The Nurse Educators' Guide to Simulation-Based Education

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MARYLAND CLINICAL SIMULATION RESOURCE CONSORTIUM

Contents

The need to transform nursing education with innovative teaching strategies is a call that nurse educators can no longer ignore. Simulation education is viewed by many nursing leaders, both in education and practice, as the Trojan Horse that will break barriers of long held traditions in nursing education. This resource is a guide for nurses, as they journey through the world of simulation education.

1. Curriculum Integration of Simulations

Curriculum Integration of Simulations *by Raquel Bertiz, PhD, RN, CNE, CHSE*

This chapter is written for nurse educators in academic and practice settings with prior knowledge of the basic foundations of simulation-based education (SBE) -a necessary foundation to a full comprehension of steps to curricular integration of simulations.

Learning Objectives

Upon completion of this learning module, the learner will:

- Discuss the elements of systematic/purposeful integration of simulations in curriculum
- Analyze enhancers/barriers to successful integration of simulations in curriculum
- Create a plan for systematic integration of simulations in nursing curriculum

Introduction:

Simulation is an integral component of nursing education because it allows for a safe, timely, and prescriptive

approach to meet learning objectives at the levels of simulations, courses and academic programs (Franklin & Blodgett, 2021). There is currently an extensive amount of literature supporting the ability of simulations to provide rich learning experiences, especially clinical situations that they might not have had access to as students/learners. However, isolated simulation encounters that are not carefully integrated into an organized curriculum can result in ineffective and inefficient use of time for both educators and learners (Franklin & Blodgett, 2021, quoting Herrington &Schneiderith, 2017; Howard et al, 2019; Thomas et al, 2016). It is, therefore, imperative that nurse educators and simulationists exert efforts to ensure the systematic integration of simulations in curricula in academic, and even in practice settings. Simulation-based education is a costly educational modality, and the maximum benefits can be achieved, when simulations are well integrated in the curriculum to meet not just individual simulation objectives, but course and program objectives as well (Masters, 2014) Like any novel undertaking in educational programs, a curricular integration framework must be used, and a curricular plan made available for implementation and evaluation. This learning module unfolds to discuss the concept of curricular integration, theoretical and empirical bases for simulation-based education in nursing curriculum, and essential steps/elements of curricular integration. Exercises to check knowledge and apply learned concepts are included along with video resources to further highlight concepts of curricular simulation integration.

Knowledge Check:

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I. Integration of Simulations in Nursing Curricula

Curriculum simulation integration, among other definitions, is the coordinated and purposeful use of simulation-based learning methods to meet predetermined learning goals within an approved curriculum (Franklin $ Blodgett, 2021). Simulations are incorporated in each course/level to promote psychomotor, cognitive and affective domains of learning (Schram & Aschenbenner, 2014). Simulations are used in different settings in nursing education, from simulated clinical situations to replace part (or all) of clinical experiences that traditionally happen in real patient care situations, to simulations used to illustrate clinical experiences in the classroom. The National League of Nursing Vision Series (2015) articulates the vision of using simulations across the curriculum: simulation pedagogy transcends the simulation laboratory and viewed as an innovative way, a break from the long held nursing education traditions.

Curriculum and Simulation: Are they related?

II: Theoretical and Empirical Support for Simulation-Based Education in Nursing

Empirical Bases

Systematic curricular integration of simulations in the curriculum enhances teaching and learning needs of faculty, as exemplified by one recent study in a nursing program (Aul, K., Bagnall, L., Bumbach, M. D., Gannon, J., Shipman, S., McDaniel, A., & Keenan, G. ,2021). This is not an isolated study. The National Council of State Boards of Nursing (NCSBN) National Simulation Study generated support of simulations replacing 25%-50% of traditional clinical experiences (Hayden et al, 2014). Unlike traditional clinical education, empirical support of the use of simulations in clinical education had advanced and had been used to support standards of best healthcare simulations (INACSL, 201) and guidelines for using simulations in nursing education (NCSBN, 2016). The NLN (2015) advocates for debriefing across the curriculum. NCSBN (2016) Simulation Guidelines for prelicensure nursing programs cite several systematic reviews and the National Simulation Study to support the use of simulations in nursing curriculum:

- Lapkin, Levett-Jones, Bellchambers, & Fernandez (2010) conducted a systematic review of 8 studies that met their inclusion criteria. *They found that simulation improved the critical thinking, performance of skills, knowledge of the subject matter and an increase in clinical reasoning in certain areas.* Two integrative reviews of undergraduate nursing's use of simulation focused on patient safety.
- Berndt (2014) reviewed seventeen studies, including 3

systematic reviews. *Their findings support the use of simulation as an educational intervention to teach patient safety in nursing, particularly when other clinical experiences aren't available.*

- Fisher & King (2013) conducted an integrative review related to patient safety in that they examined eighteen studies preparing students, through simulation, to respond to deteriorating patients. They found that, in general, *confidence, clinical judgment, knowledge and competence increased through the use of simulation.*
- The largest and most comprehensive study to date examining student outcomes when simulation was substituted for up to and including 50% simulation was NCSBN's National Simulation Study (Hayden, Smiley, Alexander, Kardong-Edgren & Jeffries, 2014). This longitudinal, randomized, controlled study replaced clinical hours with simulation in prelicensure nursing education. In ten nursing programs from across the country (5 BSN and 5 ADN), students were followed through all the clinical courses in their nursing programs as well as through their first six months of practice. The study provides evidence that when substituting clinical experiences with up to 50% simulation, there were no statistically significant differences between the groups using 10% or less of simulation (control), 25% simulation or 50% simulation with regard to knowledge acquisition and clinical performance. *In conclusion, the literature provides evidence that simulation is a pedagogy that may be integrated across the prelicensure curriculum, provided that faculty are adequately trained, committed and in sufficient numbers; when there is a dedicated simulation lab which has appropriate resources; when the vignettes are realistically and appropriately designed; and when debriefing is based on a theoretical model.*

Simulation research had advanced to what it is today, establishing its relevance and necessity in nursing education. (See References).

It is important for nurse educators, as they attempt to integrate simulations in the nursing curriculum to be cognizant of current empirical evidences and guidelines for using simulations in nursing education.

Theoretical Bases

The theoretical bases of simulation are sound learning theories, and are frequently used in simulation education and research:

1. Kolb's Experiential Learning Theory:

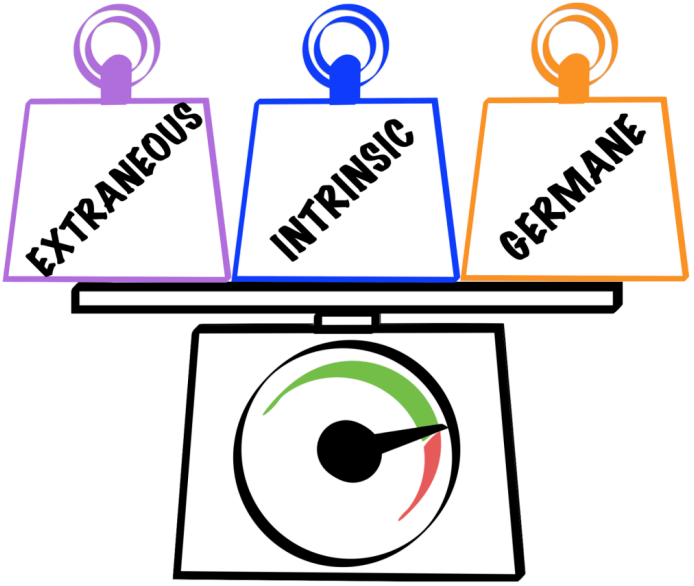
Kolb describes a cognitive learning process where individuals have concrete experiences, followed by reflection, generation of abstract conceptualizations and application of new knowledge to

future practice(Franklin & Blodgett, 2021, citing Kolb, 1984) (See image above). Kolb's theory resonates with modern nursing simulation : active participation in a simulation experience (concrete experience), followed by reflective observation and abstract conceptualization occur in debriefing of simulations. The cycle is completed through learners active experimentation of learned practice, in another simulation or in actual patient care.

Reflection Question

How can nurse educators use Kolb's Experiential Learning Theory in planning for real and simulated students' clinical learning experiences?

2. Cognitive Load Theory



Cognitive Load Theory in a nutshell:

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The application of Cognitive Load Theory is discussed in the following video. Cognitive load theory underpins simulation scenario design.

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Key Takeaways

As nurse educators, how do we take into account intrinsic load, germane load and extraneous load of our learners in the design and facilitation of simulations? What are the implications in curricular integration?

- What are your prebriefing plans?
- How simple or complex are the simulations in each course? Are they appropriate for the learner's level in the program?
- Reflect on other ways use this frame (Cognitive Load Theory) in your curriculum.

3. NLN Jeffries Simulation Theory

The following are notable points of the theory based on NLN Jeffries Simulation Theory: Brief Narrative Description (Jeffries, Rodgers & Adamson, 2015).

- Context refers to contextual factors that needs to be taken into consideration when designing and evaluating simulations such as setting, overarching purpose of simulation.
- Background refers to the theoretical perspective for the specific simulation experience and how the simulation fits into the larger curriculum.
- Design includes specific learning objectives that guide the development or selection of activities and scenarios with appropriate content and problem-solving complexity (physical and conceptual fidelity, roles, scenario progression, prebriefing and debriefing strategies)
- Simulation Experience is characterized by an environment that is experiential, collaborative and learner-centered (psychological safety, suspension of disbelief)
- Facilitator and Educational Strategies in the context of the simulation experience is a dynamic interaction between facilitator and participant. Some of the important facilitator attributes include skill, educational techniques and preparation. Example: "*The facilitator responds to emerging participant needs during the simulation experience by adjusting educational strategies such as altering the planned progression and timing of activities and providing appropriate feedback in the form of cues (during) and debriefing (toward the end) of the simulation experience.*"
- Participant innate attributes include afe, gender, level of anxiety and self-confidence whereas preparedness for simulation is modifiable.
- Outcomes: a) Participant outcomes include reaction, learning, behavior; b) Patient and c) System

Key Takeaways

In planning for Curriculum Integration:

- Our plans to integrate simulations in existing simulation must be based in sound educational theories
- The planning, design, implementation and evaluation of simulations must be planned in curricular integration using the NLN/Jeffries Simulation Theory.

III. Curriculum Integration Framework

This video provides an outline of curriculum integration and important concepts will be highlighted in the text below: (GWU School of Nursing open educational resource)

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A. Needs Assessment

(Kern's Steps 1 and 2)

Understanding the following required elements is necessary to determine the need to integrate simulations in the curriculum:

- Underlying cause of concern
- Organizational analysis

- Stakeholders' survey
- Program outcome data
- Self-study comparing current practices to INACSL standards of healthcare simulations
- Accreditation reports
- Standardized test results
- Didactic Examinations
- Feedback from clinical partners
- QSEN competencies
- Learners Needs and learning style preferences

Highlighting the need for Interprofessional Education (IPE) and Simulation Enhanced IPE (SIM-IPE)

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Key Takeaways

A statement indicating the desired state, compared to current state, supported by objective data and standards of best practice, is needed to propose a curricular integration of simulations in the curriculum.

B. Goals and Objectives- Curricular mapping

(Kern's step 3)

The learning goals and objectives of simulations must be linked to content, courses and the overarching program outcomes. A curricular map will allow faculty to scaffold simulation experiences and build and content and complexity from previous courses. Scaffolding allows learners to demonstrate knowledge, skills and attitudes, add new knowledge and apply new material. Scaffolding promotes learning efficiency (Franklin & Blodgett, 2021). Curricular mapping requires input from faculty across the curriculum along with simulation faculty. Simulations objectives must be specific, measurable, achievable realistic and time bound (SMART), and must be linked to unit objectives, course objectives and end of program student learning outcomes.

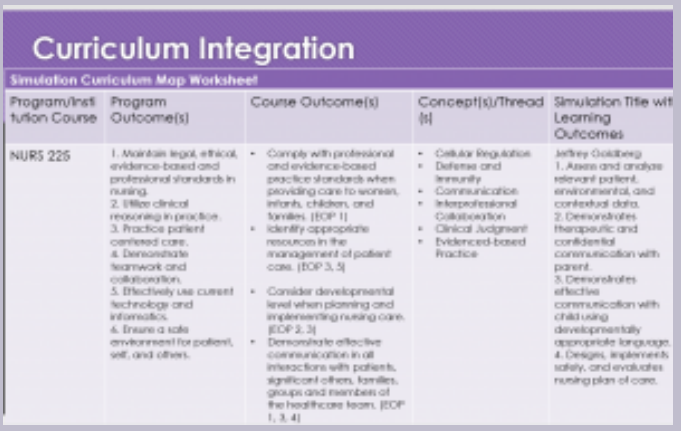
- Determine how content can be thoughtfully linked to context
- Lay out a curricular map to explore areas needing improvement
- Match simulation to didactic content for each course

Curricular alignment is a linear configuration between program outcomes, course outcomes, and simulation outcomes. If program outcomes drive course outcomes, then course outcomes should drive simulation outcomes. If we design simulations that adhere to the Standards, then *all* simulations should clearly map back to program outcomes. Simulations are no longer run to compensate

for clinical time or replace hours lost to other activities, but instead are designed to address specific course outcomes(Schneidereith & Beroz, 2017)

Examples

This is an example of a Curriculum Map Worksheet: MCSRC Simulation Curriculum Map Worksheet



Curriculum Integration

Simulation Curriculum Map Worksheet

Program/Institution Course	Program Outcome(s)	Course Outcome(s)	Concept(s)/Thread(s)	Simulation Title with Learning Outcomes
NURS 225	1. Maintain legal, ethical, evidence-based and professional standards in nursing. 2. Utilize clinical reasoning in practice. 3. Practice patient centered care. 4. Demonstrate teamwork and collaboration. 5. Effectively use current technology and informatics. 6. Ensure a safe environment for patient, self, and others.	• Comply with professional and evidence-based practice standards when providing care to women, infants, children, and families. (EOP 1) • Identify appropriate resources in the management of patient care. (EOP 3, 5) • Consider developmental level when planning and implementing nursing care. (EOP 2, 3) • Demonstrate effective communication in all interactions with patients, significant others, families, groups and members of the healthcare team. (EOP 1, 3, 4)	• Cellular Regulation • Defense and Immunity • Communication • Interprofessional Collaboration • Clinical Judgment • Evidenced-based Practice	Jeffrey Goldberg 1. Assess and analyze relevant patient, environmental, and contextual data. 2. Demonstrates therapeutic and confidential communication with parent. 3. Demonstrates effective communication with child using developmentally appropriate language. 4. Designs, implements safely, and evaluates nursing plan of care.

C. Educational Strategies
(Kern's Step 4)

- Simulation is an educational strategy that is framed by educational theories, including constructivism, experiential learning and andragogy. Current standards of healthcare simulations provide guidance to educators on design, implementation and evaluation of this teaching-learning modality. See HEALTHCARE SIMULATION STANDARDS OF

BEST PRACTICE™

- Planning and Sequencing Simulation Experiences: Thoughtful curricular integration reduces the variability of brought about by different clinical experiences; nurse educators will need to plan to include simulations that will allow students to safely practice frequently required competencies, along with the ability to practice on clinical situations that students otherwise, will not have to practice independently because of safety and legal considerations. Nurse Educators will need to plan and make decisions on writing simulation scenarios or utilize peer reviewed scenarios. Both will require alignment with course and program learning objectives.
- Simulations are a powerful teaching and learning modality beyond the simulation laboratory. An example is illustrated in the resources below:

D. Implementation

(Kern's Step 5)

- The simulation experience should have maximum realism so that students do not spend cognitive energy understanding what is real and what must be imagined (Franklin & Blodgett, quoting Screws & Cason, 2019). This has huge implications on budgeting operations, Faculty must present a strong business case on the maximum return or gains in the integration of simulations in the curriculum.
- Utilizing Simulation Education Resources: Although simulations can curricular needs and gaps, available and potential resources must be taken into consideration, such as faculty and administrative support, size of student population/cohorts, clinical hours, clinical to simulation hours ratio, faculty competencies, simulation space and set up, debriefing space.
- It is crucial to match the level of fidelity and the level of learners' level of experience; it is important that the level of

fidelity matches both scenario objectives and learners' needs. Simulation modalities and their availability are important factors to consider in the implementation of simulations. Various modalities include low to high fidelity manikins, standardized patients(actors), tasks trainers, virtual simulation modalities, visual aids and computer systems and competent staff. These are elements that will enhance implementation of simulation-based curriculum.

Highlight on Standards of Best Practice in Simulations and Standardized Patients/Human Players

The Association of Standardized Patient Educators (ASPE) Standards of Best Practice (SOBP)

Reflection: What are special considerations do we consider as nurse educators in using Standardized Patients in the Curriculum?

F. Evaluation of Simulations
(Kern's 6)

- Well-defined learning outcomes, then, are critical to the success of a simulation activity. Yet outcomes, in turn, should get educators to consider how they're going to evaluate their simulations; similar to how educators should "begin with the end in mind" when
programming simulation activities, Tagliareni and Forneris believe there should also be a focus on evaluation of the simulation activities overall. To that end, they recommend faculty and curriculum developers build in evaluations that evaluate: 1) total number of anticipated simulations 2) student learning; 3) students' simulation experience (whether or not

the experience is being implemented consistently across classes and courses, for example); 4) the simulation program as a whole (how effective it as at positively impacting outcomes, for example), 5) faculty development, including roles and responsibilities and best practices in using simulation; and 6) evaluation of faculty facilitation (how does it compare to the facilitation conducted in the classroom?). (Tagliareni & Forneris, 2017)

- Evaluation results data for each individual simulation encounter should be analyzed and incorporated back into the course. Analysis should address whether the activity met the learning outcome for the course, using quantitative data—which many of the instruments referenced above are designed to measure—so that faculty can quantify learning and thus, more easily map the data to student, course, and curriculum outcomes (Tagliareni & Forneris, 2016).
- The NLN/Jeffries Simulation Theory frames the needs and elements of evaluation of simulations (Jeffries, Rogers and Adamson, 2016). A repository of instruments is found in INACSL Repository of Instruments used in Simulation Research and the standards are written in Healthcare Simulation Standards of Best PracticeTM Evaluation of Learning and Performance

Exercises

Read an application of Kern's Six Step

Approach in the Development of a Simulation-Based Curriculum:

Question: What lessons can we take from the article that will our programs to successful integration of simulations?

V. Dr. Pamela Jeffries puts all the concepts to consider in curriculum integration all together in this talk to SESAM

VI Additional Resources:

1. NCSBN Simulation Guidelines for Prelicensure Nursing Programs

2. MCSRC Summer 2020 Speaker Series: Curricular Integration by Tonya Scheneiderith

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3. Video Series: Debriefing in the Classroom and beyond:

1. Debriefing in the classroom

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2. Debriefing Post-Clinical Day:

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3. Debriefing a critical incident in clinicals:

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Aul, K., Bagnall, L., Bumbach, M. D., Gannon, J., Shipman, S., McDaniel, A., & Keenan, G. (2021). A Key to Transforming a Nursing Curriculum: Integrating a Continuous Improvement Simulation

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Jeffries, P. R., Rodgers, B., & Adamson, K. (2015). NLN Jeffries Simulation Theory: Brief Narrative Description. *Nursing education perspectives*, 36(5), 292–293. https://doi.org/10.5480/1536-5026-36.5.292

Masters K. (2014). Journey toward integration of simulation in a baccalaureate nursing curriculum. *The Journal of nursing education*, 53(2), 102–104. https://doi.org/10.3928/01484834-20131209-03.

National League for Nursing (2015). A vision for teaching with simulation. nln.org

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2. Theory- Based Debriefing Methods of Simulations

Theory- Based Debriefing Methods of Simulations by Raquel Bertiz, PhD, RN, CNE, CHSE

This chapter is written for nurse educators in academic and practice settings with prior knowledge of the basic foundations of simulation-based education (SBE) and basic knowledge of debriefing simulations and are necessary foundation to learning advanced debriefing techniques.

Learning Objectives

- Describe the theory, standards and methods of debriefing/reflective practice.
- Facilitate debriefing of simulations using theory-based debriefing methods.
- Evaluate debriefing of simulations using valid and reliable evaluation tools.

I. Introduction

Metacognition is " thinking about thinking", or more formally, "knowledge and cognition about cognitive phenomena". It is important for health professionals, including nurses to know what they know and do not know, and therefore can focus on acquiring what they do not know. In an ever increasingly complex healthcare environment, nurses who have the ability to be self-regulated or self-directed learners is essential (Medina, et al, 2017). Metacognition equates to increased awareness of one's own thought processes leading to critical thinking and monitoring of actions, thus, sound clinical judgment. Nurse educators need to be purposeful in designing instruction, both in the classroom and clinical settings (simulated and actual patient care) that allow learners to develop metacognition. This is emphasized by Morse, et al., (2021): " Ongoing shifts in the healthcare system require practitioners who possess metacognitive skills to evaluate their decisions and the thinking and rationale guiding those decisions. They go on to claim that nurse educators had embraced Simulation-Based Education (SBE) as an effective teaching and learning strategy, case in point, debriefing provided educators with the opportunity to explore and develop those metacognitive skills with the learners.

Debriefing is a virtual step in the process of the simulation learning experience and is one of key features to consider when operationalizing a simulation learning encounter (Morse, et al., 2021 quoting Jeffries, 2015). Morse et al. (2021) in their annual review of research in debriefing :

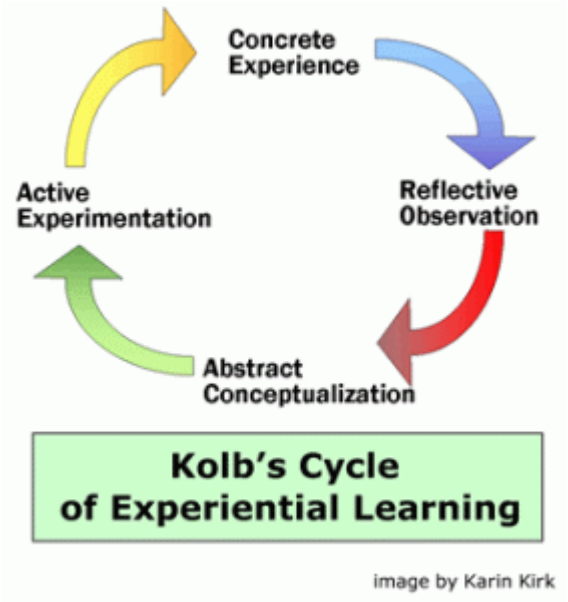
- Theory-based debriefing as an evidence-based contextual teaching-learning strategy facilitates experiential learning and fosters critical thinking and clinical reasoning.
- Simulation, plus structured debriefing improves learning outcomes, such as clinical performance, problem-solving ability, confidence to perform, critical thinking and clinical reasoning

As nurse educators begin the use debriefing across the curriculum, it is imperative that this must be supported by theory and empirical evidence. Several studies also report the need to develop competencies of faculty in facilitating debriefing. Nurse educators, therefore, who decide to adopt this instructional strategy need to be competent. This module explores the theoretical and empirical bases of SBE and debriefing, and specific debriefing methodologies that are currently used in debriefing of simulations, such knowledge is needed prior to practicing these techniques in the simulation laboratory and beyond. The theoretical and empirical bases of debriefing are reflected in the INACSL Healthcare Simulation Standards of Best PracticeTM The Debriefing Process.

II. Theoretical Bases:

Morse, et al., (2021) describe two theories that predominantly frames the theory-based debriefing models that will be described in detail below:

1. *Kolb's Experiential Learning Theory*



Key Points:

- provides a means to describe the cycle of experiential learning that occurs in SBE, and describe the process why which learners perceive and then transform their experiences in order to create knowledge
- constructs:

a) concrete experience is described as the perception, through the senses of the learning experience; it is dependent on the ability of the learners to involve themselves fully and without bias in new experiences; precedes the reflective period and influences it to the extent that the learners were adequately prepared for the experience and that the experience were meaningful to them.

b) Reflective observation is the ability to reflect on the experience from many perspectives

c) Abstract conceptualization is the ability to create concepts that integrate current observations into logically sound theories

d) Active Experimentation is the ability to use these theories to make decisions and solve problems in similar future situations

- The elements of reflective observation, abstract conceptualization and active experimentation are most directly connected to debriefing as the time to reflect on the event through the participants' mental model.
- The goal of debriefing is to engage in transformative learning

2) *Mezirow's Transformational Learning Theory*

Key Points:

- Transformative learning is learning that transforms problematic frames of reference to make them more inclusive, discriminating, open, reflective and emotionally able to change
- ***Frames of reference*** includes habits of mind, cultural biases, ideologies, schemata, stereotyped attitudes and practices, religious doctrine, moral-ethical norms, psychological preferences and schema, paradigms in science and mathematics, frames in liguistics and social sciences, and aesthetic values and standards (Mezirow, 2003)
- Behavior change is a consequence of transformation of the frames of reference

- The transformation occurs through self-reflection by identifying and judging premises, presuppositions, and taken for granted assumptions
- Transformation, or "change" starts with a ***disorienting dilemma-*** when usual interpretations and behaviors do not result in success
- ***Transformed perspective-*** inclusive, differentiating, permeable, critically reflective and integrative of experience
- The medium of transformation is radical discourse, and lies on these assumptions: discourse meets the conditions necessary to create understanding with another; driven by objectivity; actions and statements are open to question and discussion; understanding is created through the weighing of evidence and by measuring the insight and strength of supporting arguments; primary goal is to promote understanding among others
- Ten phases of transformation (process rather linear)- 1) disorienting dilemma ; 2) self-examination with discontent; 3) critically assessing assumptions; 4) recognizing the connection between discontent and the process of transformation; 5) exploring options for new roles, relationships and actions; 6) planning/revising a course of action; 7) acquiring knowledge and skills for implementing one's plan; 8) trying new roles on provisional basis; 9) building competence and self-confidence in new roles and relationships; 10) reintegration of new frame

The structured debriefing methods that will be discussed in this module are supported by the two theories discussed above. Morse, et al., (2021, quoting Morse, 2015) asserts that when the debriefing process is a structured, facilitated process that supports transformative learning, it provides an opportunity for the learner to engage in self-reflection and possibly perspective transformation.

Highlight on Prebriefing:

Prebriefing- Debriefing and prebriefing are intertwined, and therefore, the discussion of learning in debriefing starts with prebriefing (Morse, Fey & Forneris, 2017). The interaction of the facilitator and the learner is a key dynamic in the learning process in simulation, therefore, it is crucial to establish psychological safety during prebriefing and maintained all throughout the simulation experience. The debriefer needs conduct prebriefing according to standards of healthcare simulation practice, and the INACSL provides the standards : Healthcare Simulation Standards of Best PracticeTM Prebriefing: Preparation and Briefing

Note: An evidence-based prebriefing supports an evidence-based debriefing

II. Theory Based Models of Debriefing

1. *Debriefing with Good Judgment*

The following Key Points are derived from Morse, Fey & Forneris (2021) chapter on Evidence-Based Debriefing, Annual Review of Nursing Research 2021:

- A debriefing method developed by Rudolph et al from the Center for Medical Simulation
- Aims to discover the thought processes driving observable actions

- Based on theories from diverse fields such as adult learning theories, behavior change, cognitive psychology and research from organizational research
- The model states that there is no such thing as "nonjudgmental" debriefing and should be done with "good judgment".
- The facilitator uses the " Advocacy/Inquiry"(AI) conversational strategy as reflective learning technique to uncover the thought process, or cognitive frames, behind the actions observed in simulations.
- Through discussion and teaching, the facilitator reinforces positive cognitive frames, or helps to facilitate the creation of new cognitive frames that will support practice moving forward.

The following video explains the AI method:

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here: https://oer.pressbooks.pub/simulation-education-resources/?p=30#oembed-1

This video describes how the facilitator uncovers the learner's frame:

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Exercise: Debriefing with good judgment

Watch the video below and write your observations:

- How did the facilitator use the AI approach?
- If you are the facilitator, how will you apply the AI approach?

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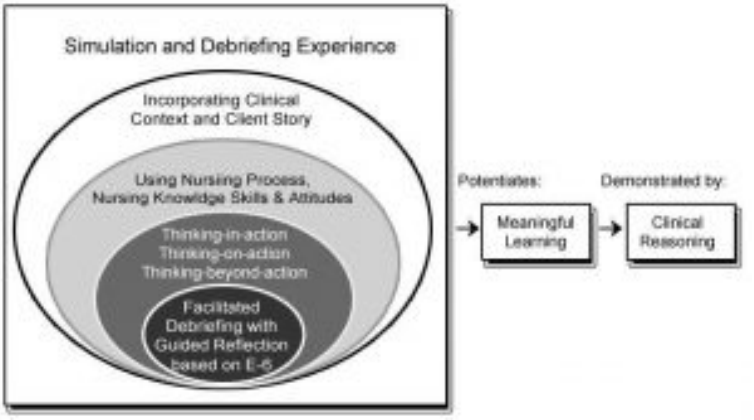
2. *Debriefing for Meaningful Learning* (DML)

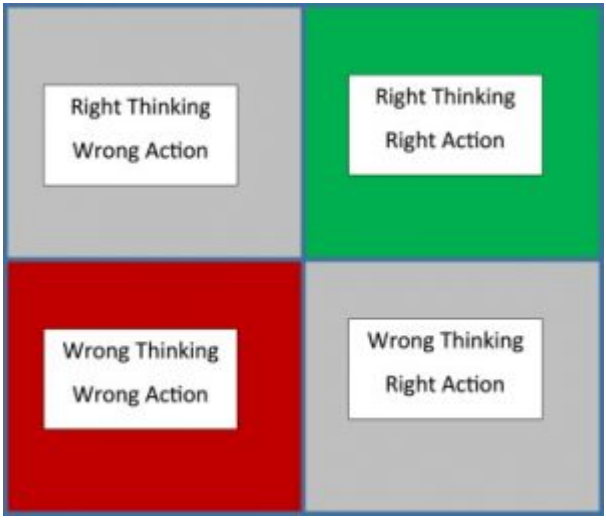


Key Points:

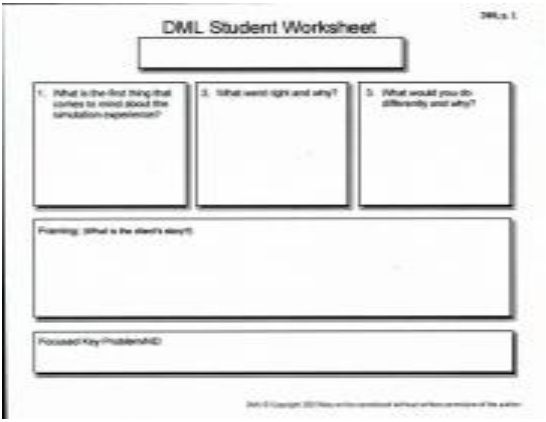
- DML (Dreifuerst, 2012) is a method that uses reflective discourse to uncover relationships between thought processes and nursing actions.
- There are six elements that facilitate thinking process: Engage, Explore, Explain, Elaborate,Evaluate, Extend (Six Es); these elements serve to guide the learners through a reflective learning conversation to facilitate sensemaking of the learning experience and apply current learning to potential future

experiences- using **"*Socratic Questioning*"**

- Using Socratic Questioning, the debriefer exposed the student's frame of reference and taken-for-granted assumptions by revealing the relationships between the student's thinking and actions (Dreifuerst, 2015). See Illustration Below:

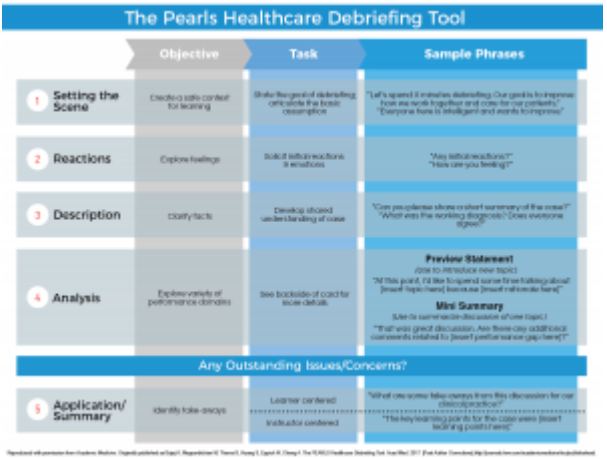


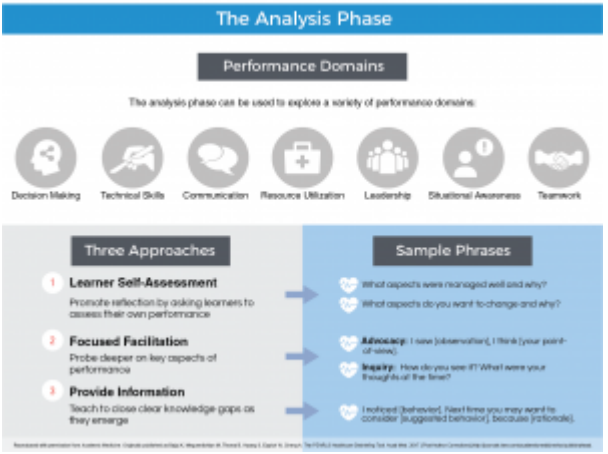
- promotes clinical reasoning by actively promoting reflection-in-action, reflection-on-action, and reflection-beyond-action
- uses a set of worksheets, page 1 is shown below:



- This article explains how to get started using this technique: [Getting Started With Debriefing for Meaningful Learning]

3. *Promoting Excellence and Reflective Learning in Simulation* (PEARLS)





Key Points:

- A method of debriefing described by Eppich and Cheng(2015).
- A blended approach to debriefing that included three educational strategies: learner self-assessment, focused facilitation for reflective learning and providing directive feedback and/or teaching
- This method provides scripting for the debriefer
- This is the site for free download of tools used in PEARLS PEARLS Debriefing Tool

The following video describes the method. More detailed information about this debriefing technique below:

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://oer.pressbooks.pub/simulation-education-resources/?p=30#oembed-4

IV. Evaluation of Debriefing

- Debriefing is considered to be where the bulk of learning takes place. Examination of debriefing is needed to help determine if facilitation methods effectively contribute to the learning process. (Reed, 2020). There are several instruments that are available in the literature to evaluate debriefing skills of the facilitator, but there are few tools to evaluate participant engagement.
- Instruments to evaluate debriefing includes tools to evaluate debriefing skills of novice debriefers by expert debriefers, self-assessment of debriefing, and evaluation of debriefing experience by learners (Morse, et al, 2021)
- Regular evaluation and/or appraisal of debriefing are necessary for simulation-based learning. While Debriefing evaluation tools are critical in identifying areas to improve practice and optimize learning. The development of debriefing evaluation tools is challenging (Alhaj & Musallam, 2018)

1. *The Debriefing Assessment for Simulation in Healthcare* (DASH)

The DASH is a six-element unweighted, criterion-referenced, behaviorally anchored rating scale that evaluates instructor behaviors that are believed to represent optimal behaviors. It is the most commonly used tool to assess facilitator debriefing skills in prelicensure programs in the United States. (Morse, et al, 2021). There are three versions of this tool: a) Rater version is designed for trained trainers to rate instructors; b) Student Version- designed for students to rate their instructors and C) Instructor Version- designed for instructors to rate themselves. (Debriefing Assessment for Simulation in Healthcare© (DASH)

See the presentation below on details of the DASH Tool by Kada (2021)

DASH TOOL PRESENTATION- MCSRC -Geetha Kada[49425

DASH Tools:

DASH Student Version Short Form

DASH Instructor Version Short Form

2. *Debriefing for Meaningful Learning Evaluation Scale* (DML-ES)

This instrument was developed specifically for DML debriefers. The need for formal training, assessment of DML competence, and continued development in debriefing has intensified as nursing programs increasingly integrate DML as a teaching-learning method in simulation and across curricula. The demand for a more precise description of DML behaviors to formatively assess debriefing skills led to a process of revising the DMLES and psychometrically testing a new iteration of the instrument. The current version of DML -ES, a revised edition, is a 20-item behavioral rating scale that can be used for both ***self-assessment (DMLES-Debriefer)*** and ***objective assessment (DMLES-Rater)*** to further understand how well debriefers apply DML (Sheridan, et al., 2020).

3. *Debriefing Experience Scale* (DES)

The DES is a tool with 4 subscales with twenty items where each item is rated by learners on a Likert Scale. The four subscales include:

- Analyzing thoughts and feelings
- Listening and making connections
- Facilitator skill in conducting the debriefing
- appropriate facilitator guidance

Learning Exercise

Watch the prebriefing and debriefing session below. If you are the debriefer in this instance, assess yourself using the DASH Instructor Version Short Form.

What are your take aways and lessons that you will apply to your next debriefing?

Prebriefing:

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://oer.pressbooks.pub/simulation-education-resources/?p=30#oembed-5

Debriefing:

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://oer.pressbooks.pub/simulation-education-resources/?p=30#oembed-6

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