

Instructional Design: More Important Than Ever!

Recently, I attended an EDUCAUSE Learning Initiative conference on teaching practices, technology, and instructional design, which focused on “the systematic and reflective process of translating principles of learning and instruction into plans for instructional materials, activities, information resources, and evaluation” (Smith & Ragan, 2005, p. 4). I was impressed by the extent to which educational researchers and instructional designers were collaborating on curricular development across the United States. During the conference, presenters described their research that examines the relationship between the design of instructional processes and student learning outcomes. Listening to these presentations made me question whether and how nurse educators and nursing education researchers use instructional design principles when planning an educational experience or undertaking an educational investigation. As educators and scientists, should we focus on the disciplinary knowledge and leave the educational design to instructional designers? If we are not using instructional design principles in our classrooms or in our research, has this omission occurred because we have created a significant gap related to educational intervention design in nursing education research?

As educators, we employ aspects of instructional design, although perhaps somewhat unintentionally, in our teaching. We begin with a set of student learning outcomes, use our experience and literature to devise activities to achieve those outcomes, and develop methods for assessing them. However, the consider-

ation of elements of the design related to theory, context, processes, and subprocesses is often lacking. Often, the amount and frequency of instructional activities may also be ignored in the design. Without careful consideration and articulation of these elements, it is difficult to connect the activities we have selected to student outcomes. Doing so limits our ability to systematically replicate and refine the instructional design to improve those outcomes.

Fortunately, examples exist in the nursing literature of the connection between nursing education efforts and instructional design. However, most are related to simulation. Burke (2010) used the ADDIE (Analysis, Design, Development, Implementation, Evaluation) model of instruction design to plan a simulation for a Fundamentals of Nursing course. Robinson and Dearmon (2013) also used the ADDIE model to develop a safety simulation.

An excellent example of the use of design in nursing education is Jeffries' and Rogers' (2012) organizing framework for simulation design. They stated that a lack of such framework “prevents scholars from conducting research in an organized, systemic fashion, and influencing factors become elusive, as does the effectiveness of various parts” (p. 26). The design characteristics of the Jeffries' and Rogers' framework include objectives, fidelity, problem solving, student support, and debriefing. Wilson and Hagler (2012) also evaluated the Jeffries/ National League for Nursing Simulation Framework and found it helpful in developing and implementing clinical simulation. In the previous examples,

the investigators explicitly articulated an instructional design that could be replicated.

Are nurse educators prepared to use instructional design in their teaching and research? Elkind (2008) found that nursing faculty teaching in online courses lacked preparation in instructional design competencies. If instructional design is not part of graduate nursing education, how will nurse educators develop those competencies? Some schools are fortunate to have instructional design teams to support faculty, but many are not so fortunate. The lack of human and financial resources to support nurse educators to become educated about instructional design are significant limiting factors to the use of instructional design in nursing education practices.

The previously mentioned limitations become even more significant when one considers that instructional design involves the identification of an educational problem, the proposed outcomes, and the design of the processes by which the outcomes can be achieved. Because context has a significant effect on processes and outcomes, instructional design must be explicit so that it can be replicated and refined in subsequent testing in different contexts (McKenney & Reeves, 2012). A lack of specificity in instructional design does not allow for replication and iterative empirical testing, which could build evidence to improve efficacy of that intervention. Similarly, if the design itself is not grounded in theory, it contributes little to advance either general education or nursing education theory.

What of nursing education researchers? As nurse researchers are called to

advance the science of nursing education, it is time to take a critical look at where the gaps in research exist. In their pilot study of pedagogical research of 21 American Association of Colleges of Nursing member schools, Broome, Ironside, and McNelis (2012) reported that 90% of the schools indicated that none of their research was experimental in nature. Descriptive, single-site, small-sample studies, although providing support for the need for interventional pedagogical research, do little to build the science in ways that can be applied, replicated, and built upon in nursing education. Nurse researchers who are knowledgeable about instructional design could help address the issues highlighted by Broome et al. (2012). Importantly, empirical testing and refinement of instructional designs in nursing have the potential to advance the science of nursing by generating practical evidence to support nursing education. Meticulous attention to instructional design in the application

and empirical testing of a nursing education intervention may be accomplished by collaborating with instructional designers; however, nurse educators must be the drivers to ensure that it advances the science of nursing education! Are we up to the challenge?

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Anne M. Krouse, PhD, MBA, RN-BC
Associate Provost and Professor of Nursing
Widener University
One University Place
Chester, PA 19013

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