these boundaries is

implied in the paradigm shifts that address the separation of knowledge from context and the separation of classroom from clinical learning. However, overcoming these boundaries will also bring nursing education closer to the shift from critical thinking to multiple modes of thinking and from socialization to formation.

The favoring of theory over practice and of knowing over doing is an old problem in Western science (Benner, 1984; Benner, Tanner, & Chesla, 1996). While acknowledging the importance of hands-on skills, it is still a common understanding among nurse educators that students must learn the theory before they can apply it in practice and that a solid theoretical understanding should result in solid clinical practice. However, in nursing, the practice is always more complex, flexible, and responsive than a theory can capture, and the ability to use knowledge in undetermined and changing situations is essential (Benner, 1984; Benner et al., 1996; Benner, Hooper-Kyriakidis, & Stannard, 1999). By creating learning environments that recognize practice as an important source of knowledge and theory and engagement with a community of practice as the basic source of learning (Lave & Wenger, 1991), nurse educators will be able to cross the boundary between theory and practice and close the practice–education gap.

Closely related to the theory–practice boundary is the boundary between knowledge acquisition and knowledge use. Learning science tells us that students learn best by using knowledge as they acquire it (Chickering & Gamson, 1987; Tokuhama-Espinosa, 2010). Nursing schools must become places where students are always asked to confront clinical problems that require them to learn and use new content. This blending of knowledge acquisition and knowledge use also will help students better understand the demands of the practice they are entering and further their professional formation.

In essence, dismantling the boundaries between theory and practice, knowledge acquisition and knowledge use, begins with an effort to identify the most valuable features of the clinical placement experience and transport those features, as far as possible, beyond the clinical setting into the classroom and the online realm. Simply put, the clinical setting is the one learning environment where students are asked to bring together the four fundamental “patterns of knowing” that underlie professional practice in nursing as identified by Barbara Carper (1978) in her well-known formulation: empirical, personal, ethical, and aesthetic (as in, related to the here and now). Carper’s vision of an expert nurse is one who is able to integrate these patterns of knowing when it counts the most. However, in order to do so, expert nurses must engage in a process of lifelong learning known as *reflective practice*. Thus, when

faced with a clinical issue, these nurses are able to think on their feet, but they also take the time to document their reaction to the situation after the fact and reflect on the consequences of their actions. Over time, this reflective practice hones the professional's sense of salience or the ability to prioritize in a complex, ambiguous clinical situation and immediately determine what needs to be attended to before anything else.

TRANSFORMATION OF NURSING IN DISTANCE EDUCATION

In many ways, the transformation of nursing education described by Benner et al. (2010) is already taking place in distance education. Dedicated nurse educators faced with moving courses from face-to-face classrooms into online, virtual classrooms quickly realized that simply putting lectures online would fail. The pioneers of online education made a monumental shift from teacher-centered pedagogy to learner-centered pedagogy. Some authors even extol the learner-centered practices of distance education as having a positive influence on classroom teaching practices (Shovein, Huston, Fox, & Damazo, 2005; Stone & Perumean-Chaney, 2011).

The learner-centered pedagogy of distance education that predominates leans heavily on educational theories such as constructivism and adult learning theory. Both of these purport that learning occurs best when it is situated in meaningful contexts; when learners can connect new ideas to their previous knowledge, experience, or emotions; and when the learning is authentic or based in real situations. Because adult learners tend to value previous experience, self-directed reflective practice, and creative problem solving in dialogue with others, they also tend to respond positively to constructivist learning activities (Lombardi, 2007). Nurse educators who design instruction will likely use learning management systems that contain technology able to shift the educational paradigm. However, the transformation will require a purposeful and creative instructional design.

While nursing faculty rarely have formal training in pedagogy, they are quite skilled in developing learning objectives in courses that support program objectives. When developing or redesigning distance education courses with transformation in mind, the same principles are used—imagine the knowledge, skills, and values of students that are desired, and create structures and processes to support the desired outcomes.

Each technology is a tool with its own set of affordances, or the *range of possibilities* that opens up for the user, and its own set of constraints,

or the range of possibilities that this technology closes off for the user. Once educators clarify the learning context (characteristics of learners, student level, the nature of the learning environment, etc.) and learning intent (what the student will be required to do/demonstrate/produce at the conclusion of the lesson/module/unit), they are ready to determine which technologies are best suited to serving the educational purpose, given the particular learning context and intent.

Fortunately, there are a number of models available to help instructors match learning intent with learning strategies, and strategies with technology supports. One such model identified five fundamental learning intents and produced the following matrix (Table 1.1; Littlejohn & Pegler, 2007).

Those who teach at an institution with a robust distance education program can expect to have at their disposal an infrastructure that includes high-speed Internet connectivity, access to mobile and stationary computing devices, systems for producing and presenting multimedia materials and capturing information about student performance by way of learning management systems, asynchronous and synchronous communication, and social networking tools for the support of teamwork and peer-based learning. Nurse educators must select carefully the instructional technologies amid a vast and rapidly changing digital world. Each instructional design decision has the opportunity to overcome barriers and push traditional boundaries in the goal of transforming nursing education.

Paradigms 1 and 2: Teaching for a Sense of Salience, Situated Cognition, and Action in Particular Situations and Integrating Classroom and Clinical Teaching

One of the most effective ways of teaching for a sense of salience and collapsing the distance between the clinical setting and the classroom (or clinical and the virtual learning environment) is a pedagogy built on unfolding case studies. Many case studies are available from online repositories or websites dedicated to online delivery of cases. The National Center for Case Study Teaching in Science (2012) contains a collection of unfolding cases in nursing and many other science disciplines. The site also provides learning objectives and teaching suggestions for in-class collaborative learning, but the ideas are easily transferable to online collaborative case studies. Other free sources of case studies can be found in the Multimedia Educational Resource for Learning and Online Teaching (MERLOT, 2012). Educators in all disciplines have

TABLE 1.1 Learning Intents and Section of Instructional Technologies

Learning Intent	What Is It?	Media Forms	Active-Learning Strategies	Support Tools
Assimilative	Students are asked to process narrative media while managing and structuring information	Content delivery in multimedia formats (readings, lectures, narrated slide presentations, etc.)	Web quests, concept mapping, mind mapping, brainstorming, participatory sense making	Learning management systems (Blackboard, Sakai, Moodle, etc.), presentation software, brainstorming tools including concept mapping software, citation/research management tools including social bookmarking software, news aggregators (e.g., Google Reader), reflective journaling software (blogs), and collaboration software (wikis that support group work, including multiauthor annotated bibliographies)
Adaptive	An environment that changes according to learner input	Clinical simulations, game-based assessment environments	Situated coaching through online learning and assessment modules	Task-centered online learning modules (including a series of questions, decision points, and requests for rationale that students must address), role-playing exercises performed in multiplayer online role-playing game environments, interactive web-based lessons and clinical cases like NovEx eLearning
Communicative	Discussing	Asynchronous or synchronous discussions, chats, text messages	Reasoning, arguing, coaching, debate, discussion, negotiation, performance, online peer critique	Electronic whiteboards, e-mail, discussion boards, chat, instant messaging, VoIP (Voice over Internet Protocol, i.e., Internet telephony applications such as Skype), video conferencing, blogs, wikis
Productive	Learners producing something	Creating, producing, writing, synthesizing, remixing, mash-ups	Patient care plan, reflective journal, literature review, portfolio, narrated slide presentation	Creative applications (Google Video, office software, InDesign, Photoshop, Sketch, and other design software), publishing environments (YouTube), computer-aided assessment tools, electronic learning environments
Experiential	Interactive activities that focus on problem solving in a variety of clinical situations	Practicing, applying, mimicking, experiencing, exploring, investigating, performing	Case studies, simulation scenarios, role-playing exercises, interprofessional team-based learning	Multimedia, interactive case study lessons (NovEx eLearning), virtual simulation labs that approximate clinical settings and conditions within a 3-D immersive environment, massively multiplayer online role-playing games

contributed nearly 31,000 learning objects (materials or assessments in self-contained modules that can be reused). Textbook publishers and other commercial websites offer case studies that can be integrated into online classes such as Evolve and Lippincott's multimedia packages. Access to learning materials tends to be similar to the cost of textbooks.

A new online learning system based on the "novice-to-expert learning" approach is being pioneered by Benner (NovEx Novice to Expert Learning[®], 2011). Launched in response to the call for an increase in situated (context-specific) learning issued by the Carnegie Foundation, the Robert Wood Johnson Foundation, the Institute of Medicine, Quality & Safety Education for Nurses (2011), and the Lancet Commission (Frenk et al., 2010), the NovEx eLearning system comprises a growing set of online courses that instructors are encouraged to use as a replacement for the traditional textbook. Students access a set of online modules that include short digital lessons focused on essential clinical and scientific information, along with videos that visually reinforce proper clinical use of concepts under discussion. Students immediately use the knowledge learned from the NovEx lessons by practicing on "unfolding" patient cases designed by content experts to reflect the latest evidence-based practices. An example of curatorial teaching, the NovEx case approach displays important artifacts (the patient in the clinical context, medical images, video interviews, electronic medical records, instrument readouts, etc.) in a sequence designed to create a pathway through the unfolding situation with students called upon to use all four patterns of knowing fundamental to a nurse's reflective practice. Students may repeat the interactive tutorial as often as they wish and receive feedback on their performances. Finally, they are prepared to enter the online test "rooms" where interaction with the clinical situation is tracked and assessed. Significantly, there is a transformative agenda behind this new e-learning program, which presents nurse educators with templates and guidelines they can follow in crafting their own unfolding case study scenarios. In this way, the online tutorials help to shift nursing education away from decontextualized lectures and toward a context-based pedagogy that engages students in meaningful dialogue.

Paradigm 3: Emphasis on Clinical Reasoning and Multiple Ways of Thinking

Authentic learning experiences are designed to evoke, as closely as possible, the complex, open-ended dynamics found in actual practice,

where problems typically require input from multiple perspectives. As learning scientist George Siemens (2004) suggests, learning to be a professional nurse is all about forging connections—interpersonal connections between mentors and learners, intellectual connections between the familiar and the novel, private connections between the individual learner’s goals and the broader concerns of the discipline. It is through the many and varied exposures that students begin to think deeper and broader about situations in patient care. Differences in perspectives, similarity of human needs, and scientific thinking are enhanced when students are challenged to solve problems and reflect on practice.

Online discussions can be used to enhance clinical reasoning; an introductory topic is posted for discussion, and student response is based on readings. Faculty take the topic to the next level by posting intriguing, thought-provoking responses and additional questions that stimulate students to use their clinical reasoning and critical thinking abilities. It is the creative online educator that can develop discussion topics that are relevant and intriguing enough to push students to use their higher-level thinking abilities, combined with practice experience, to find solutions to practice issues.

Paradigm 4: Emphasis on Formation

Finally, it is imperative for student nurses to become lifelong learners responsible for their own growth and responsiveness as clinicians. As educational theorist Gardner Campbell (2009) insisted, students must acquire the “digital fluency” necessary for them to assume “creative and responsible leadership.” Nurse educators can mentor students in formation as professional nurses and lifelong learners using online tools that engage them, foster inquiry, and create opportunities for robust discussion. In a networked, technology-enriched world, the educator can bring quality content to students and create a pathway through the content that fosters reflection *in* action and reflection *on* action. Narrative pedagogies lend support to other forms of generative sharing, including “digital stories” culled from previous experiences related to the topic at hand. Students might be asked to contribute to the curated resources by using a simple tool such as VoiceThread™ (2012) to combine images and words into a 3- to 5-minute video that others in the class may comment on with the help of VoiceThread’s annotation tool.

As an adult learning community, students in a well-developed online course will work together to reflect on their past and current

experiences to create materials that demonstrate their ability to “think like a nurse.” The artifacts they produce over the course, in the form of patient care plans, for instance, should ultimately contribute to the learning community’s shared base of resources that have been vetted for their reliability and usefulness. The longevity of these resources and the learning community building around them can be assured through the use of electronic portfolios that help students see the arc of their progress over time or collaborative wikis where members of the learning community can work jointly to develop a common knowledge base. The nurse educator models the curatorial behavior of the lifelong learner by designing a pathway through the content.

Before they graduate, student nurses should be able to create and maintain a *personal learning network* that will support their lifelong learning needs. They can join professional communities and reach out electronically to potential mentors. They should be exposed to social bookmarking tools and academic reference management systems (e.g., Mendeley, Zotero, Endnote) that allow them to work together with nurses from across the country and around the world to construct online collections of Internet resources or bookmarks, classify and organize them through the use of metadata tags, and share both the bookmarks and tags with others. As professional nurses, they have an obligation to keep up to date on significant changes in the field as efficiently as possible by subscribing to the syndicated Web content (news headlines, podcasts, blogs, etc.) published by significant organizations and thought leaders in their field. Aggregator tools (or “news readers”) will automatically assemble that syndicated Web content into a “personal newspaper” dedicated to the user’s particular interests and affinities. Even though these are digital skills, student nurses who learn to harness digital resources also are forming into lifelong learners.

SUMMARY AND KEY POINTS

Nurse educators who prepare students for entry-level or advanced nursing practice have the responsibility of designing instruction that captures the realities of fast-paced and uncertain work environments. Using instruction that calls on clinical imagination and thinking in context can be achieved in online education. The role of the nurse educator is to serve as coach and guide through learner-centered online education.

Key Points

1. The call for radical transformation of nursing education is important for teachers in distance education. It is the role of every nurse educator to design distance education courses that shift from traditional teaching methods to those that encourage students to think as nurses.
2. Transformation of nursing education means that teachers move from presenting information to guiding students to understand the most significant clinical issues and using knowledge in context. Teachers in online courses can use many different instructional technology tools to situate learning in context, including case studies and simulations.
3. Transformation means that nurse educators close the gap between classroom and clinical settings. By using case studies and other clinically realistic multimedia learning objects, nurse educators are able to showcase clinical learning even in online courses.
4. Nurse educators will transform education when they encourage students to develop clinical reasoning and to use multiple ways of thinking. In distance education, self-reflection in blogs, group collaboration in wikis, and thought-provoking online discussions can promote deep thinking and sharing of ideas with peers.
5. The final paradigm shift involves moving from socialization to an emphasis on formation in nursing education. Formation is a process of internalizing the values of nursing practice. Nurse educators play a vital role in developing an online community of learners who appreciate responsibilities for evidence-based, ethical practice.

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