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Featured Article

NLN/Jeffries Simulation Framework State of the Science Project: Participant Construct

Carol F. Durham, EdD, RN, ANEF, FAAN[a,*], Mary L. Cato, EdD, RN[b], Kathie Lasater, EdD, RN, ANEF[c]

[a]*Clinical Professor and Director, Education-Innovation-Simulation Learning Environment, School of Nursing, The University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-7460, USA*
[b]*Assistant Professor, Oregon Health & Science University School of Nursing, Portland, OR 97239, USA*
[c]*Professor, Oregon Health & Science University School of Nursing, Portland, OR 97239, USA*

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Abstract

Background: The initial Jeffries Simulation Framework was developed by Jeffries and Rogers in 2007 to guide the evolving simulation-based education. This framework identified five constructs: *student*, *teacher*, *educational practices*, *simulation design characteristics*, and *outcomes*. In 2011, the International Nursing Association for Clinical Simulation and Learning assembled a panel of simulation experts to review the literature to establish evidence for each of the framework constructs. This report summarizes the findings of the research about the simulation student construct and the rationale for expanding the label from student to participant.

Method: A database was used to collate literature citations and findings to identify who participates in simulation and their associated characteristics. Preliminary findings were presented at the 2012 International Nursing Association for Clinical Simulation and Learning (INACSL) annual conference and feedback from attendees was solicited. The team then summarized the findings and considered the attendee comments.

Results: Findings from the literature suggest that the construct be changed from student to participant. This article used current literature and expertise to expand the original participant descriptors to four elements: *demographics, roles/responsibilities, attributes,* and *values*. The paper further presents characteristics for each element.

Conclusion: It was notable that the participants in simulation were seldom the focus of the literature. Early on, it became evident that there was no consistency about what the participants in the simulation were called or what their roles were. The broadening of the term from student to participant allowed for the inclusion of the range of individuals involved in simulation. Standardization of terminology will provide more consistency, improving descriptions, and reporting of simulation activities in the literature.

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* Corresponding author: carol_durham@unc.edu (C. F. Durham).

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The growth of simulation as a learning activity in health care professions has exploded in the past decade. Research focused on simulation as experiential pedagogy in health care has gone from nonexistent to prolific. Early in nursing education' use of simulation, a framework for approaching simulation as a model for education was developed. The NLN/Jeffries Simulation Framework (NLN/JSF) was an outcome of the first large, multisite nursing study supported by the NLN and Laerdal Medical (Jeffries, 2007). Many subsequent studies have used one, two, or all five constructs of the original framework to guide the expanding body of research. The five constructs included (a) *student*, (b) *teacher*, (c) *educational practices*, (d) *simulation design characteristics*, and (e) *outcomes*.

Key Points

- Supported by the literature, the word *participant* replaces *student* to more accurately reflect who participates in simulation.
- Elements of *roles/responsibilities*, *attributes*, *values*, and *demographics* replace the original *participants* elements of *program*, *level*, and *age*, which are presented in the model.
- Exemplar characteristics delineate descriptors for each element.

In summer of 2011, the International Nursing Association for Clinical Simulation and Learning (INACSL) assembled five international project teams of nursing educators to examine the simulation research literature to uncover evidence that could (a) support the framework's validity as a theory and/or (b) refine the NLN/JSF. At this initial meeting of the team, it was clear that our charge included finding a new name for the construct as student was judged inadequate by those involved in the project. The team presented preliminary findings at the 2012 11th Annual International Nursing Simulation/Learning Resource Centers Conference where nurse educators and practitioners from around the world provided their perspectives and feedback. The purpose of this article was to report the findings of a search for current evidence, including the literature, expert perspectives of the authors, and attendees at the INACSL annual conference, about the student construct.

Concurrent with the growth of research is the recognition of a broader scope of uses for simulation, which translates to a wider range of those engaged in simulation than was initially the case. Hence, the Student Construct Team began the literature search with the recognition that the term student was too narrow and needed to be changed. The NLN/JSF student construct was initially defined by only three descriptors: *program*, *level*, and *age* with no further descriptions. The possibility of a broader term for the construct brought acknowledgment that additional or replacement descriptors would better describe those involved in simulation.

Literature Search Process

Team members investigated the literature using the terms simulation, student, learner, and/or participant. Each team member consulted a librarian and used multiple databases, including CINAHL, ERIC, PsychINFO, and Medline. Research articles were the primary focus, but systematic reviews and other nonresearch articles, such as expert opinions, were also included.

Complex issues arose from the comprehensive search. For example, the simulation literature was not necessarily focused on nursing or health care simulation but included literature from other types of simulation, such as aviation. The nursing and health care literature used multiple terms for simulation, including human patient simulation, high-fidelity simulation, nursing simulation, and health care simulation (Gore, Hunt, Parker, & Raines, 2010; Leigh, 2008; Smith-Stoner, 2009; Zavertnik, Huff, & Munro 2010). For example, the National Council of State Boards of Nursing offers the following definitions for prelicensure nursing programs:

1. High-fidelity simulation
   Patient care scenario that uses a standardized patient or a full-body patient simulator that can be programmed to respond to affective and psychomotor changes, such as breathing chest action. Examples of high-fidelity manikins include SimMan®, METIman, and Noelle® with Newborn Hal®.
2. Medium-fidelity simulation
   Patient care scenario that uses a full-body simulator with installed human qualities such as breath sounds without chest rise. An example of a medium-fidelity manikin is VitalSim™.
3. Task trainers
   Part of a manikin designed for a specific psychomotor skill, for example, an arm for IV insertion practice (Hayden, 2010, p. 53).

Literature, including standardized patients or actors as well as manikins and task trainers, was examined. In searching the literature, it was apparent that researchers were doing relevant simulation research with not only undergraduate nursing students but also graduate students, practicing nurses, interprofessional teams, and other nonnursing practitioners (Bambini, Washburn, & Perkins, 2009; Blum, Borglund, & Parcells, 2010; Chappy, Jambunatian, & Marnock, 2010; Fountain & Alfred, 2009; Parsh, 2010). Because we were searching for a new construct label to define who was involved in simulation, we determined that an integrative review (Whittemore & Knafl, 2005) was