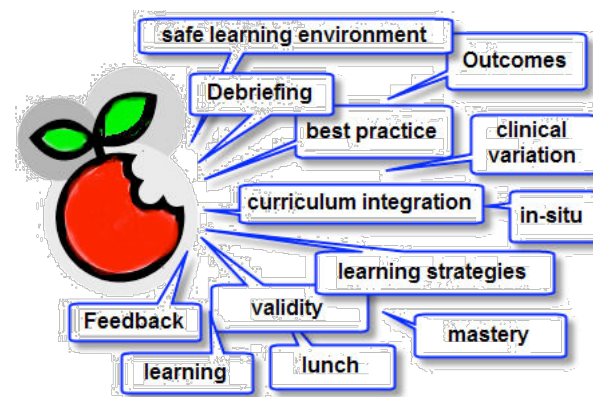




Writing Effective Objectives for Simulation

SimBites

September 20, 2024





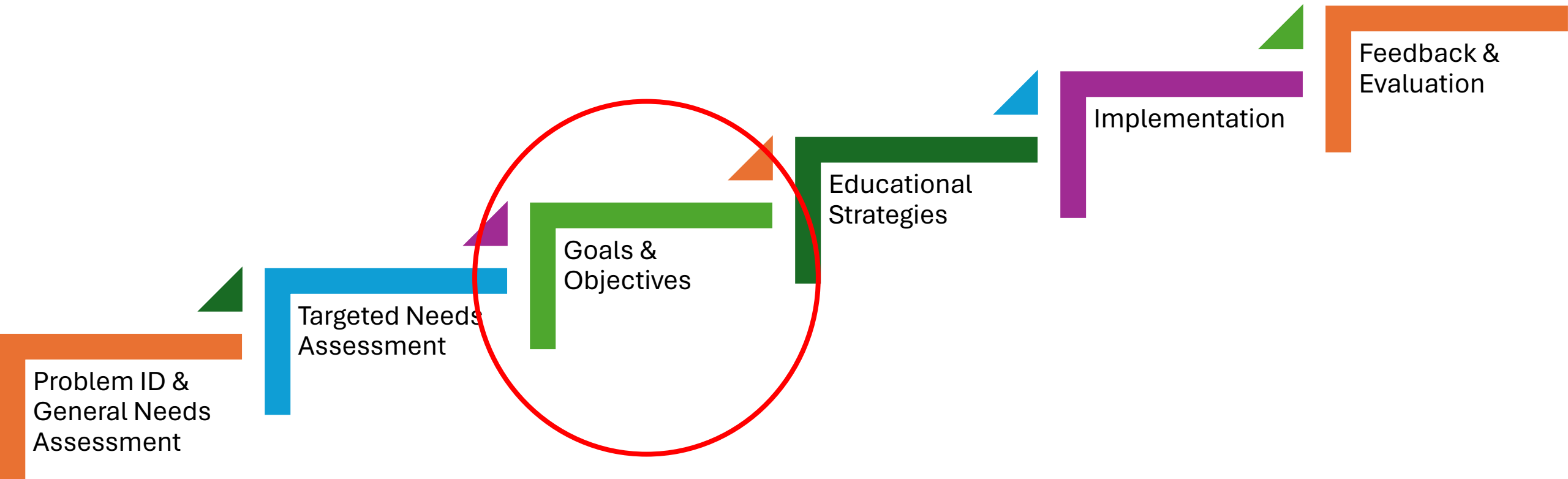
Teaching & Learning Objectives

After completing this program
Simulation educators will be able to:

- Compare and contrast Goals and Objectives
- Identify the essential characteristics of measurable SMART learning objectives
- Write a clear, measurable educational objective using the ABCD model

Curriculum Development for Medical Education

Kern's 6-Step Model





For Learners

Describe what you expect them to be able to do



For Educators

- Develop instructional strategy
 - Simulation design
- Specify outcomes that can be tested
- Assess student performance
- Assess if course is effective



Goals and Objectives

Goals

What you want to achieve

Expected learning outcome

- Broad / General intentions or directions
- Abstract, hard to measure
- Usually have a longer time frame

Goal – Example from ACLS:

Students perform high quality CPR



Objectives

Observable learner behaviors

- Specific
- Concrete, easy to measure
- Usually set for a short term



Objectives support the goal:



Goal



Objectives





Which is a

Learning



Knowledge Check

1. The MD 2 course is designed to address cardiovascular and pulmonary problems.
2. In Problem Based Learning (PBL), students discuss a case, state a diagnostic hypothesis, and present evidence.
3. With a given set of clinical data the first-year student in PBL will be able to state a hypothesis and create research questions.



Which is a



Learning objective
Instructional Objective
Goal

1. The MD 2 course is designed to help 1st year medical students develop knowledge and skills in cardiovascular and pulmonary problems
2. In Problem Based Learning (PBL) sessions the first-year student will be asked to analyze and discuss a case, state a diagnostic hypothesis, and present evidence to support the hypothesis.
3. With a given set of clinical data the first-year student in PBL will be able to state a hypothesis and create research questions.



Which is a

Learning objective
Instructional Objective
Goal



GOAL: Broad statement of learning outcomes

1. The MD 2 course is designed to help 1st year medical students develop knowledge and skills in cardiovascular and pulmonary problems

Instructional Objective: Specific statement of teacher-centered performance

2. In Problem Based Learning (PBL) sessions the first-year student will be asked to analyze and discuss a case, state a diagnostic hypothesis, and present evidence to support the hypothesis.

Learning Objective: Specific Statement of student-centered performance

3. By the end of a PBL session the first-year student in PBL will be able to state a hypothesis and create research questions.



Writing objectives

The ABCD Approach



Audience



Behavior



Conditions



Degree of mastery



A = Audience

[learners / participants, not the instructor]



Audience



Behavior



Conditions



Degree of mastery

Who is this activity for?

Be specific!

“At the end of instruction, **1st year nursing students** will be able to.....”

Create objectives to meet learning needs of all learners in the audience





B = Behavior

[what the participants will do]



Audience



Behavior



Conditions

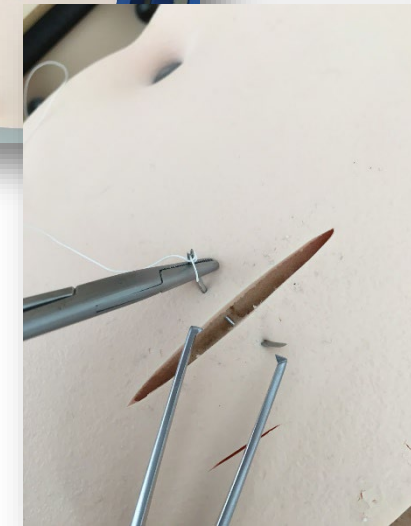
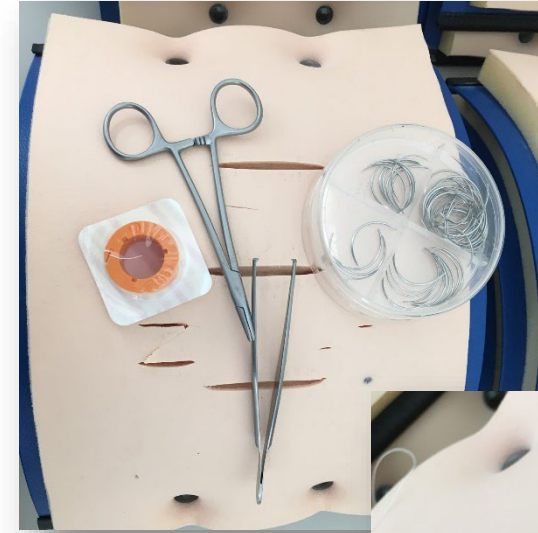


Degree of mastery

What exactly do expect the learner to do as a result of your program

“Surgery residents will place 5 simple interrupted sutures with tied square knots in 3 minutes”

The behavior is the action (verb) that describes what the learner (audience) will be able to do after instruction





What type of behavior?

- **Cognitive / Knowledge:**
 - Intellectual abilities
 - Approximately 80% of educational objectives are in this domain
 - Familiar to instructors, authors and learners
- **Psychomotor / Skill:**
 - Behavior is easily observed and monitored.
 - Psychomotor skills involve the use of tools or instruments
 - “Hands On” courses contain psychomotor objectives
 - The easiest objectives to write
- **Affective / Attitude:**
 - Relating to the expression of feelings, including confidence, emotions, fears, interests, attitudes, beliefs, values and appreciations
 - Often the most difficult objectives to develop



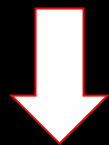
SMART Objectives

- Specific
- Measurable
- Achievable
- Realistic
- Targeted to Learner
- Time-limited



Criteria	Description / Questions
<u>S</u>pecific	Is there a description of a precise behavior and the situation it will be performed in? Is it concrete, detailed, focused and defined?
<u>M</u>easurable	Can the performance (or non-performance) of the objective be observed and measured?
<u>A</u>chievable	With a reasonable amount of effort and application can the objective be achieved? Are you attempting too much?
<u>R</u>elevant Realistic	Is the objective important or worthwhile to the learner? Is it possible to achieve this objective?
<u>T</u>ime-bound Target to learner	Set a time limit for the expected outcome: Is rate, number, percentage or frequency clearly stated? When will the objective be accomplished?

Begin with a clear understanding of the educational end-goal



Assessment Metrics & Content will emerge clearly during the design process





K-S-A

SMART Objectives

Writing with action words / Verbs

“define, describe, label
list, name, order,
recognize, relate, recall,
state, arrange, reproduce,
identify, select...”

Knowledge

“appraise, compare,
criticize, defend, explain,
justify, support, report,
explain...”

Skill

“appraise, compare,
criticize, defend, explain,
justify, support, report,
explain...”

Attitude



Always begin
with the end in sight!



SMART

Objectives guide instructors
and channel learners



C = Conditions

[created by instructor/design]



Audience



Behavior



Conditions



Degree of mastery

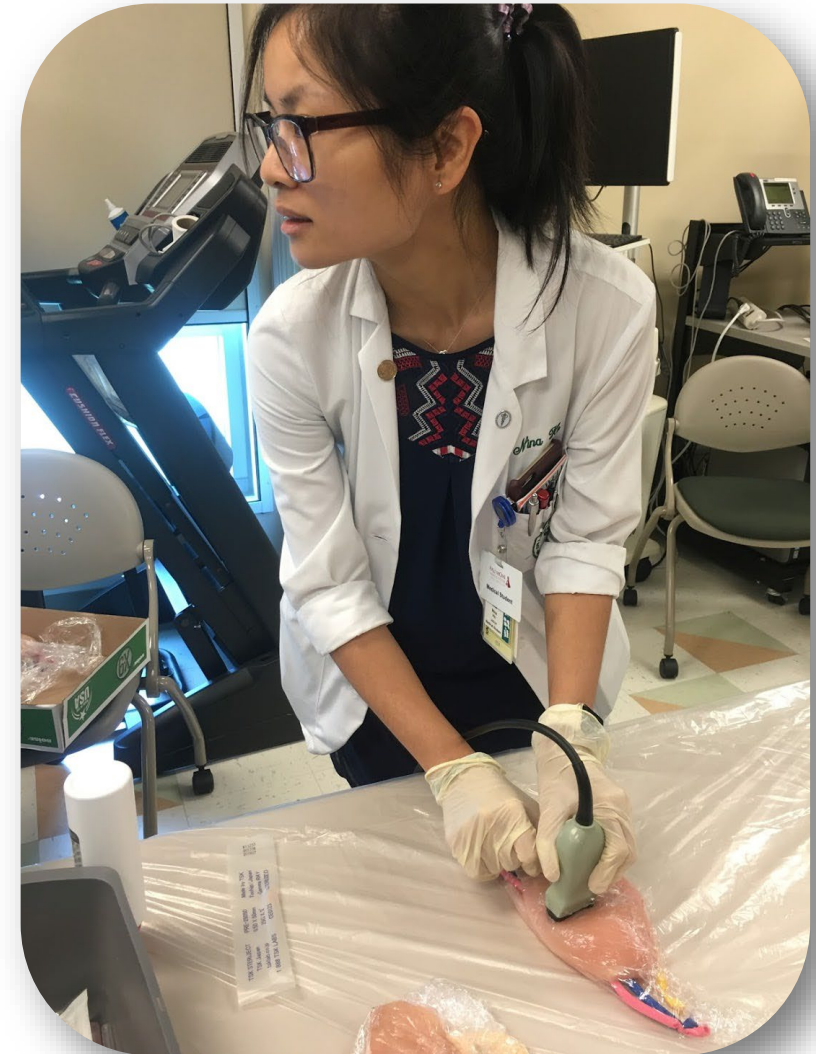
Conditions the instructor sets as learners demonstrate performance

Usually a WHEN or WHILE statement

- “when inserting an IV during simulation”
- “while using ultrasound”

May include what the student be given to succeed
(checklist/learning aide)

May include what the learners is already expected to know to accomplish the learning





D = Degree

[what is adequate performance]



Audience



Behavior



Conditions



Degree of mastery

The standard or criterion for judging the behavioral performance

What performance is required for the learner to succeed?

Measurement

- Speed
- Accuracy
- Quality
- Quantity





“Using the ABCD method the instructor will write a learning objective that is observable, measurable, and clearly defined”



Using the ABCD method the instructor will write a learning objective

that is observable, measurable, and clearly defined

Audience

Behavior

Condition

Degree/Criteria





Audience

Using the ABCD method the instructor will write a learning objective

that is observable, measurable, and clearly defined

Behavior

Condition

Degree/Criteria





Breakdown The Learning Objective

Audience

Behavior

Using the ABCD method the instructor will write a learning objective

that is observable, measurable, and clearly defined

Condition

Degree/Criteria





Breakdown The Learning Objective

Condition

Audience

Behavior

Using the ABCD method the instructor will write a learning objective

that is observable, measurable, and clearly defined





Breakdown The Learning Objective

Condition

Audience

Behavior

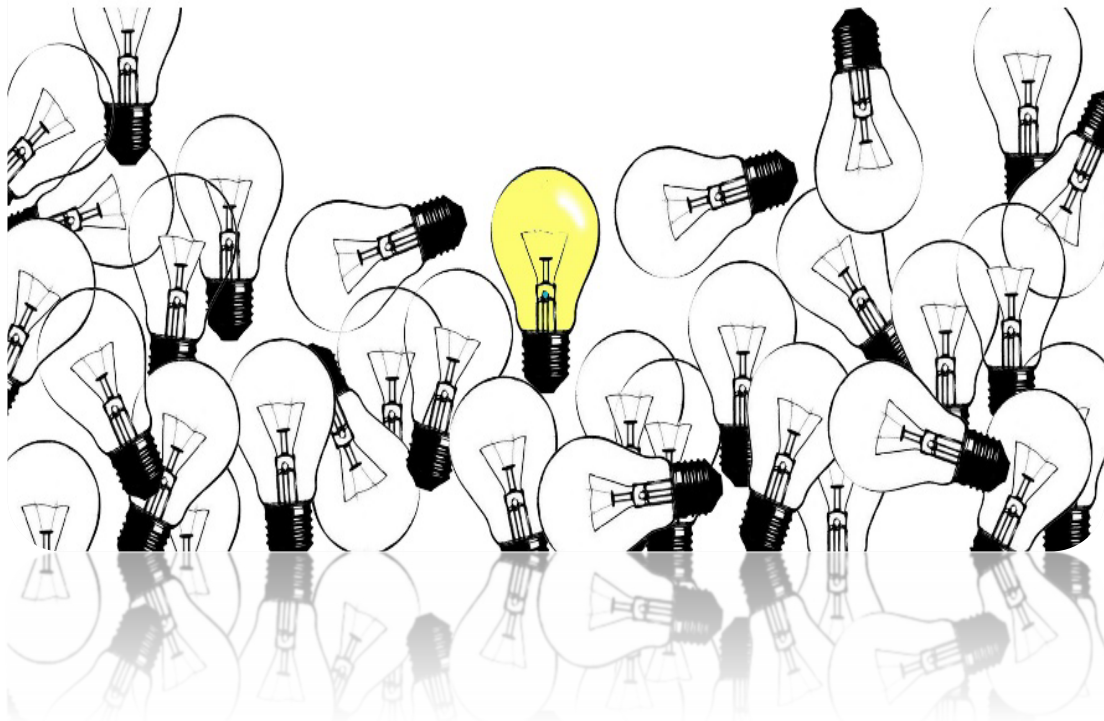
Using the ABCD method the instructor will write a learning objective

that is observable, measurable, and clearly defined

Degree/Criteria



Educator Benefits of Clear Learning Objectives



- Guide
 - Instructional design
 - Teaching method
- Lead to an assessment method



Criteria

Specific

Measurable

Achievable

Relevant
Realistic

Time-bound
Target to learner



Audience



Behavior



Conditions



Degree
of mastery



Discussion