

vSim for Nursing Curriculum Integration Guide for Faculty

Developed by the National League for Nursing



Addendum: Fundamentals



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■ Introduction

This addendum provides strategies for use of the vSim Fundamentals product in nursing programs. It provides faculty with ideas to integrate vSim Fundamentals into existing curricula and offers ways to develop and/or enhance current teaching strategies. The addendum is based on data collected from faculty who were early adopters or trialers of the vSim Fundamentals scenarios during Fall 2015 and submitted feedback to the National League for Nursing. Faculty included those providing instruction in classroom, clinical, lab, and simulation settings. Before integrating vSim Fundamentals into the curriculum, it is important for faculty to review the primary vSim Curriculum Integration Guide for specific information on practical preparation for use of vSim and vSim pedagogical considerations.

■ vSim Pedagogical Considerations

Formative Assessment

vSim provides an opportunity for faculty to engage students contextually through the use of story. The problems encountered in these patient stories focus the student on achieving goals as those goals relate to an evolving patient context. Used as a means of formative assessment, the stories focus the participant's progress toward goal attainment and provide constructive feedback for improving performance (Bourke & Ihrke, 2012; INACSL, 2013; Prion, 2016).

Faculty in the Fundamentals pilot utilized vSim as a formative assessment in the following ways:

- As a means for faculty to understand student learning in the classroom. Use of vSim Fundamentals during class enhanced student interaction by bringing "context" into a classroom with beginning nursing students who are more acontextual early on in their coursework.
- As a benchmark for students to work toward. Among the pilot schools that instructed students to meet a target percentage score on the vSim Fundamentals scenarios, most specified a target percentage of 80%. Similar to the Medical-Surgical vSim scenarios, slightly more than half of students were likely to repeat the scenarios until achieving slightly higher scores (most frequently 85% or higher).
- As a dose-response measure (i.e., repeating vSim attempts to enhance a student's level of content knowledge or reasoning and decision making). Students get concrete feedback on their thinking in action through the feedback log, which provides specific rationales for the order of decision making as well as inclusion and/or omission of activities in error. Fundamentals faculty users reported this feature as extremely valuable for novice learners because important nursing concepts are introduced. Students begin using the content knowledge immediately, within context.
- As a way to direct student remediation. The feedback log provides students with textbook references to direct and focus their remediation activities. (For those who have the corresponding Wolters Kluwer CoursePoint+ product, these references are linked to the corresponding material in the ebook.)

Figure 1 summarizes the evaluation of the vSim scoring features by Fundamentals faculty who participated in the pilot study.

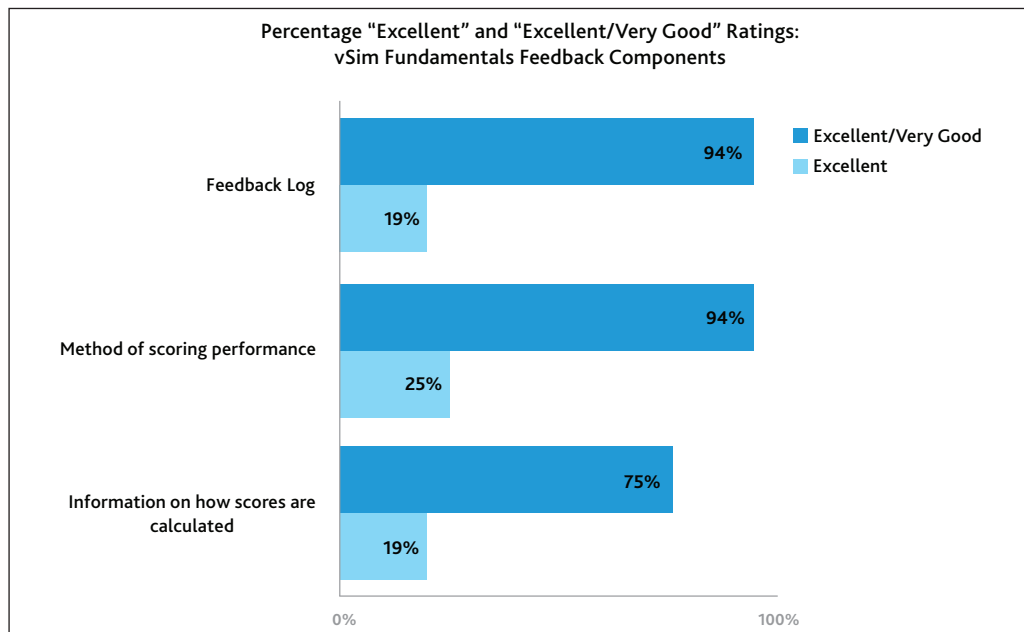


FIGURE 1

Teaching Strategies Specific to Fundamentals Nursing

Faculty involved in the Fundamentals pilot viewed vSim as offering more value and utility than other teaching methods (e.g., case studies on paper, care plans). Students readily embraced the vSim activity, providing an opportunity for faculty to focus their teaching efforts in other ways (e.g., engaging students to use the content vs. lecturing to provide the content). A variety of strategies may be used to integrate vSim into curricula.

Utility as a Teaching Tool

vSim enables students to build and test their knowledge before virtual simulation through reading assignments and pre-simulation quizzes. Engaging in the virtual simulation scenario, students integrate new knowledge as they care for the patient. Prioritization and decision-making are central to the vSim design. Faculty adopting the vSim Fundamentals product found that the cases provided a strong scaffolding component, enabling students to begin with the foundational concepts such as safety or infection control and asepsis and to build on that knowledge by moving to more complex concepts such as oxygenation or managing fluid and electrolytes. Faculty in the pilot recommended using a thoughtful approach to integrating vSim Fundamentals into their beginning nursing courses by matching the vSim Fundamentals concepts and learning outcomes to the course learning outcomes. As shown

in Figure 2, the rate of usage of individual scenarios ranged from 72% for the most popular scenario—oxygenation (Mona Hernandez)—to just below 40% for scenarios on pain management (Sara Lin) and fluids and electrolytes (Rashid Ahmed).

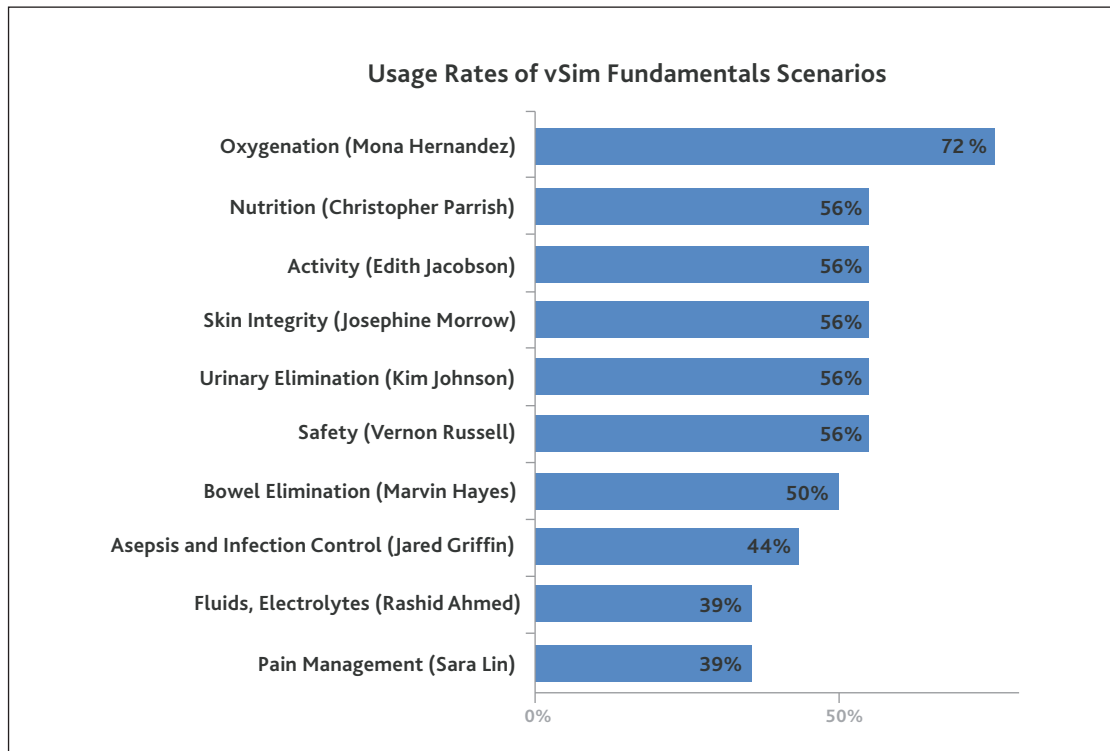


FIGURE 2

Learning Objectives

When vSim Fundamentals users were asked to identify their primary learning objective for each scenario, three out of four cited “improving clinical reasoning and ability to prioritize.” However, for two of the scenarios—fluids and electrolytes (Rashid Ahmed) and pain management (Sara Lin)—the primary learning objective of deepening understanding of specific concepts was equally as important. Fluid balance and pain management are complex concepts for vSim Fundamentals users, which may explain their emphasis on this learning objective. Experiencing the same patient encounter through different technologies (i.e., vSim and Full-scale manikin simulation) also helped to reinforce theoretical content knowledge and gradually build confidence and competence. Finally, post-simulation quizzes, guided reflection questions, and documentation assignments complete the learning experience.

Figure 3 summarizes how the faculty in the pilot rated the primary learning objectives for utilization of the vSim Fundamentals scenarios.

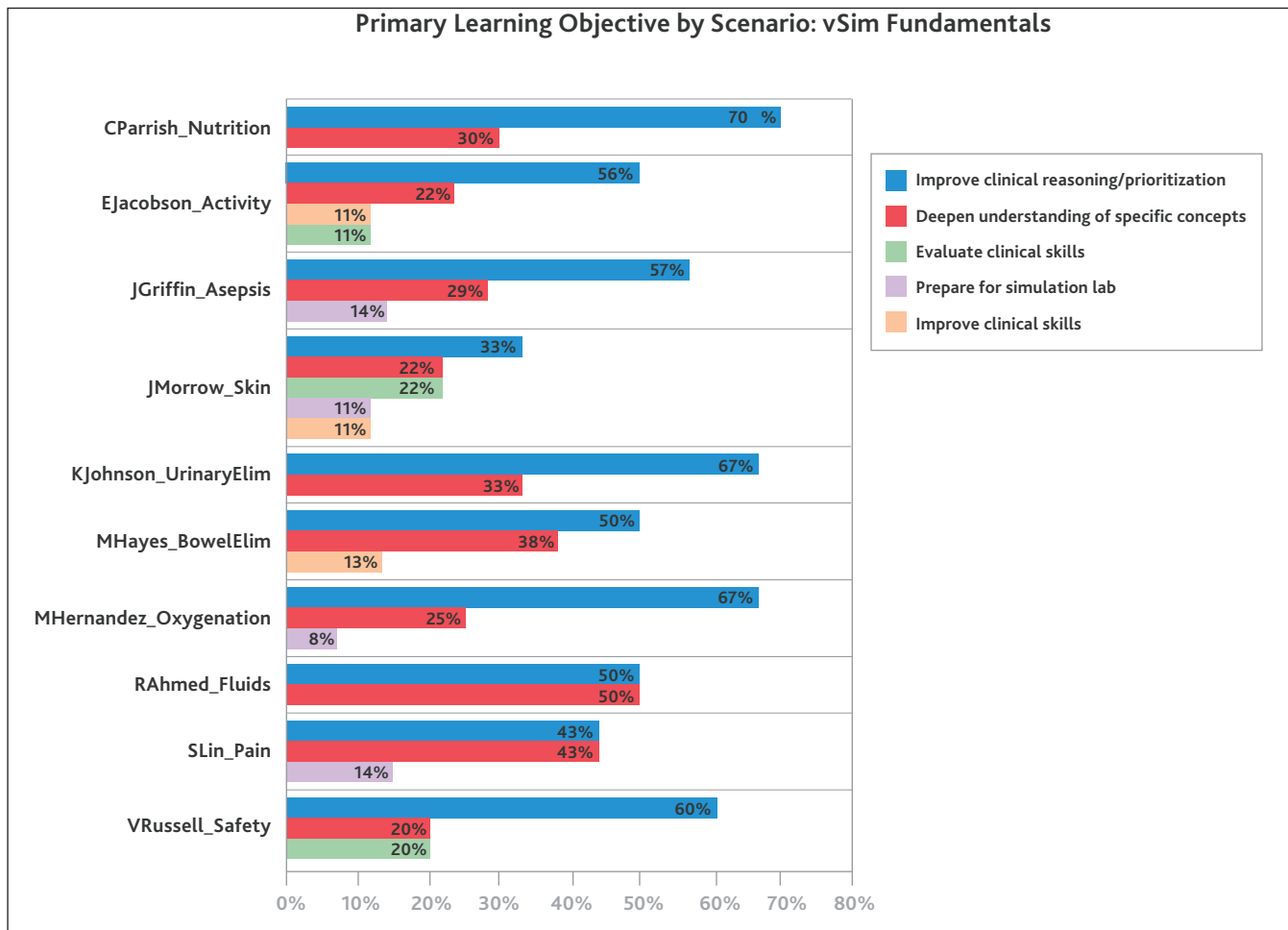


FIGURE 3

Challenging student thinking and learning is an important component with active learning teaching strategies. Faculty using vSim Fundamentals rated the challenge level of the scenarios with respect to a number of skill requirements. In terms of clinical reasoning, the vast majority of vSim Fundamentals users reported that the challenge level was “about right” for beginning and intermediate Fundamentals students. See Figure 4.

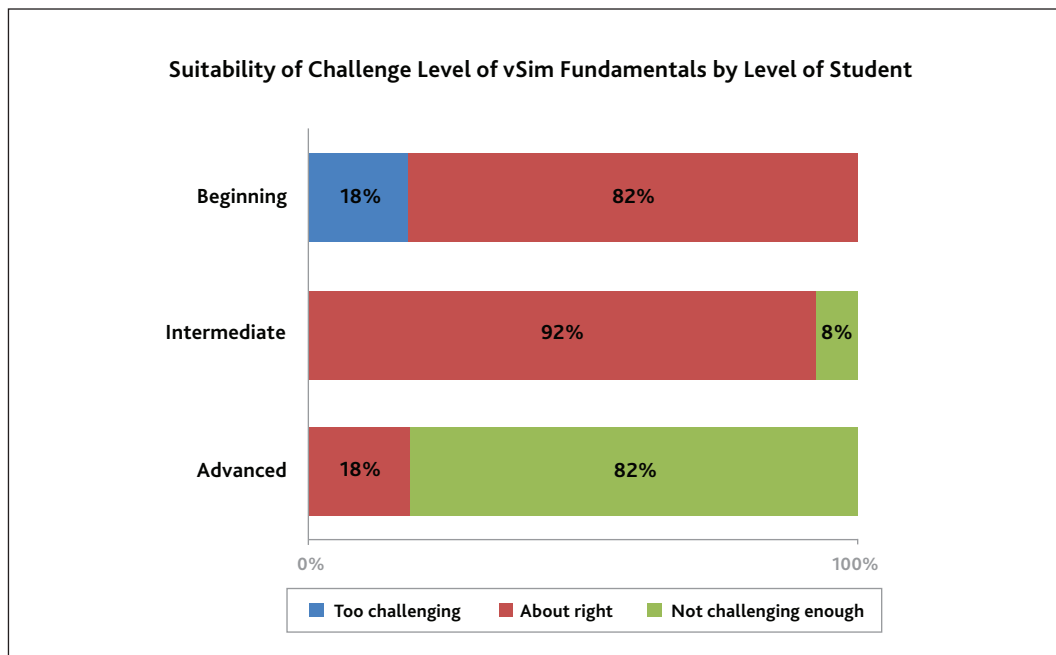


FIGURE 4

Curriculum Approaches

The use of simulation in the classroom continues to grow as an effective interactive teaching strategy, engaging students in learning through the use of doing (Skiba, Connors, & Jeffries, 2008). Using vSim as a classroom approach to demonstrate thinking in action provides an opportunity for immediate feedback. This helps to strengthen student thinking to enhance course learning outcomes. vSim Fundamentals provides context for the novice learner who is new and acontextual. Faculty reported the use of vSim Fundamentals as a needed enhancement to both introduce foundational nursing concepts and also to illustrate how the skill component “fits in” relative to a concept being studied—a comprehensive and contextual approach in bringing the whole of foundations together for the novice learner. All participants using vSim Fundamentals scenarios assigned the scenarios as a make-up activity, and a number of users were able to incorporate the simulations in the class and lab activities. Faculty involved in the pilot focus groups reported that individual scenarios were used as homework in preparation for class and lab. Figure 5 illustrates the primary uses of the vSim Fundamentals scenarios.

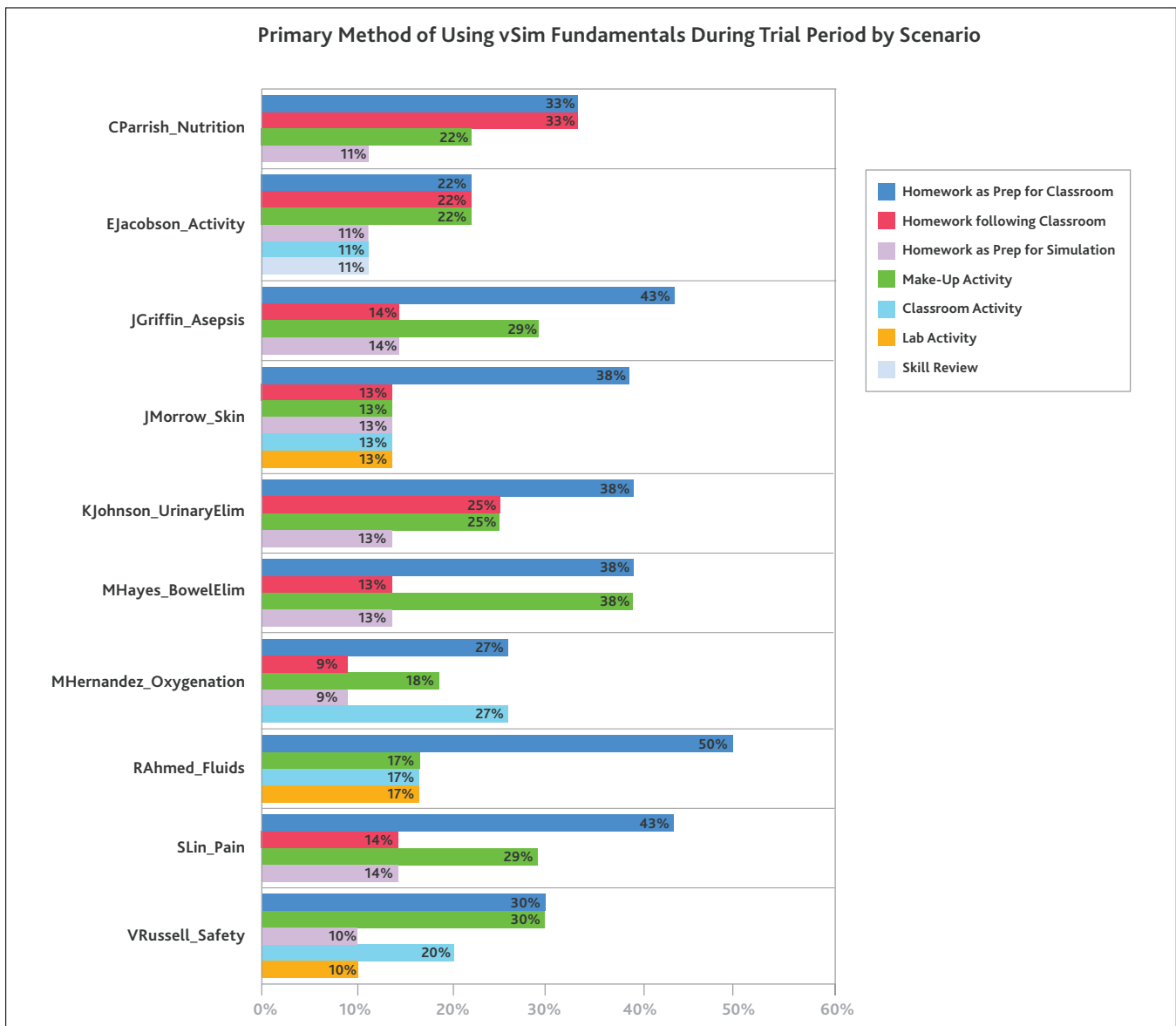


FIGURE 5

Flipping the Classroom

vSim is used to facilitate an active classroom approach to engage a dialogue with students on content knowledge using an interactive patient story that unfolds within context. vSim Fundamentals instructors reported that novice learners are inquisitive and hungry for knowledge. vSim Fundamentals provides the opportunity to use knowledge in the context of learning.

EXAMPLE: Examine the principles of safety in the management of care of a new stroke patient (Vernon Russell) or the importance of safety and infection control relative to postoperative care for a knee replacement and contact precautions (Jared Griffin).

Small Group Conversations

Faculty reported that use of vSim in the classroom through small group conversations was an instrumental approach to enable a robust dialogue. vSim can be completed as small group activities in the classroom with faculty role modeling their thinking in dialogue with students on fundamentals concepts and rationales for action. A group setting can also provide an opportunity for students to think cooperatively through a situation and help them assess both the what and the why surrounding patient care decisions. Learning is incorporated through the variations in thinking and decision making, and corresponding correct rationale.

EXAMPLE: Assign students the Mona Hernandez scenario in preparation for a class on oxygenation fundamentals or the Kim Johnson scenario in preparation for a discussion of urinary elimination fundamentals. Students bring their feedback log as a ticket to class, using the logs in small groups to discuss outcomes and variations in prioritization and decision making, and associated rationale.

Post-Clinical Learning

Clinical faculty structured post-clinical conversation around a vSim concept to emphasize a patient care theme and relate this to patient care issues students encountered in the clinical setting.

EXAMPLE: For early clinical rotations, assign students the vSim on skin integrity (Josephine Morrow). Use the feedback log during a post-clinical conversation to compare and contrast skin integrity and wound care issues of patients on the clinical unit using their vSim feedback logs, including associated correct rationale and links to latest evidence. As clinical skills progress, assign students Christopher Parrish focused on nutrition to compare and contrast nutrition of actual patients across the care continuum and fundamental skill techniques with feeding tubes. The associated guided reflection questions can be used to uncover student content knowledge and rationale for action.

Small Group Concept Mapping

Concept mapping for concept-based curricula can target important Fundamentals concepts, such as fluid and electrolyte imbalances (Rashid Ahmed) or pain management (Sara Lin). These conversations can be structured to emphasize important care issues highlighted through the use of an active concept map. vSim provides context that can bring the concept map to life. vSim Fundamentals scenarios are concept based to address both the clinical knowledge and technical skill thinking and reasoning.

■ Effectiveness of vSim Compared to Other Teaching Methods

Figure 6 illustrates vSim Fundamentals users' views on the overall effectiveness of vSim when compared to other teaching methods. Faculty in the pilot reported that it was essential to bring the scenarios into the classroom and begin to demonstrate how to use different approaches to enhance thinking and learning. The more they were able to demonstrate effective use of the vSim in the classroom, the more readily the students used the vSim resources outside of the classroom. Substantial majorities of users found the Fundamentals scenarios to be as effective as training manikins, standardized patients, and simulation labs.

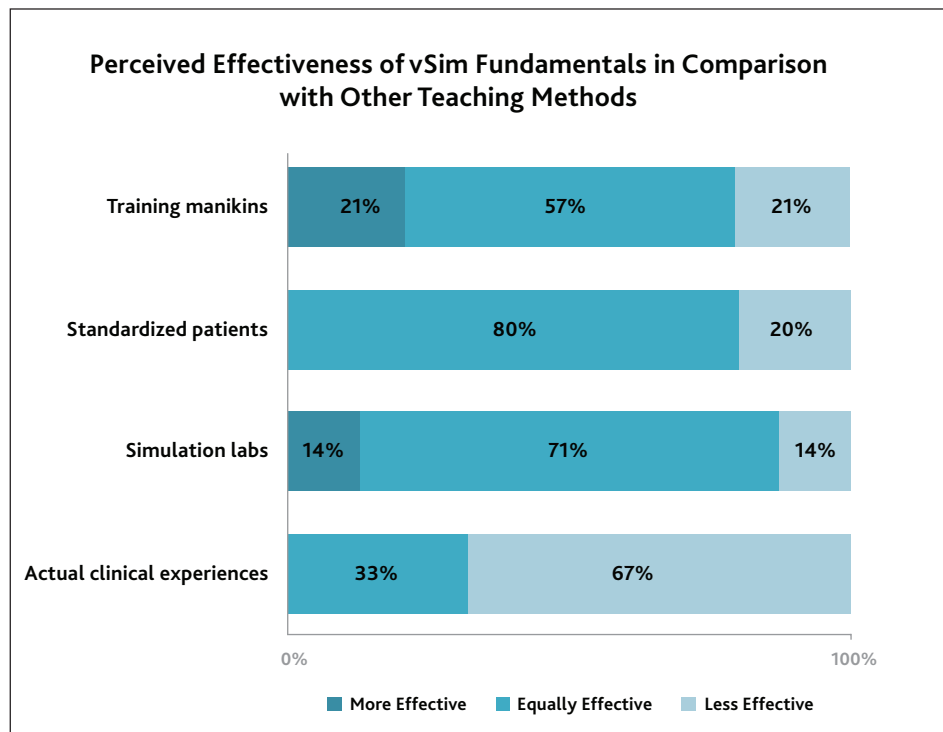


FIGURE 6

Resources and References to Support Simulation

Resources

- vSim Instructor Resources—Take advantage of the materials available for faculty on the vSim product page on thePoint, including a Professional Competency Map, Scenario Overviews, and Debriefing Guides (see Instructor’s User Guide).
- Wolters Kluwer Customer Success Training
- NLN Simulation Innovation Resource Center (SIRC), <http://sirc.nln.org/>
 - SIRC Courses
 - Teaching and Learning Strategies
<http://sirc.nln.org/mod/resource/view.php?id=96>
 - Curriculum Integration
<http://sirc.nln.org/mod/resource/view.php?id=98>
 - Debriefing and Guided Reflection
<http://sirc.nln.org/mod/resource/view.php?id=97>

- Evaluating Simulations

- <http://sirc.nln.org/mod/resource/view.php?id=99>

- SIRC Annotated Bibliography –Simulation literature

- <http://sirc.nln.org/mod/data/view.php?id=711>

References and Further Reading

- Billings, D.M. and Halstead, J.A. (2012). *Teaching in Nursing: A Guide for Faculty*. 4th Edition. St. Louis, MO: Elsevier Saunders.
- Bourke, M.P. and Ihrke, B.A. (2012). The evaluation process: An overview. In D. Billings, J. Halstead (Eds.), *Teaching in Nursing: A Guide for Faculty*. 4th Edition. St. Louis, MO: pp. 422-440.
- Forneris, S. G. and Peden-McAline, C.E. (2006). Contextual learning: A reflective learning intervention for nursing education. *International Journal of Nursing Education Scholarship*, 3(1, Article 17), 1-18.
- International Nursing Association for Clinical Simulation and Learning. (2013). *Standards of Best Practice: Simulation*. Retrieved from <http://www.inacsl.org/files/journal/Complete%202013%20Standards.pdf>.
- Jeffries, P.R. (Ed.). (2013). *Clinical Simulations in Nursing Education: Advanced Concepts, Trends, and Opportunities*. Washington, DC: National League for Nursing.
- Jeffries, P.R. (Ed.). (2012). *Simulation in Nursing Education: From Conceptualization to Evaluation. 2nd Edition*. Washington, DC: National League for Nursing.
- McGaghie, W., Issenberg, S.B., Cohen, E. R., Barsuk, J.H., Wayne, D. B. (2011). Does simulation-based medical education with deliberate practice yield better results than traditional clinical education? A meta-analytic comparative review of the evidence. *Academic Medicine*, June: 86(6): 706-711. doi:10.1097/ACM.0b013e318217e119.
- Prion, S. (2016). *Evaluating Simulations*. Simulation Innovation Resource Center, National League for Nursing. Retrieved from: <http://sirc.nln.org/mod/page/view.php?id=842>.
- Skiba, D., Connors, H., Jeffries, P. (2008). Information technologies and the transformation of nursing education. *Nursing Outlook*, 56:225-230.