More Work Needed! Analysis of Fuzzy Concepts in Simulation-Based Learning

When attending conferences or while conducting simulations, how many times have educators heard comments such as, “Simulation is a safe learning environment,” “What happens in sim stays in sim,” or “Cue the student.” Each comment reflects an aspect or phase in simulation-based learning. That said, how educators interpret these statements varies. For example, when considering the concept of a safe learning environment, one could ask for whom is it safe—the student, the patient, or both? If one educator believes that “safe” pertains to preserving the student’s psychological safety, what actions does he or she take while conducting the simulation or the approach used in the debriefing session? Would the educator’s concern about not harming the student’s psychological safety supersede probing about errors in judgment? Conversely, if an educator believes “safe” pertains to not harming a real person, would he or she allow the student to make the error and then address it in the debrief? How many educators have pondered whether to let students make potentially life-threatening decisions or stop the simulation to correct the error in process? Does the educator’s interpretation of what comprises a safe learning environment influence the choice to stop or continue with the simulation?

Furthermore, the reoccurring comment heard at simulation conferences, “what happens in sim stays in sim,” might reflect another aspect of the safe learning environment concept. Yet, what meaning is conveyed by this statement? Some educators may consider that the phrase pertains to the need for students to maintain the confidentiality of the scenario. Other educators may think this phrase pertains to maintaining confidentially of students’ performance. Further work to clarify the underlying assumptions behind this colloquial phase is needed. This clarification is even more important, given the 2015 National Council of State Boards on Nursing guidelines that call for an established method to share student performance in simulation activities with clinical faculty (Alexander et al., 2015). Although the concept of a safe learning environment is discussed in the literature (Ganley & Linnard-Palmer, 2012; Rudolph, Raemer, & Simon, 2014), aspects of what comprises a safe learning environment and the meaning educators associate with the concept vary.

Similarly, other concepts that educators use daily when planning and conducting simulation activities can be challenged. For example, creeping into educators’ language are terms such as fidelity, cueing, fiction contract, prebrief, and debriefing. Such terms, some of which have origins in other disciplines (e.g., military, aviation), may assume a slight variation in meaning when applied in simulation-based learning. Although efforts to clarify concepts such as debriefing (Dreifuerst, 2009) and prebriefing (Chamberlain, 2015; Page-Cutrara, 2015) have occurred, conceptual definitions in the context of simulation-based learning remain underdeveloped. This underdevelopment is not surprising, given curricular integration of simulation across health care professions has occurred at a faster pace than the ability to develop and establish conceptual clarity of concepts used in simulation. While applauding the efforts of all who have contributed to the development of knowledge and skill in the use of simulation, what must be championed are efforts to develop conceptual clarity, including borrowed concepts from other disciplines within the context of simulation-based learning.

The Problem With Fuzzy Concepts

As educators gain knowledge and skill in the use of simulation-based learning, concepts that initially appear clear become fuzzier as conversations and activities probe deeper behind the essence of their meaning. Herein lies the problem. If the meaning associated with a concept varies among educators within and across professions, misunderstanding of another’s actions when facilitating a simulation or providing feedback to students may occur. Educators operationalize simulation-based learning activities based on their interpretation of the language used in simulation-based learning, such as fidelity, cueing, and facilitation. Without a common understanding of these terms, the ability to deliver the same learning experience across similar groups of students can be problematic. Furthermore, as simulations are used for summative and high-stakes testing, the need for conceptual clarity of terms such as cueing and facilitation becomes critical. Not having this conceptual clarity limits the ability to measure outcomes of simulation. In addition, because simulation frequently involves interprofessional partners, conceptual clarity in language across professions is essential to design,
conduct, and evaluate interprofessional educational (IPE) opportunities.

More Work Needed!

Clarification of concepts benefits from the multiple efforts involving different strategies and methods to conduct analysis, clarification, and development of concepts (Rodgers & Knafl, 2000). The literature on simulation-based learning contains an abundance of review articles, as well as empirical studies, yet what remains lacking are efforts that analyze and advance the development of the concepts used in simulation-based learning. Considering this, the following concepts require further clarification.

Cueing

What does cueing look like? How and when should cueing happen? How does a simulation facilitator react and cue based on unexpected student actions? Are cues similar to prompts and triggers as two related terms seen in the literature? What are the necessary skills needed by a facilitator to deliver strategically placed cues?

Psychological Safety

This concept, in particular, has been discussed in the literature (Rudolph et al., 2014). However, is psychological safety similar to or different from other related concepts, such as academic safety, safe learning environment, or environment of trust? How does the idea of psychological safety vary when simulations are conducted for summative or high-stakes testing? How is the concept of psychological safety in simulation-based learning activities different from other educational, classroom, or clinical settings?

Facilitation

The literature speaks to the importance of facilitation during debriefing (Rudolph et al., 2014). Yet, facilitation skills are also important across the simulation experience—prior to, during, and beyond the simulation activity. What does this look like? What are the critical attributes of facilitation during a simulation? Are there aspects of facilitation that occur during simulations that differ from facilitation of other educational activities? While facilitating simulations, do educators face a different set of student questions? For example, following simulation activities, students have been known to state, “I would have acted differently if this was a real patient.” “I get more nervous when I know I am being watched,” or “I was not sure if you really wanted me to give that medication.” Again, is facilitation more than or does it differ from facilitation used in other educational settings?

Who Will Do This Work?

For conceptual definitions to be useful for educators, practitioners, and researchers, definitions that are “precise, understandable to others, and appropriate for the context in which the term will be used” need to develop from a series of long and intense activities” (Waltz, Strickland, & Lenz, 2010, p. 34). These activities involve the development of preliminary definitions and a review of the literature for current knowledge of the concept, followed by mapping out the concept’s meaning. So, who has the preparation to do this type of work?

Efforts from those with various educational preparation and professions are needed. Certainly, conceptual analysis is a common scholarly activity of Doctor of Philosophy (PhD)-prepared educators or those pursuing PhD degrees. In addition, given the importance of grounding the design and delivery of simulation activities in learning theory, the inclusion of scholars in educational psychology and instructional design are important. Many concepts requiring development contain attributes derived from learning and educational principles. Moreover, collaborative efforts within and across professions are essential to develop conceptual definitions that would be useful, comprehensive, and suitable to simulation activities used by interprofessional teams. Imagine the opportunity and collegiality to work with scholars from other health care professions, whether in medicine, pharmacy, or allied health, to analyze, clarify, and develop conceptual understanding of the terms used in simulation-based learning. Across-professions analysis of concepts will likely reveal new insights and yield conceptual definitions that are understood and conceptually clear across professions. When using IPE, learning about, from, and with each other is not only for students but also for IPE educators and scholars.

All those involved in simulation-based learning are challenged to tackle this type of scholarly work. When undertaking analysis of concepts in simulation-based learning, those doing so need to be persistent, intentional, and open to ideas of others and seek out and collaborate with educators and scholars outside of one’s profession. Concepts that originated elsewhere need to be re-analyzed within the context of the simulation-based learning used to educate health care professionals. The simulation world awaits the efforts of all to clarify the fuzzy concepts that persist in simulation-based learning.

References


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