

Did Learning Happen and Was It Transferred to the Work Environment: Measuring the Effectiveness of Education Programs

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Measuring the Effectiveness of Education Programs

Overview

How do you measure the contribution and value of education to the organization? In other words, how do you measure the effectiveness of an educational program? Those charged with knowledge management know that effective educational programs have the power to bring about decided, decisive and desired results. These results may be used by quality leaders to demonstrate an improvement in knowledge, skill, behavior and/or outcomes (quality, human resource and financial) for patients, staff members, physicians and/or the organization. Key to measuring the effectiveness of an educational program is a basic understanding of assessment (needs), educational outcome (objectives), and evaluation (low to high level). Come join us as we explore these concepts, the relationships between them, and operationalize performance measurement of educational programs. Come learn the best kept secrets of easy, resource neutral, high level evaluation techniques for educational programs.

Measuring the Effectiveness of Education Programs

Objectives

- Upon completion of this continuing education activity, participants should be able to:
 - Discuss the implications of measuring the effectiveness of education on improved patient care outcomes.
 - Define effectiveness as a measurement of educational activities.
 - Identify key institutional criteria for measuring effectiveness of education.
 - Differentiate effectiveness and evaluation of educational activities in healthcare education.



Measuring the Effectiveness of Education Programs

- Implications for Practice/Patient Care
 - Right thing to do
 - Improve processes and outcomes
 - Quality (safety)
 - Satisfaction
 - Costs
 - Become a destination hospital
 - Meet accrediting, approving and regulatory organizations requirements



Measuring the Effectiveness of Education Programs

- Implications for Educational and Quality Leaders
 - Address issues impacting continuing health professional education
 - 2008 Macy Report
 - 2010 Carnegie Report
 - 2010 Institute of Medicine
 - Utilize resources appropriately
 - Demonstrate the value of staff development activities
 - Become an influential leader



(Dickerson & Ohri, 2010)

Measuring the Effectiveness of Education Programs

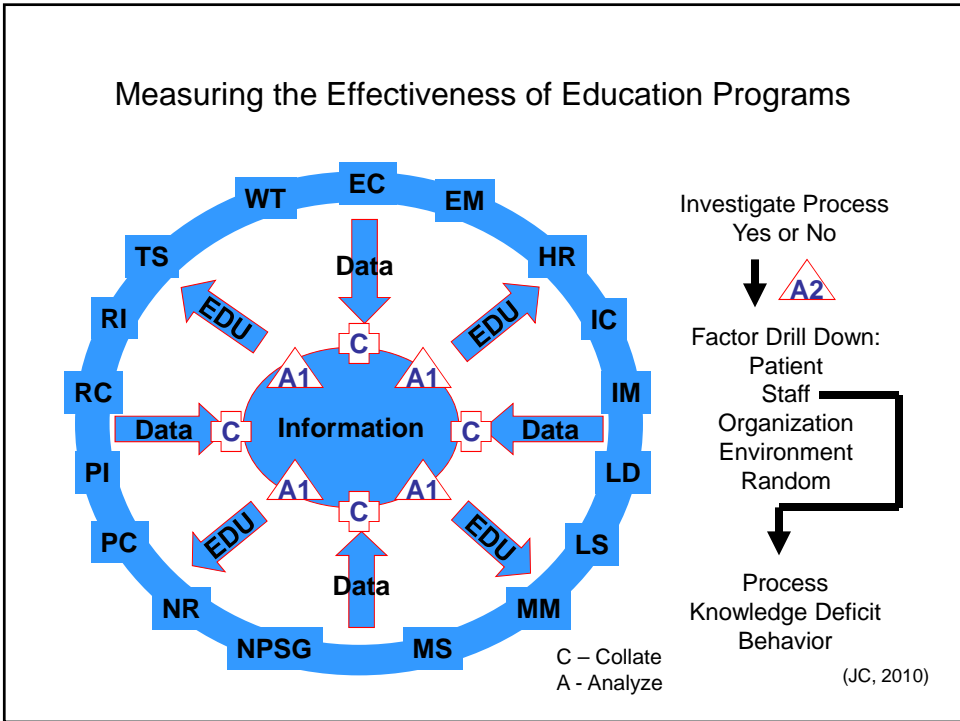
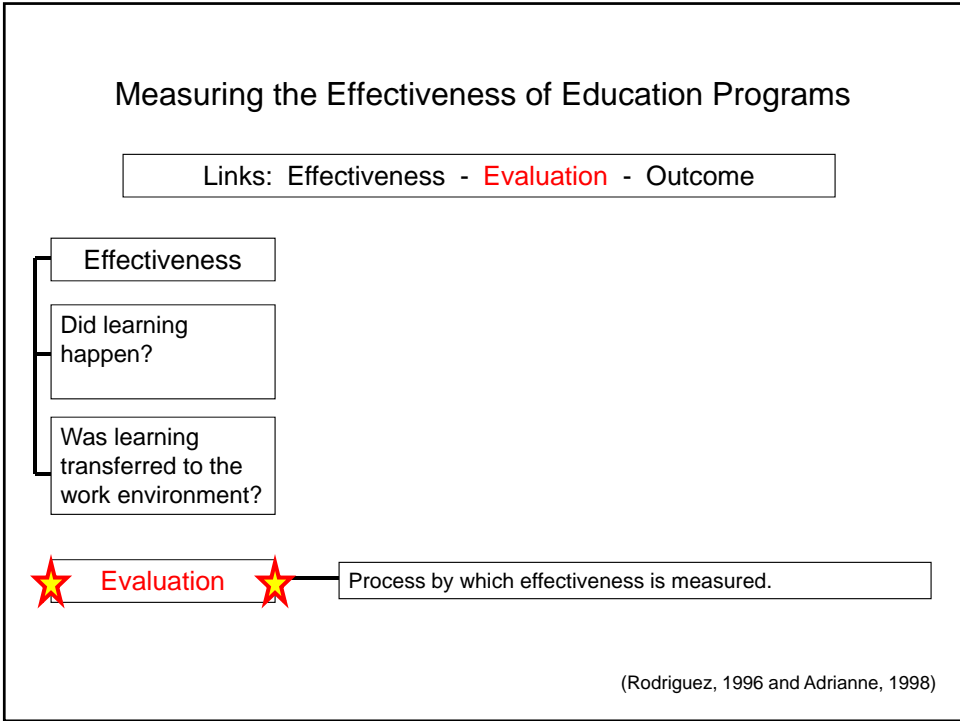
Links: Effectiveness - Evaluation - Outcome

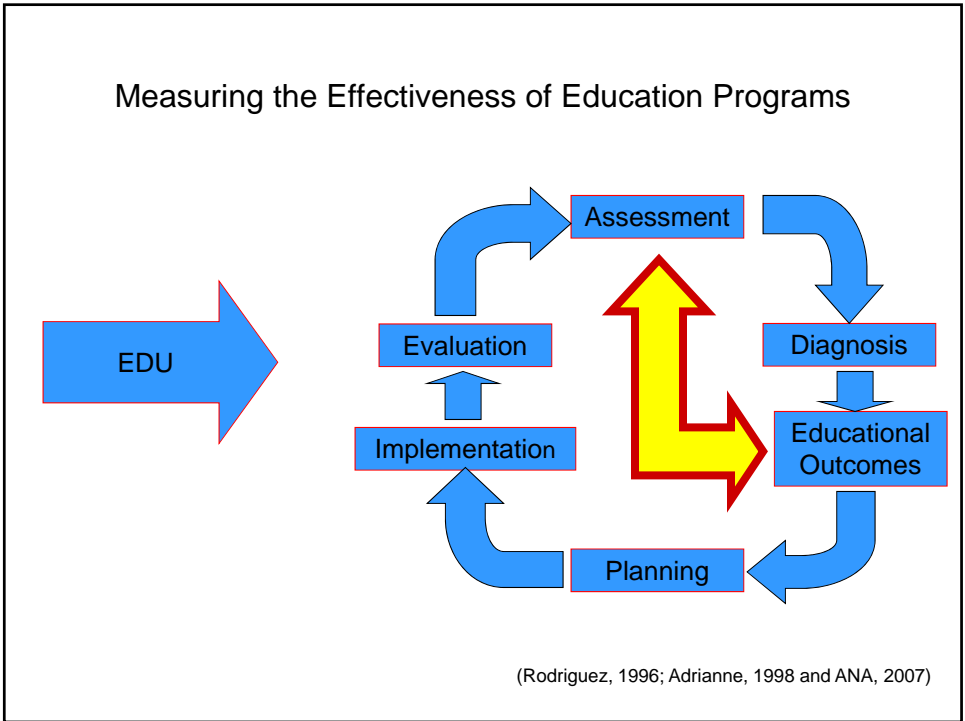
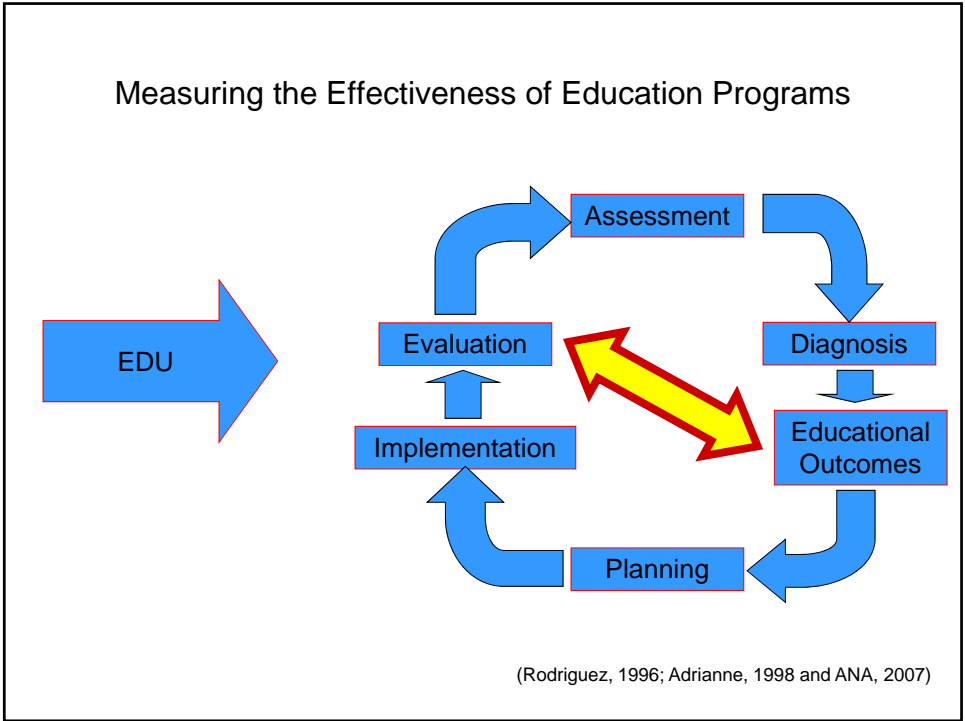
Effectiveness

Did learning happen?

Was learning transferred to the work environment?

(Rodriguez, 1996 and Adrienne, 1998)





Measuring the Effectiveness of Education Programs

- Assessment (People)
 - Leadership
 - Product Line Changes
 - Technology Changes
 - Patients
 - Satisfaction Survey
 - Complaints
 - Population Specific
 - Physicians
 - Needs Survey
 - Satisfaction Survey
 - Complaints
 - Staff Members
 - Needs Survey
 - Satisfaction Survey
 - Complaints
 - Testing



Measuring the Effectiveness of Education Programs

- Assessment (Department / Organization)
 - Departmental PI
 - Other PI Sources
 - Bio Medical
 - Employee Health
 - Infection Control
 - Quality Risk (internal survey)
 - Environment of Care
 - Organizational Policies



Measuring the Effectiveness of Education Programs

- Assessment (Accrediting and Regulatory)

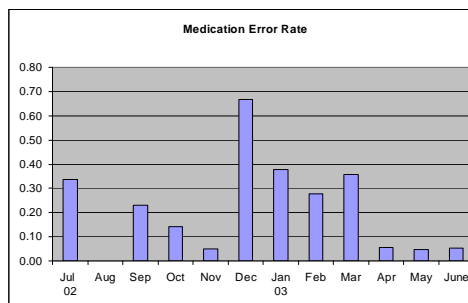
- Alerts
- Benchmarking (literature review)
- Criteria
- Goals
- Indicators
- Rules
- Regulations
- Recommendations
- Standards
- Results (external)
 - Reports
 - Surveys



Measuring the Effectiveness of Education Programs

- Assessment (Accrediting and Regulatory)

- (Clinical Indicators)
 - Adverse medication events
 - Central line catheter-associated blood stream infections
 - Complaints (patient / family)
 - Falls (prevalence and injury)
 - Length of stay
 - Patient satisfaction
 - Pneumonia
 - Postoperative infections
 - Shock / cardiac arrest
 - Skin breakdown
 - Urinary tract infections
 - Ventilator associated pneumonia



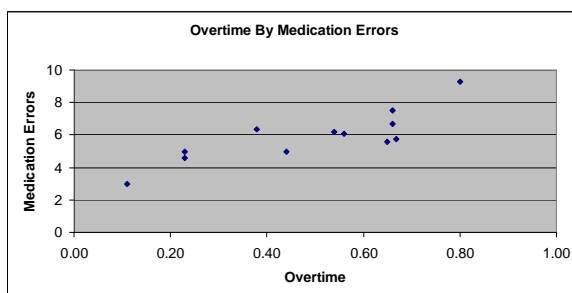
(JC, 2008)

Measuring the Effectiveness of Education Programs

- Assessment (Accrediting and Regulatory)

- Human Resource Indicators

- Agency hours
 - Nursing care hours per patient day
 - Overtime
 - On-call hours
 - Retention
 - Staff vacancy
 - Staff satisfaction
 - Staff injuries
 - Staffing variance
 - Sick time
 - Turnover



(JC, 2008)

Measuring the Effectiveness of Education Programs

- Assessment (Prioritization)

- Patient Quality / Safety

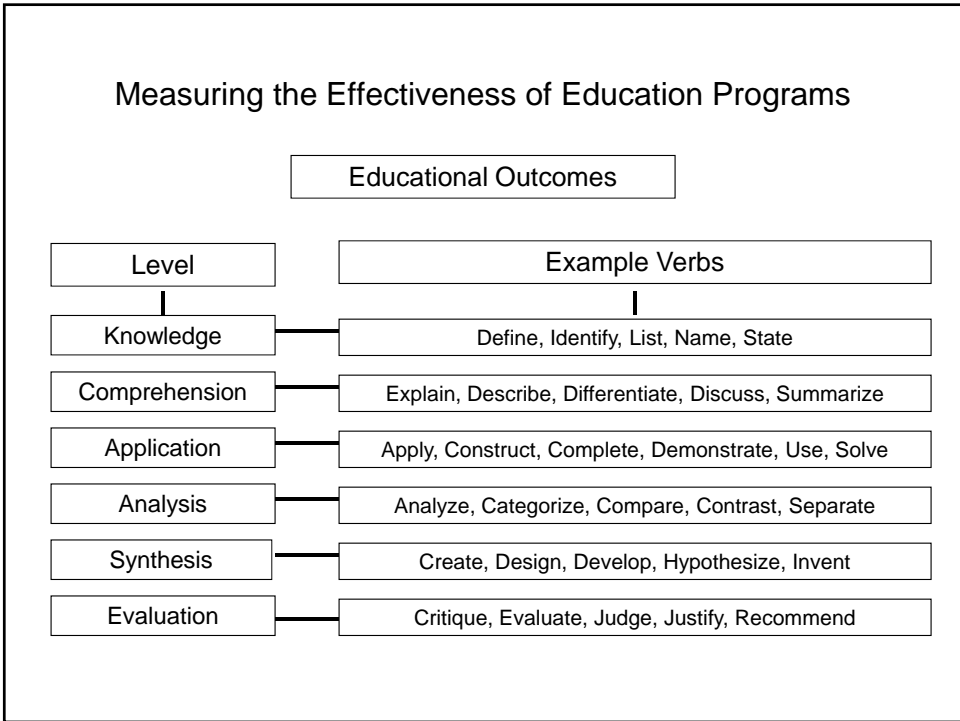
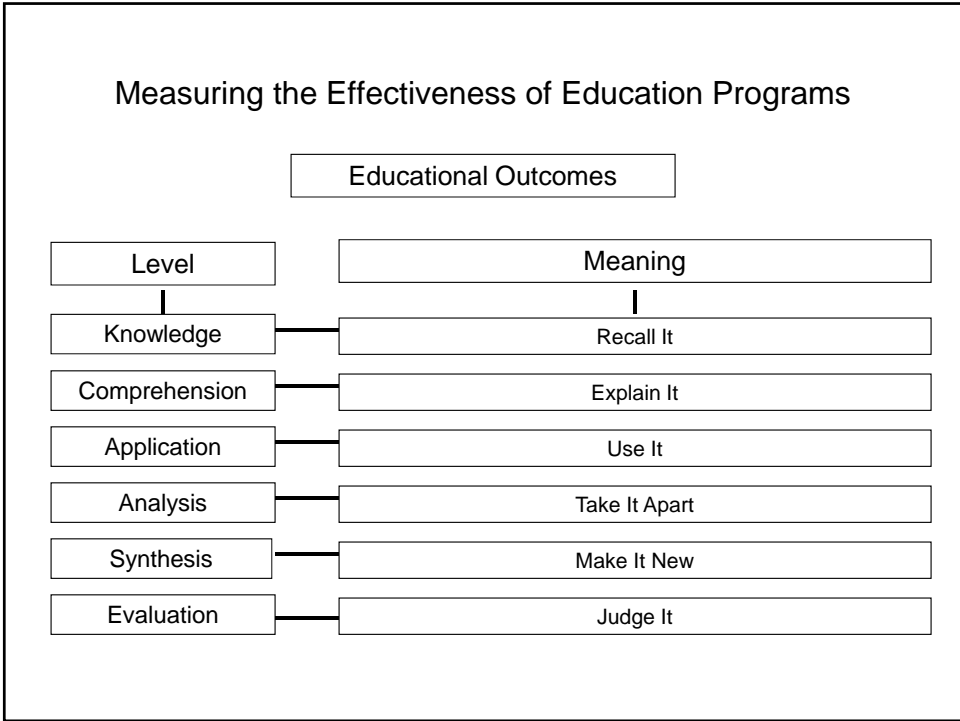
- High Risk
 - Problem Prone
 - High Volume
 - Low Volume
 - Essential (required)
 - New

- Customer Satisfaction


- Patient
 - Staff Members
 - Physicians
 - Payers
 - Accrediting and Regulatory Bodies

- Cost Control





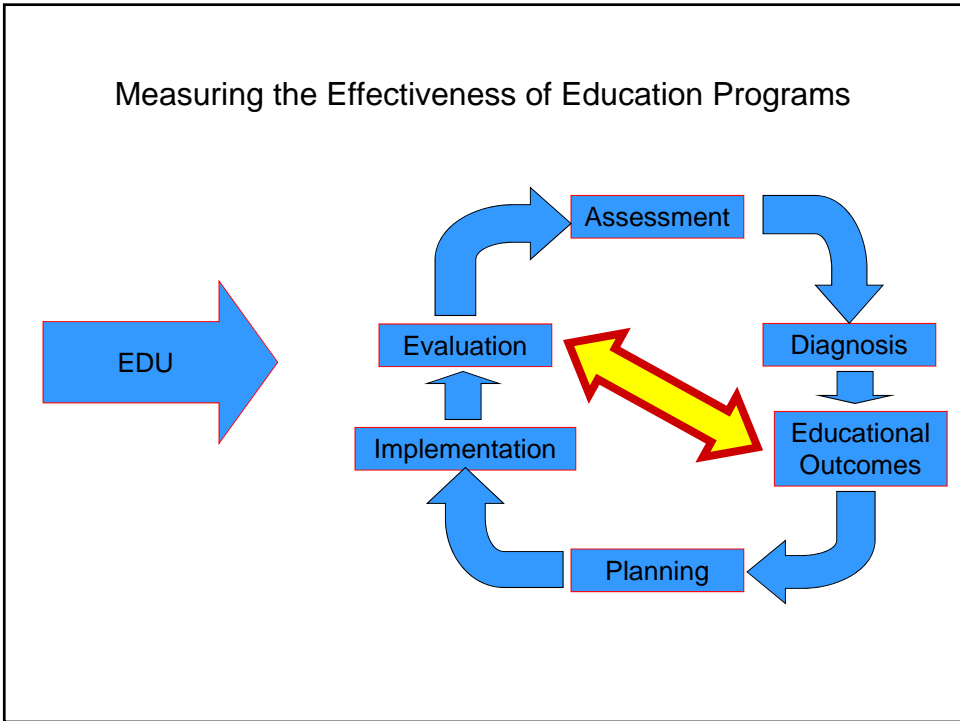
Measuring the Effectiveness of Education Programs

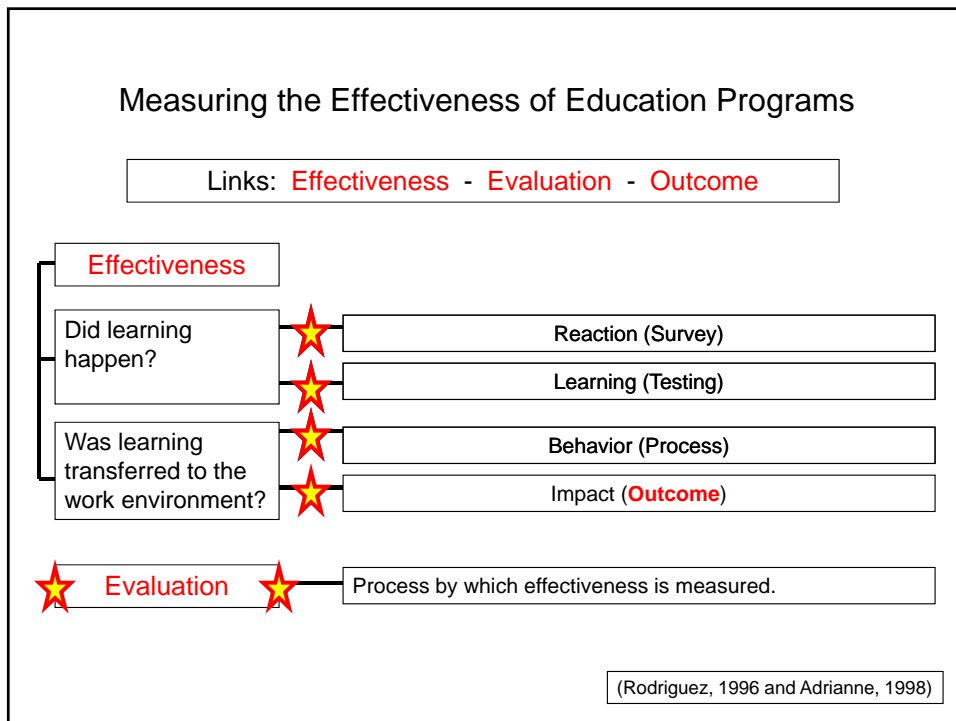
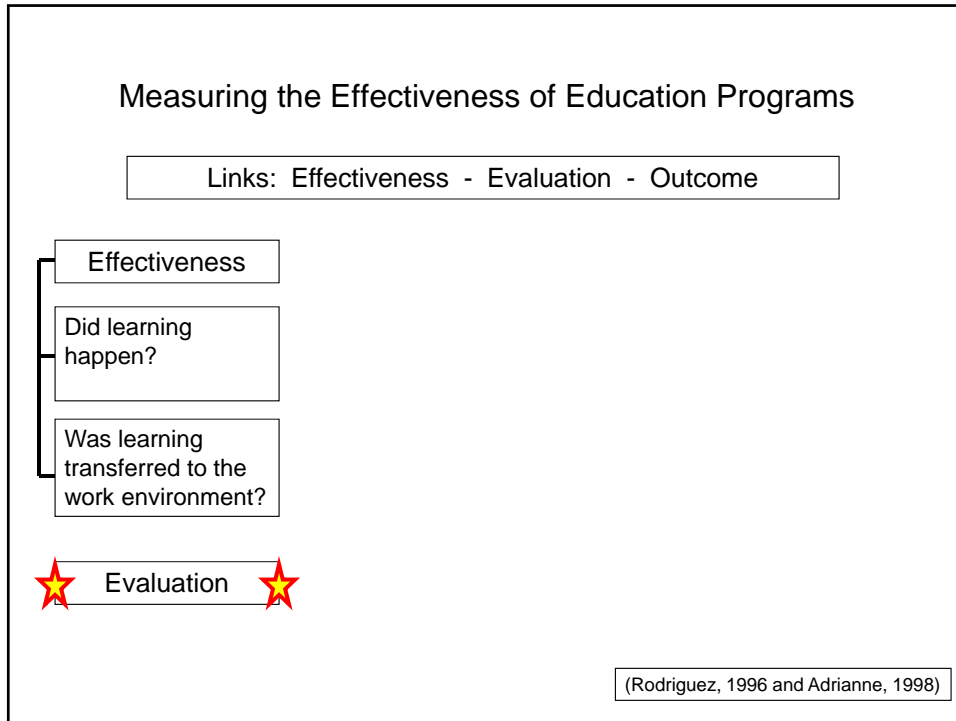


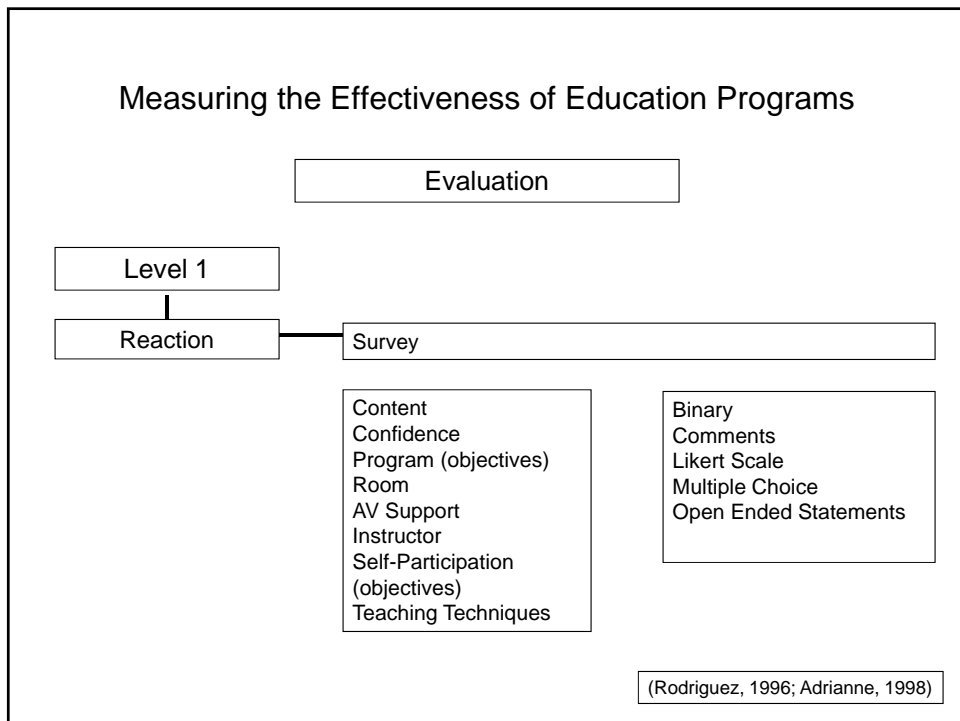
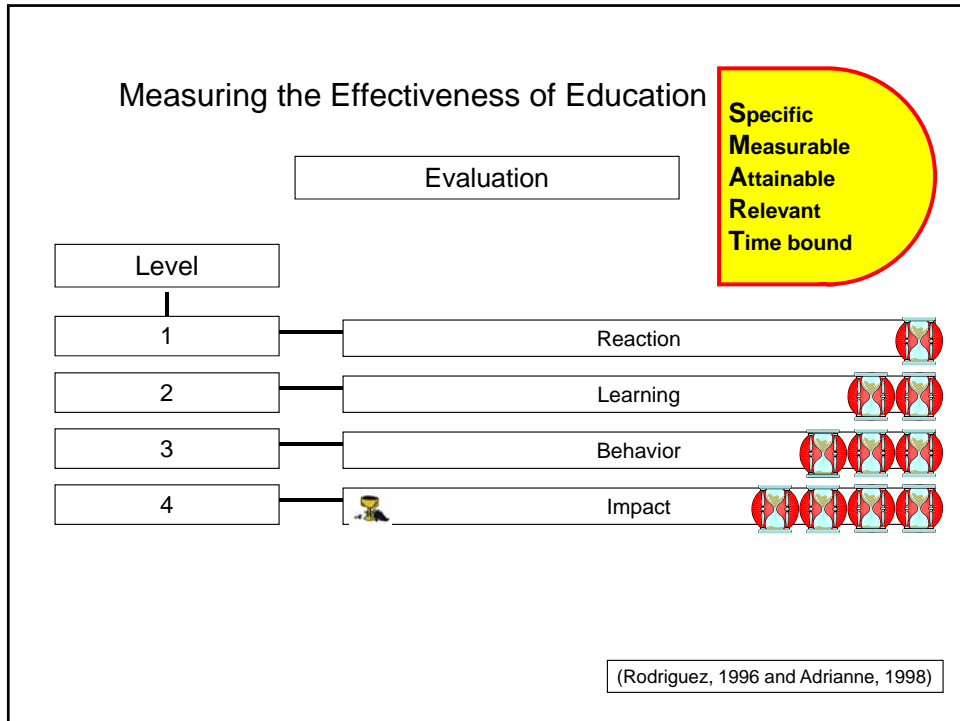
Educational Outcomes

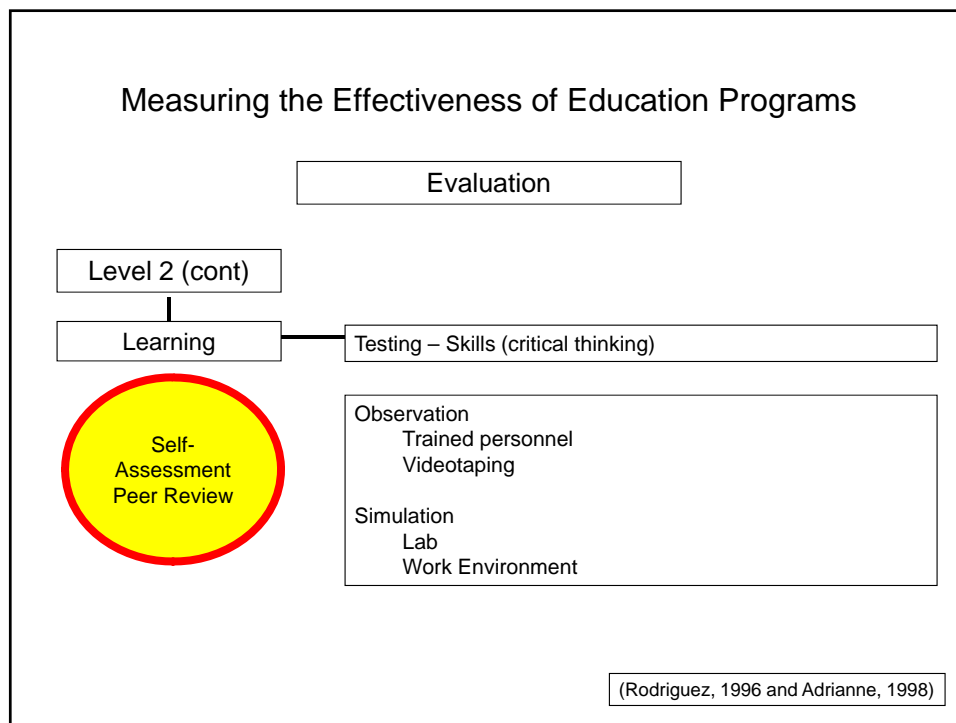
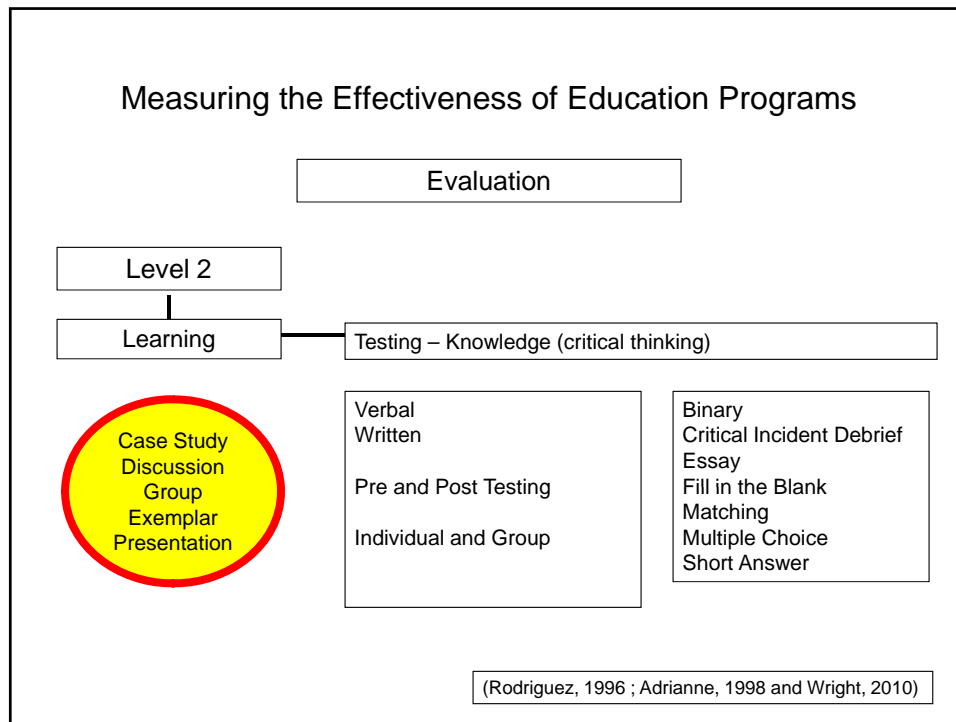
	Example Verbs
	Define, Identify, List, Name, State
	Explain, Describe, Differentiate, Discuss, Summarize
	Apply, Construct, Complete, Demonstrate, Use, Solve
	Analyze, Categorize, Compare, Contrast, Separate
	Create, Design, Develop, Hypothesize, Invent
	Critique, Evaluate, Judge, Justify, Recommend

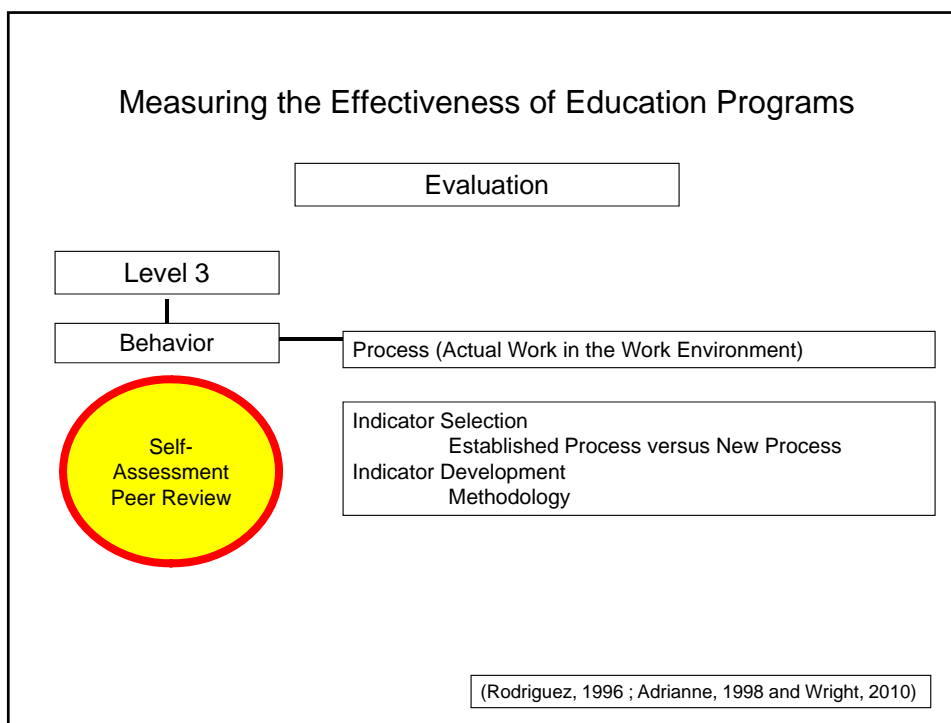
- Knowledge
 - Define
 - Identify
- Comprehension
 - Discuss
 - Differentiate





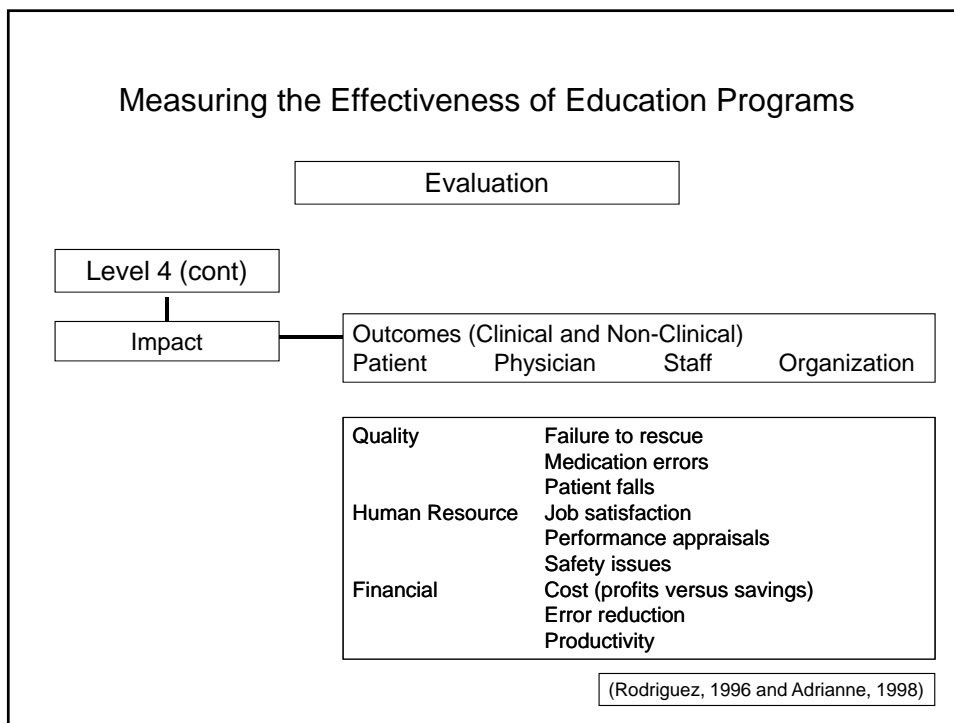
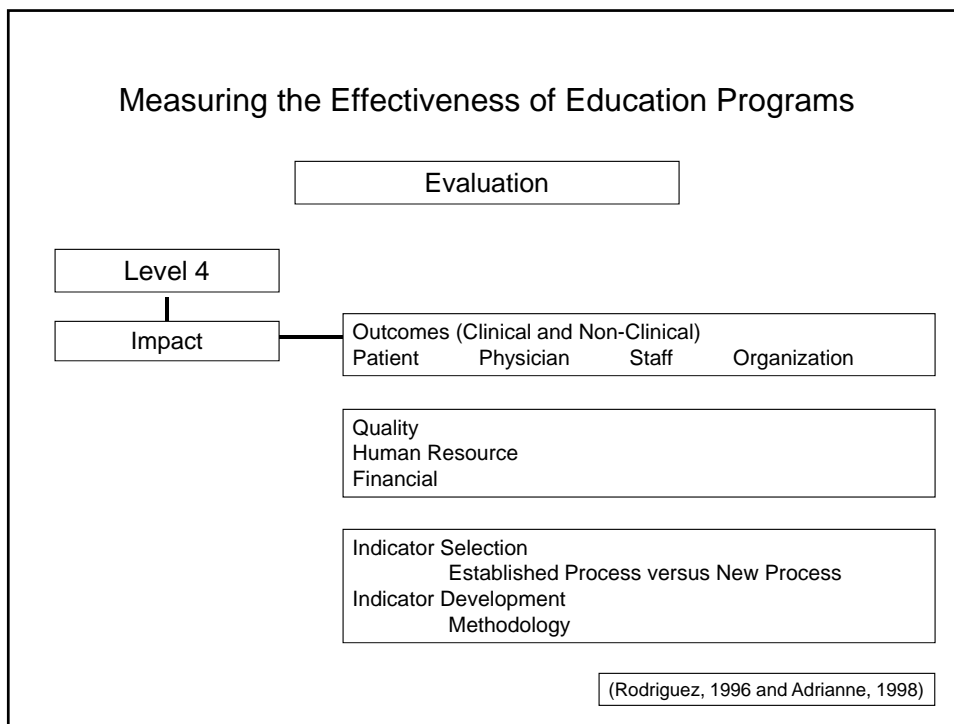






Measuring the Effectiveness of Education Programs

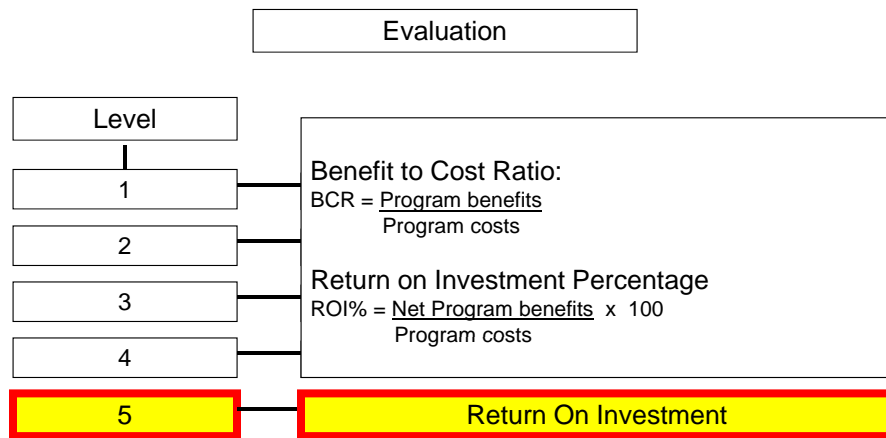
Indicator Name:	Patient Appropriate for Restraint Device Rate
Definition:	Patients that have restraint devices that are deemed appropriate (alternative devices attempted and failed; and restraint device appropriate – validation of 1 st and 2 nd tier assessments)
Rationale:	Low volume; Problem prone; High risk; Patient safety
Benchmark:	100% compliance
Statistic:	Total number of patients that have restraint devices that are deemed appropriate per week / Total number of patients that have restraint devices per week X 100
Sample Size:	All patients in restraint
When:	Once every 24 hours @ 1000-1200
Criteria:	Absence of documented criteria will count as a negative event
How:	Direct; Trained Data Collector
Who:	Nurse Manager or designee
Data Management:	Hand collection with paper tool; Statistical Control Chart
Reporting:	Chief Nursing Officer; Director of Quality
Record Retention:	2 years hard copy; 5 years electronic copy



Measuring the Effectiveness of Education Programs

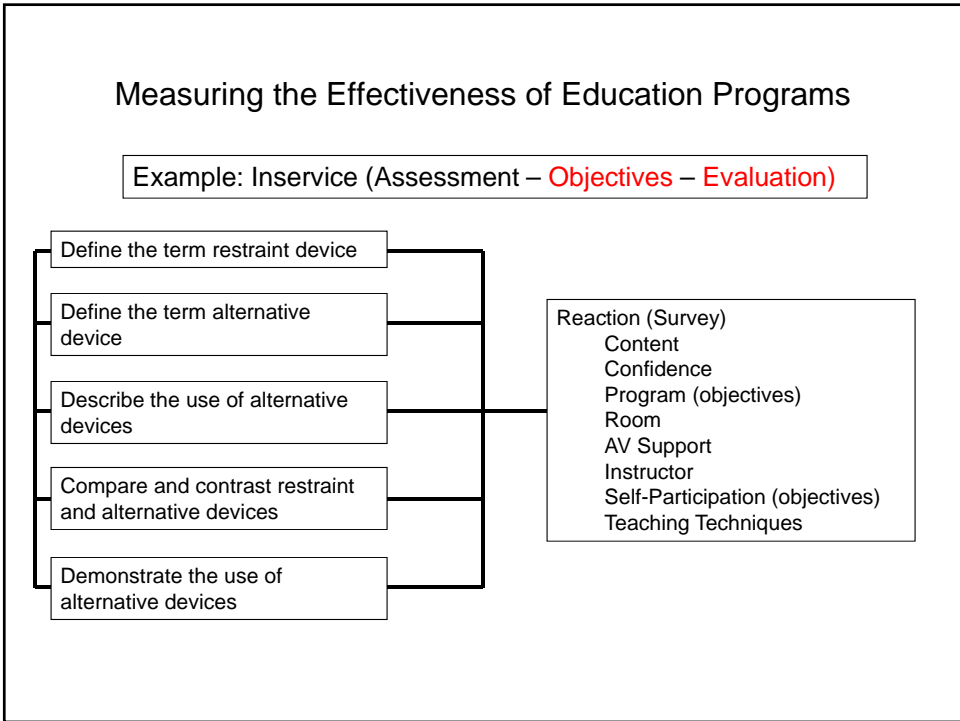
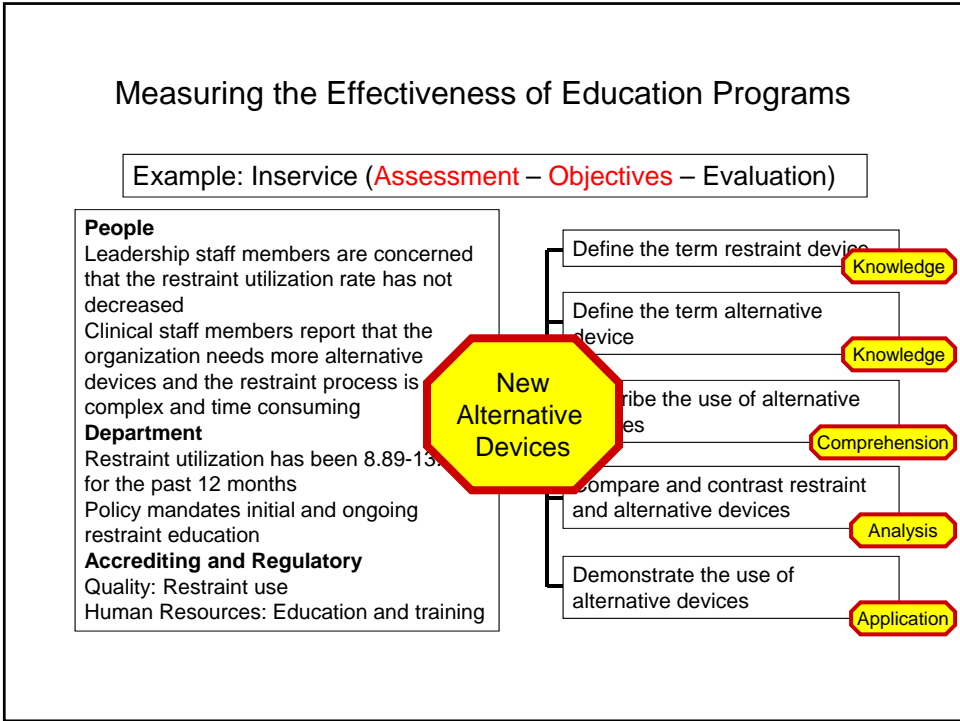
Indicator Name:	Patient Restraint Utilization Rate
Definition:	Rate of Patient Restraint Events (one event = one restraint order)
Rationale:	Low volume; Problem prone; High risk; Patient safety
Benchmark:	Trend (decrease)
Statistic:	Total number of patients that have a restraint event per month /Adjusted patient days per month X 1000
Sample Size:	Includes all patients in restraint
When:	Not applicable
Criteria:	Not applicable
How:	Direct; Trained Data Collector
Who:	Nurse Manager or designee
Data Management:	Restraint Log; Operating Report; Statistical Control Chart
Reporting:	Chief Nursing Officer; Director of Quality
Record Retention:	2 years hard copy; 5 years electronic copy

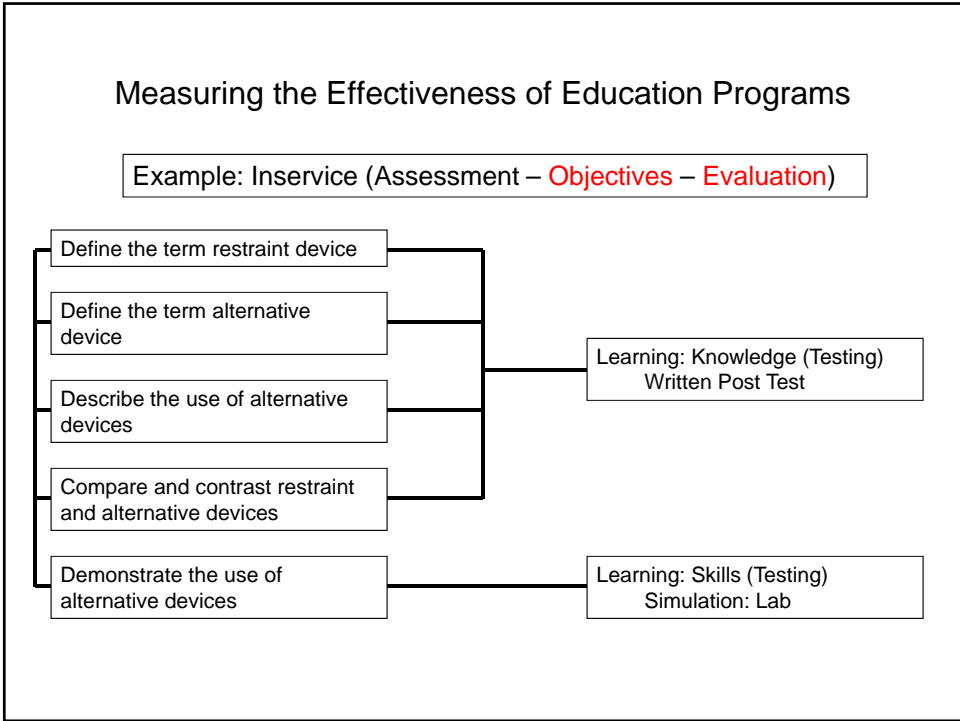
Measuring the Effectiveness of Education Programs

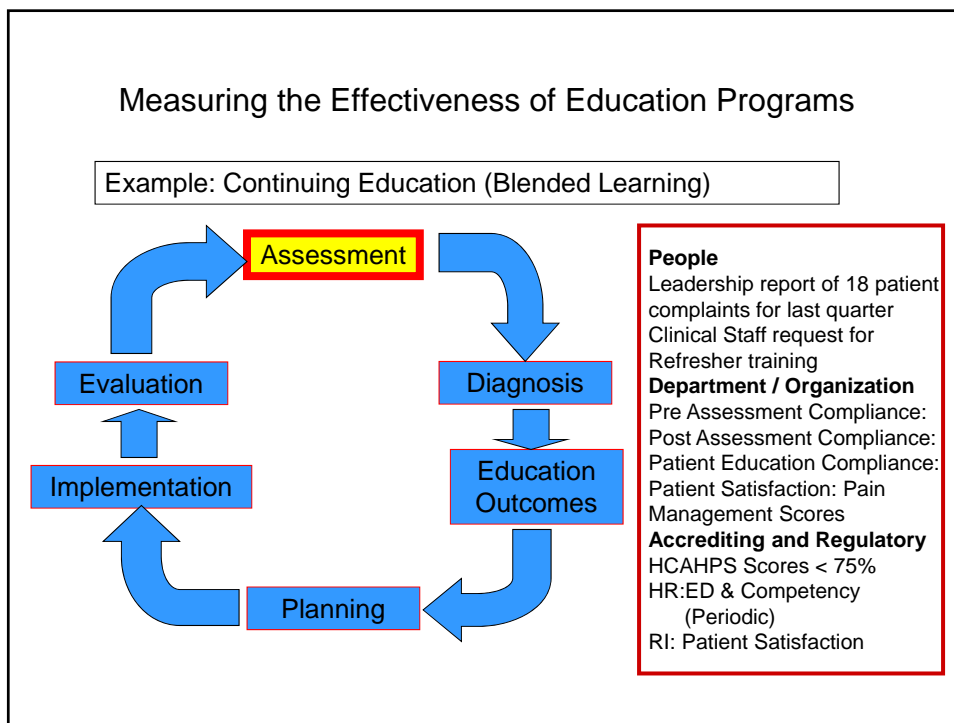
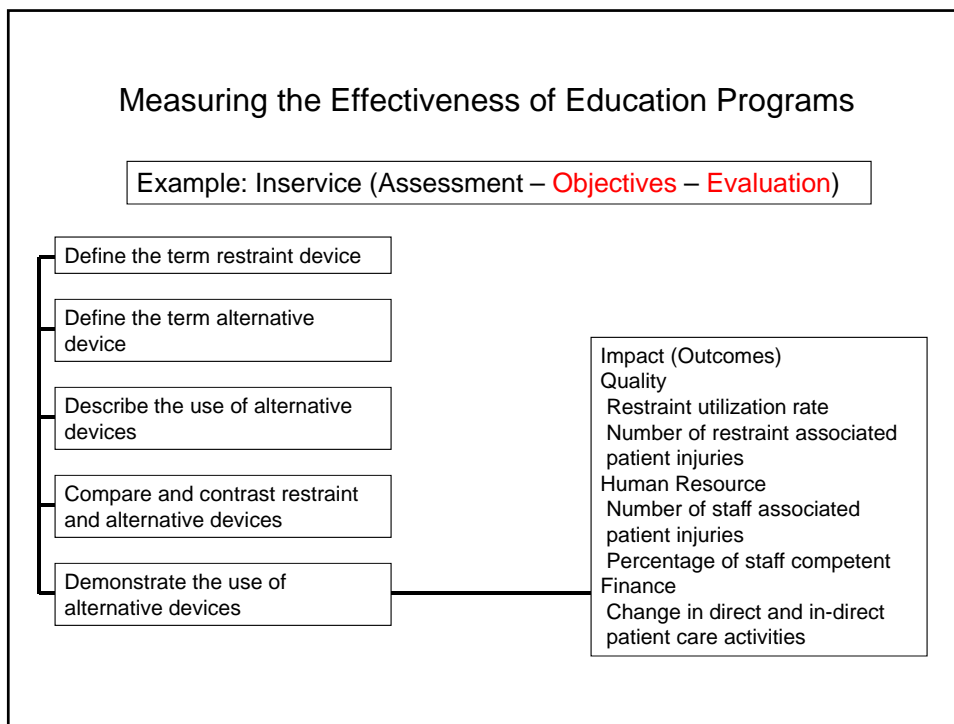


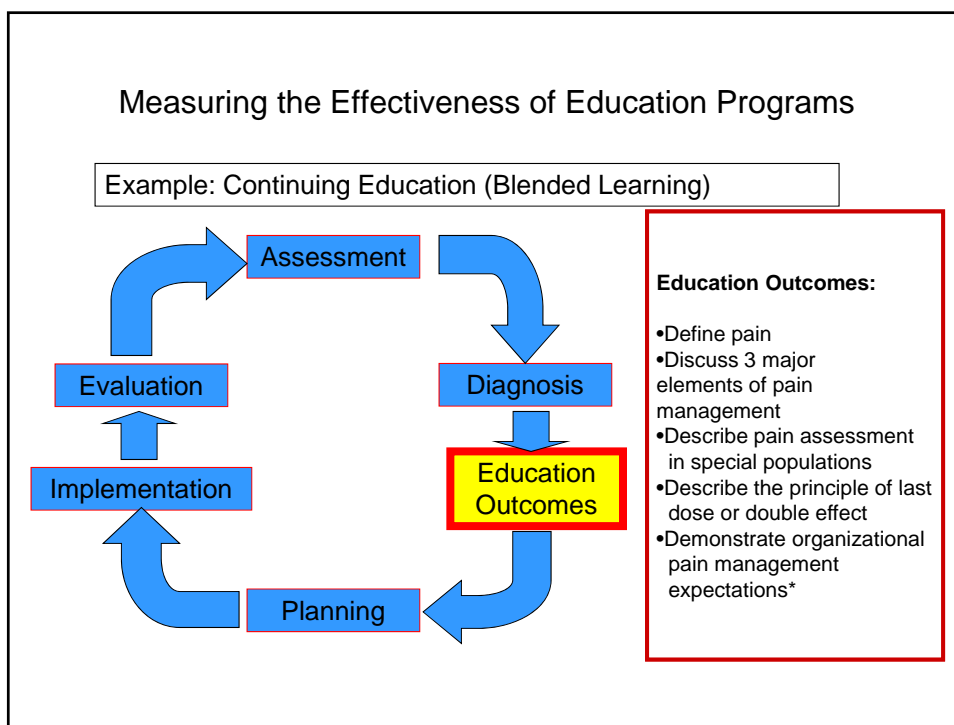
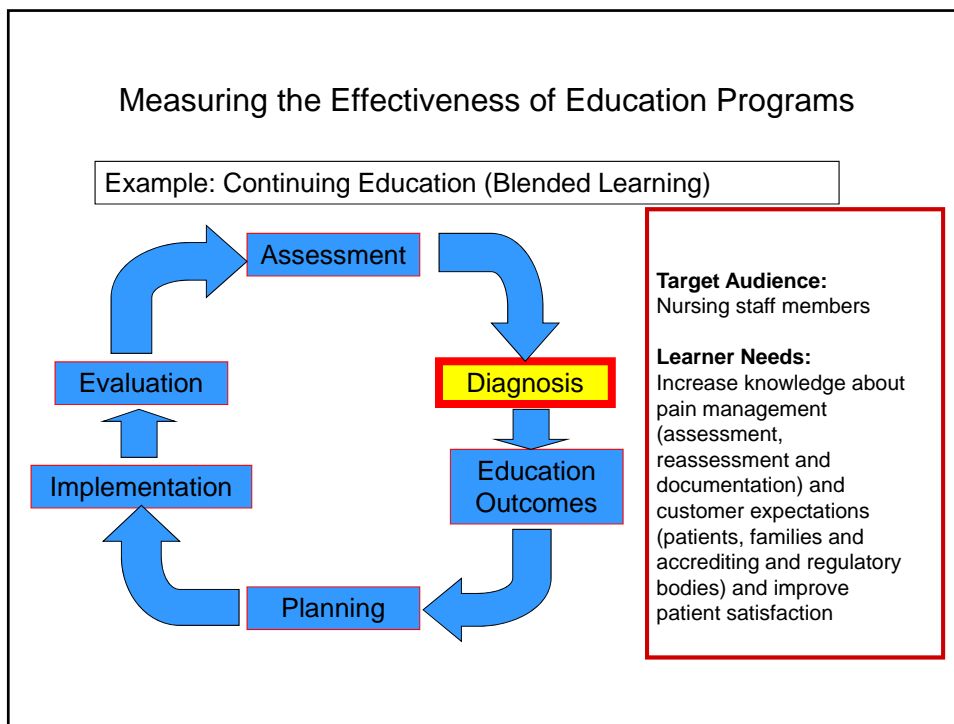
Counts (raw numbers, percentages and rates) to dollars (saved and/or spent)

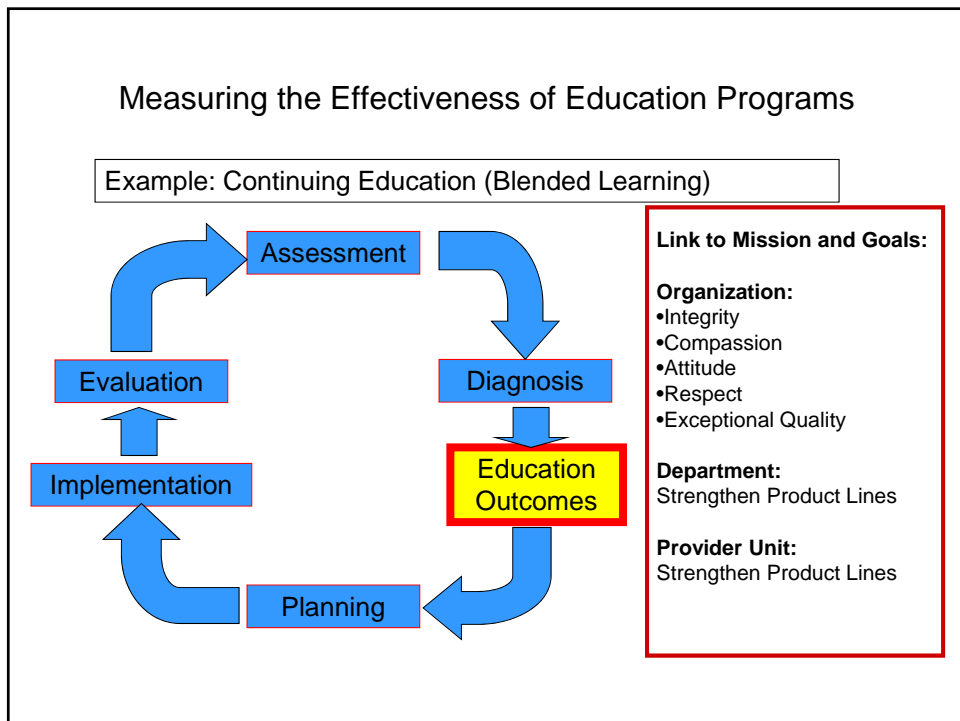
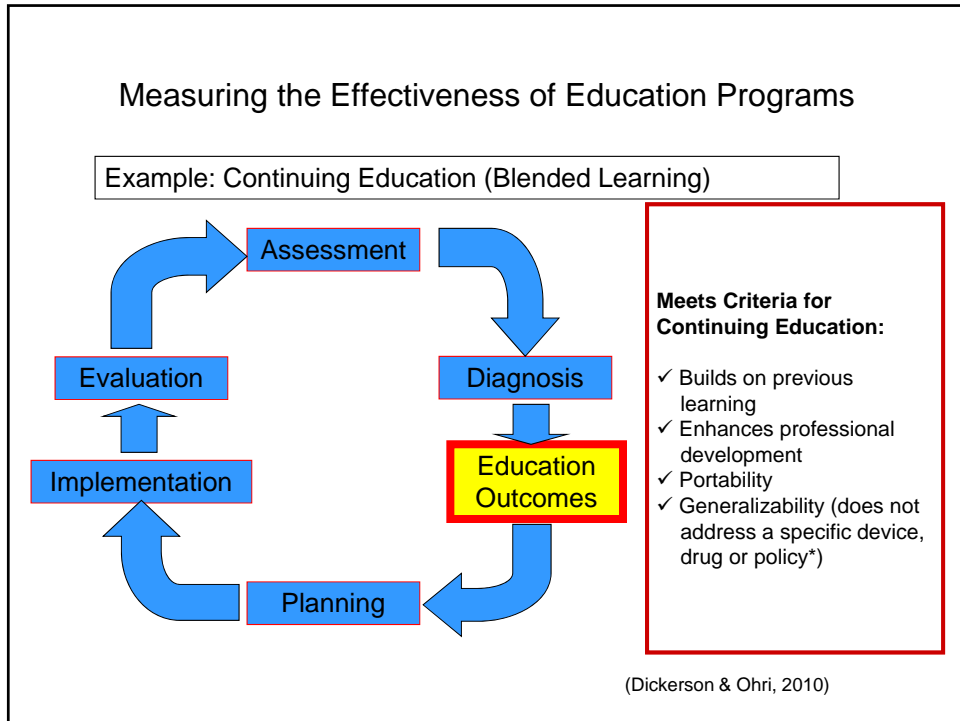
(Rodriguez, 1996 and Adrienne, 1998)

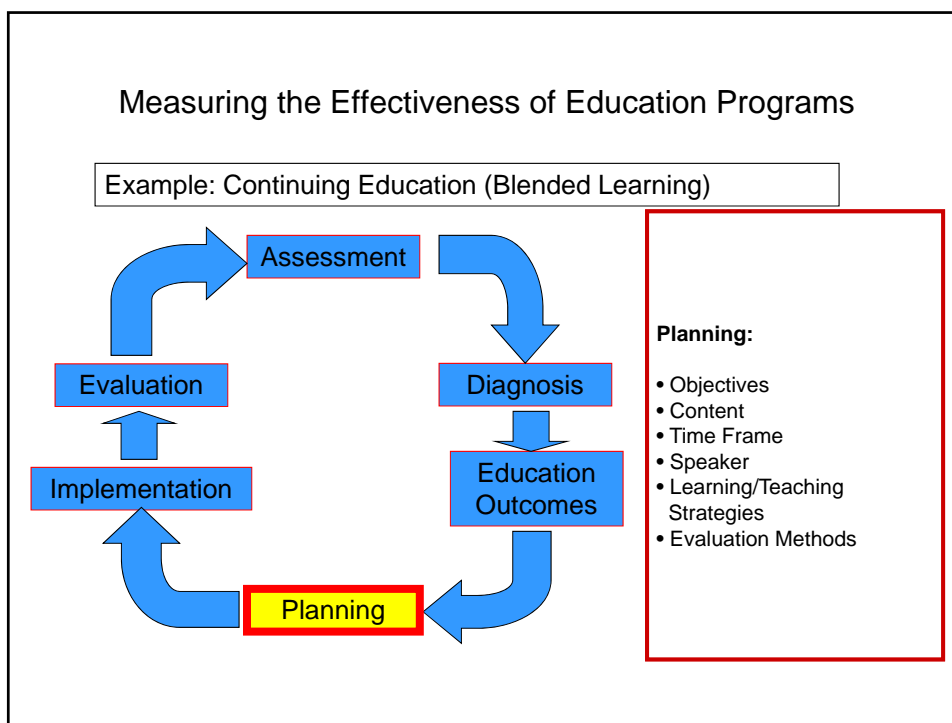












Measuring the Effectiveness of Education Programs

Example: Continuing Education (Blended Learning)

Objectives	Content	Time	Speaker	Learning/ Teaching Strategies	Evaluation Methods
Define pain	Definition Authority Rights Responsibilities Types of pain Effects of Unrelieved pain	20 min	Computer Based Training	Power Point Interactive Questions Within Program	Reaction: Survey Learning: Knowledge Post Test

Knowledge

Measuring the Effectiveness of Education Programs

Example: Continuing Education (Blended Learning)

Objectives	Content	Time	Speaker	Learning/ Teaching Strategies	Evaluation Methods
Discuss 3 major elements of pain management	Assessment •Tools Reassessment Education (PT)	10 min	Computer Based Training	Power Point Interactive Questions Within Program	Reaction: Survey Learning: Knowledge Post Test

Comprehension

Measuring the Effectiveness of Education Programs

Example: Continuing Education (Blended Learning)

Objectives	Content	Time	Speaker	Learning/ Teaching Strategies	Evaluation Methods
Describe pain assessment in special populations	Pediatric Geriatric Cognitively Impaired Non-verbal	25 min	Computer Based Training	Power Point Interactive Questions Within Program	Reaction: Survey Learning: Knowledge Post Test

Comprehension

Measuring the Effectiveness of Education Programs

Example: Continuing Education (Blended Learning)

Objectives	Content	Time	Speaker	Learning/ Teaching Strategies	Evaluation Methods
Describe the principle of last dose or double effect	End of life concerns Ethical concerns ANA Statement	5 min	Computer Based Training	Power Point Interactive Questions Within Program	Reaction: Survey Learning: Knowledge Post Test

Comprehension

Measuring the Effectiveness of Education Programs

Example: Continuing Education (Blended Learning)

Objectives	Content	Time	Speaker	Learning/ Teaching Strategies	Evaluation Methods
Demonstrate organizational pain management expectations	Assessment Reassessment Documentation Education (PT) HCAHPS Case Study Role Play 1 Role Play 2 Role Play 3	10 min* 20 min*	L. Pelt, BSN, RN S. Brown, AD, RN	Review Case Study Role Playing Discussion Q & A	Reaction: Survey Learning: Skill Simulation

Application

Measuring the Effectiveness of Education Programs

Example: Continuing Education (Blended Learning)

Objectives	Content	Time	Speaker	Learning/ Teaching Strategies	Evaluation Methods
Demonstrate organizational pain management expectations	Assessment Reassessment Documentation Education (PT) Case Study Role Play 1 Role Play 2 Role Play 3	10 min* 20 min*	L. Pelt, BSN, RN S. Brown, AD, RN	Review Case Study Role Playing Discussion Q & A	Behavior: Pre Assessment Post Assessment Patient Education Impact: HCAHPS Scores Staff Competency Patient Complaints Patient Satisfaction

Application

Learning: Knowledge (Test – Pass 80%) Objective # 4 CBT

Ms. P. is dying of cancer. She has been admitted for end of life care. She has DNR and comfort measure orders. Ms. P. is complaining of pain. Her respiratory rate is 8 and her SpO₂ is 90% on 2 L/NC. The nurse is worried that the ordered dose may suppress Ms. P.'s respirations. Which action statement best reflects what the nurse should do?

1. Withhold the dose
2. Give ½ of the ordered dose
3. Give ¾ of the ordered dose
4. **Give all of the ordered dose**

This is the principle of "Last Dose Syndrome" or "Principle of Double Effect". Nurses should not hesitate to use full and effective doses of pain medication for the proper management of pain in the dying patient. The increasing titration of medication to achieve adequate symptom control, even if hastening death secondarily, is ethically justified (ANA Position Statement of Promotion of Comfort and Relief of Pain in Dying Patients, 1991).

The following options, ½ and ¾ of the ordered dose would require clarification from the physician (Scope of Practice – Prescriptive Authority).

Learning: Skill (Simulation) Classroom

Role Playing 1 – Instructor 1: Ms. H; Instructor 2: Facilitator and Observer

Ms. H., a 45 year old admitted two days ago with a ruptured appendix, is complaining of back pain.

Perform a full pain assessment

Assessment (score, timing, quality, character, factors, observation, physical exam)

What is the expected time interval for pain reassessment post pain medication?

Reassessment (within one hour)

What are the expected event intervals for pain education for patients / family?

Education (admission and with every pain event)

Demonstrate electronic documentation of pain management activities

Documentation (history, goal, assessment, reassessment, education)

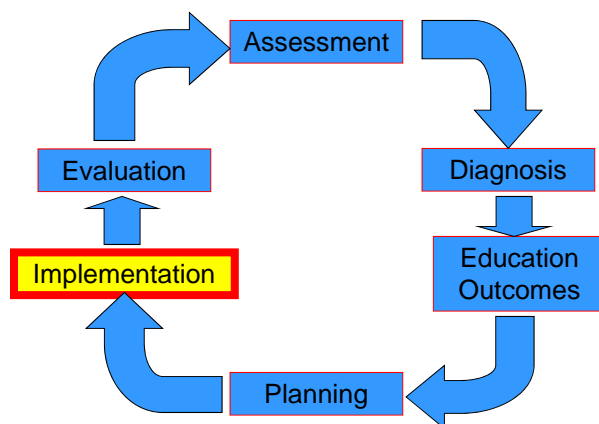
Pass

Pass with remediation

Instructor Comments:

Measuring the Effectiveness of Education Programs

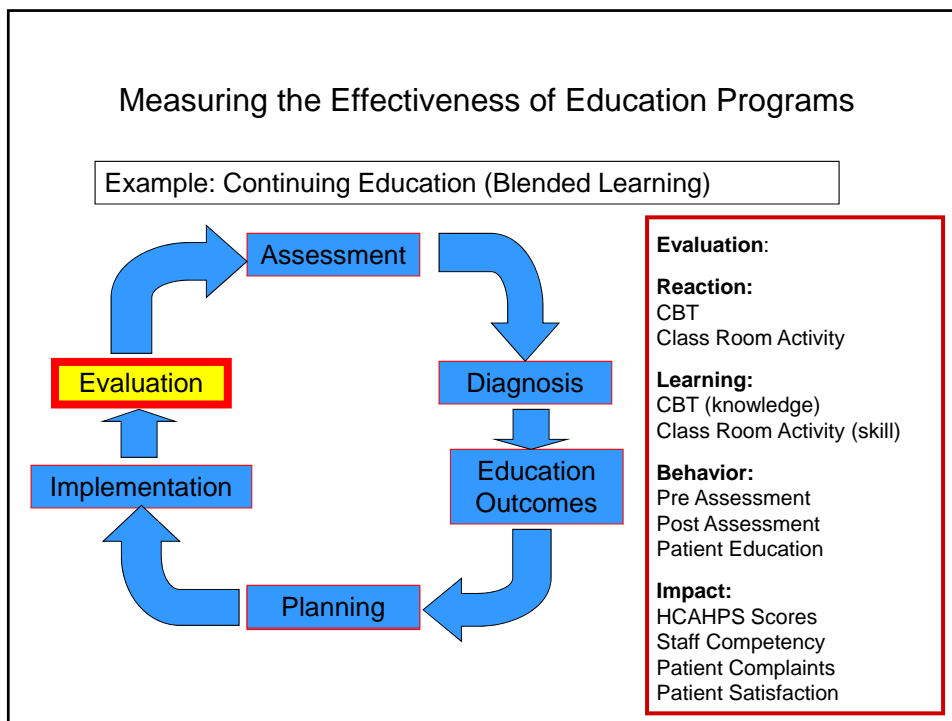
Example: Continuing Education (Blended Learning)



Implementation:

Instructions for successful completion of CBT activity

Instructions for successful completion of class room activity



Reaction: CBT and Classroom

For the areas below, use the following scale:						
1	=	Unsatisfactory				
2	=	Fair				
3	=	Average				
4	=	Very Good				
5	=	Excellent				
CONTENT	Relevance to Professional Practice	1	2 x 1	3 x 16	4 x 62	5 x 21
	Met Personal Objectives	1	2 x 1	3 x 20	4 x 70	5 x 9
	Objectives Support of Overall Purpose/Goal	1	2 x 1	3 x 20	4 x 63	5 x 16
	Advertised Objective # 1 was met	1	2	3 x	4 x 10	5 x 90
	• Define pain					
	Advertised Objective # 2 was met	1	2	3 x	4 x 10	5 x 90
	• Discuss 3 major elements of pain management					
	Advertised Objective # 3 was met	1	2	3 x 5	4 x 20	5 x 75
	• Describe pain assessment in special populations					
	Advertised Objective # 4 was met	1	2X20	3 x 40	4 x 40	5 x 0
	• Describe the principle of last dose or double effect					
	Advertised Objective # 5 was met	1	2	3 x	4 x 15	5 x 86
• Demonstrate organizational pain management expectations						

Reaction: CBT and Classroom

CBT	Content Clear and Organized	1 x 1	2	3 x	4 x 12	5 x 87	
	Material Presented Effectively	1 x 1	2	3 x	4 x 12	5 x 87	
	Teaching Methods Facilitated Learning	1 x 1	2	3 x	4 x 12	5 x 87	
ROOM & SPEAKER	Speaker 1	Content Clear and Organized	1 x 1	2	3 x	4 x 12	5 x 87
	Pelt	Presents Subject Material Effectively	1 x 1	2	3 x	4 x 12	5 x 87
		Instructional Aids Supported Presentation	1 x 1	2	3 x	4 x 12	5 x 87
		Teaching Methods Facilitated Learning	1 x 1	2	3 x	4 x 12	5 x 87
	Speaker 2	Content Clear and Organized	1x1	2	3 x	4 x 10	5 x 88
	Brown	Presents Subject Material Effectively	1x1	2	3 x	4 x 10	5 x 88
		Instructional Aids Supported Presentation	1x1	2	3 x	4 x 10	5 x 88
		Teaching Methods Facilitated Learning	1x1	2	3 x	4 x 10	5 x 88
	Physical Facility is Conducive to Learning		1	2	3 x 2	4 x 68	5 x 30
	Room Temperature		1	2	3 x 2	4 x 68	5 x 30
	AV Support		1	2	3 x 2	4 x 68	5 x 30
	Seating		1	2	3 x 2	4 x 68	5 x 30

Reaction: CBT and Classroom

CONFIDENCE	Did you learn anything today that increased your knowledge?	Yes x 80	No x 20	
	Did you learn anything today that improved your skills?	Yes x 80	No x 20	
	Did you learn anything today that will impact your practice?	Yes x 80	No x 20	
	Are there any barriers in your work environment that will prevent you from using your new knowledge and skills in your practice?	Yes x 0	No x 100	N/A x 0
	Please list and explain the barriers: None listed			

Reaction: CBT and Classroom

		Things That Went Well	Things That Need To Be Improved
COMMENTS		Case Study 42	Times not convenient x 38
		Refreshments x 1	
		Contact Hours x 4	
		General Comments: Good class x 57	

Learning: Knowledge (Test)

Average Post Test Score: 80 Test A: 72 Test B: 18

Test Item Analysis (Missed Items)

1	Objective 1 - 1
2	Objective 1 - 10
3	Objective 1 - 8
4	Objective 2 - 6
5	Objective 2 - 4
6	Objective 3 - 2
7	Objective 3 - 2
8	Objective 3 - 9
9	Objective 4 - 24
10	Objective 4 - 36

Learning: Skill (Simulation)

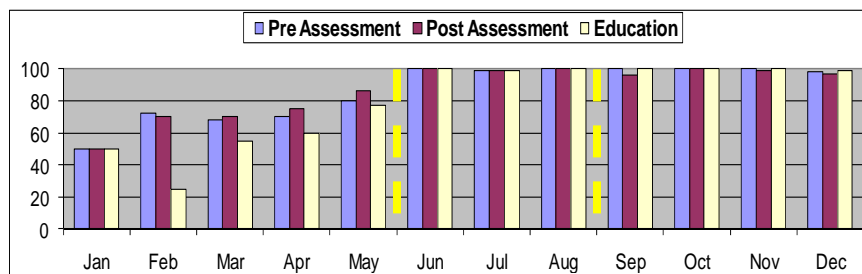
Perform a full pain assessment
 Assessment (score, timing, quality, character, factors, observation, physical exam)
 Pass: 100 Remediation: 0

What is the expected time interval for pain reassessment post pain medication?
 Reassessment (within one hour)
 Pass: 100 Remediation: 0

What are the expected event intervals for pain education for patients / family?
 Education (admission and with every pain event)
 Pass: 100 Remediation: 0

Demonstrate electronic documentation of pain management activities
 Documentation (history, goal, assessment, reassessment, education)
 Pass: 90 Remediation: 10

Behavior:



Up is Good!

Impact: HCAHPS Scores (Composite)

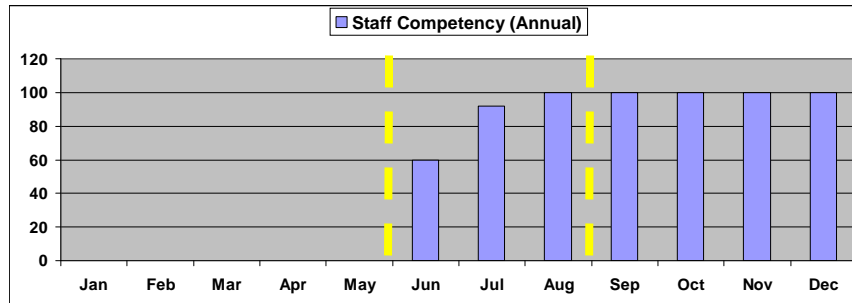
Q13 Pain well controlled

Q14 Staff did everything they could do to help your pain

≥ 75

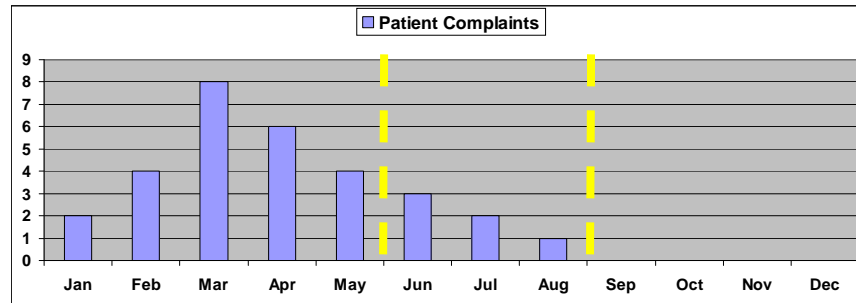
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Domain Score	70	72	75	67	72	70	72	74	75	78	80	79

Impact: Human Resources



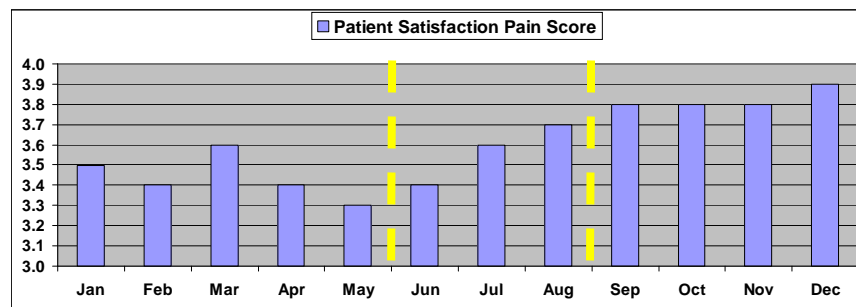
Up is Good!

Impact: Quality

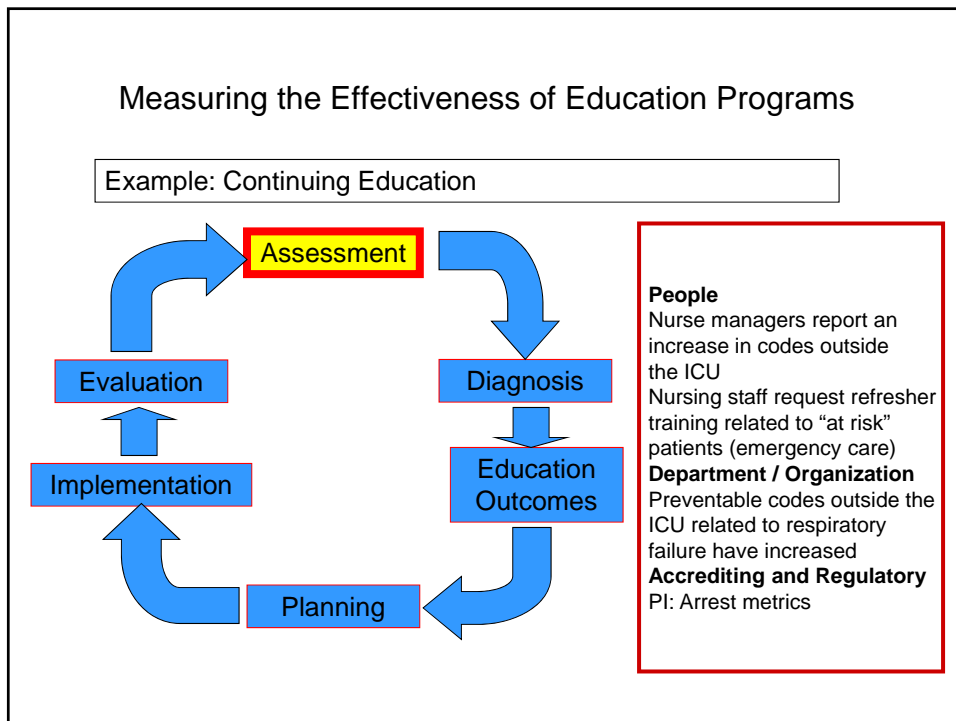
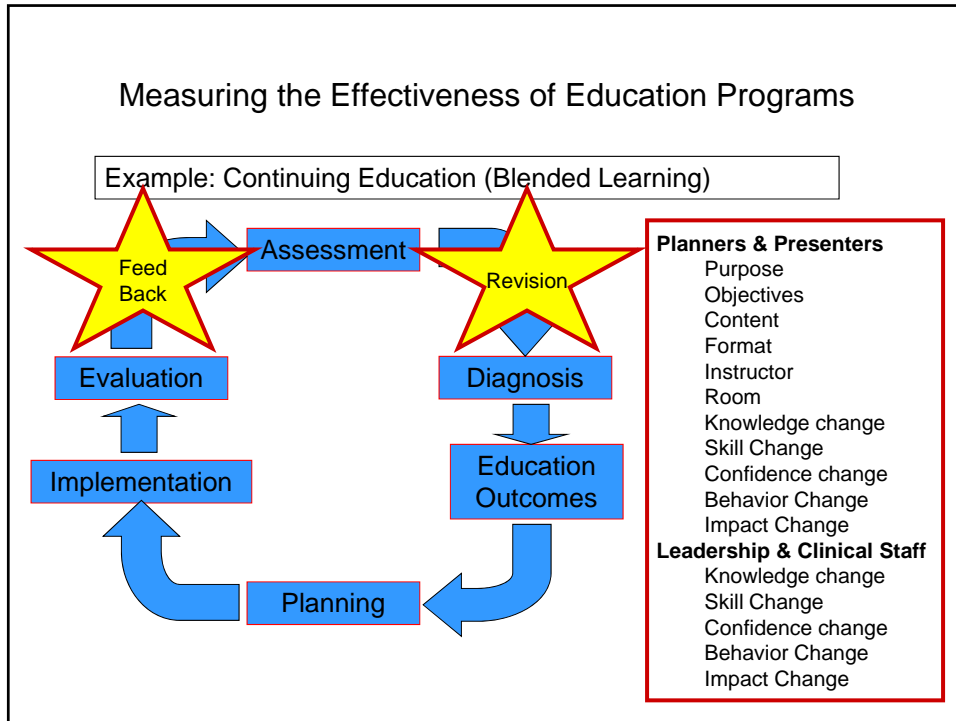


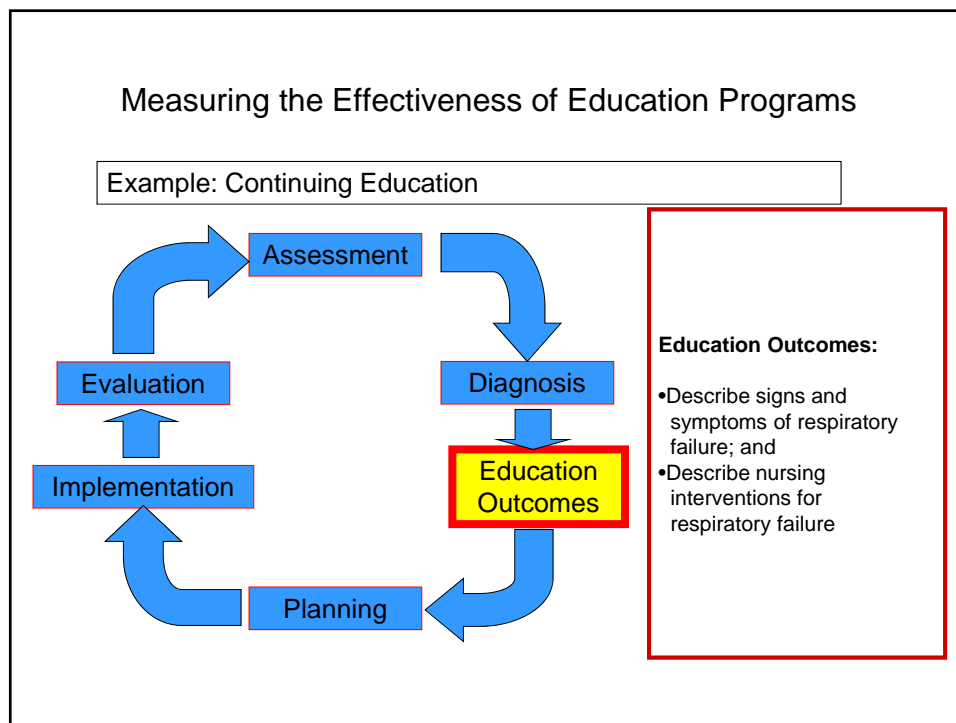
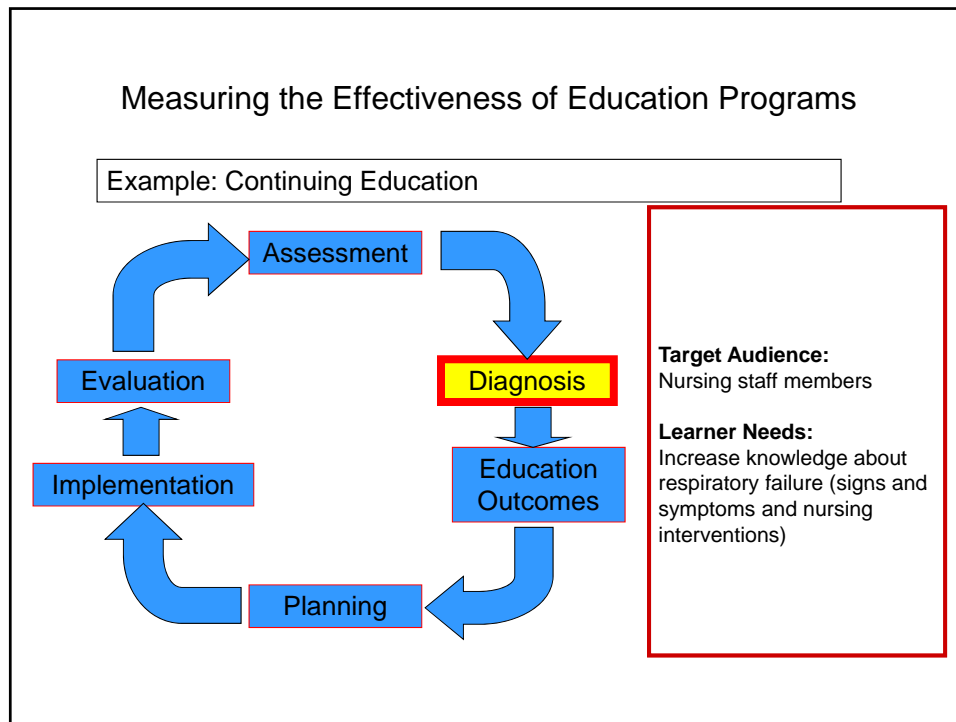
Down is Good!

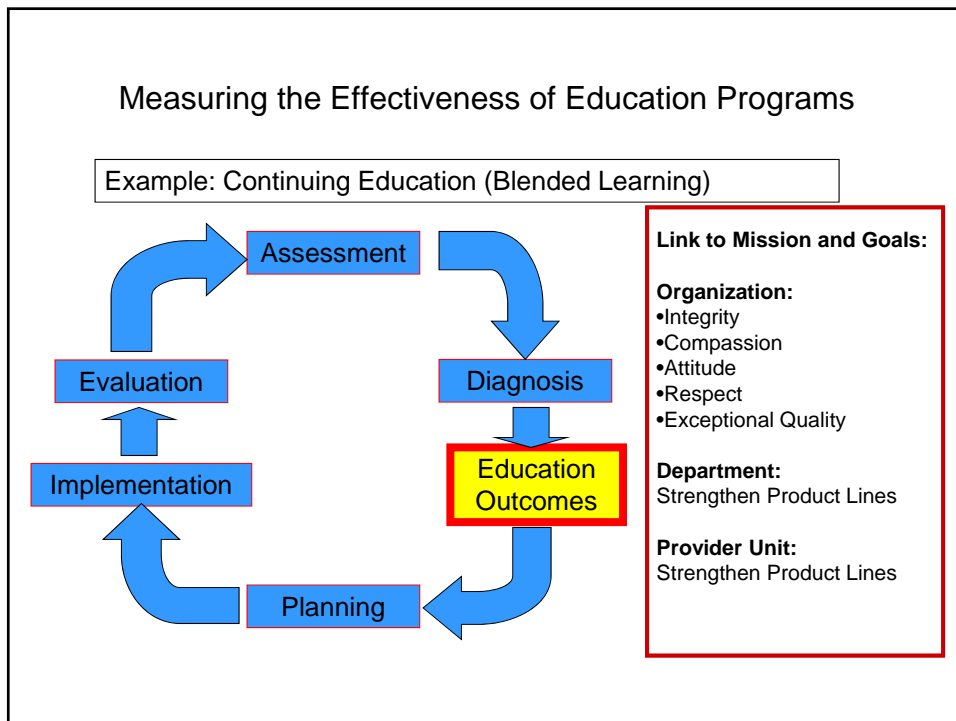
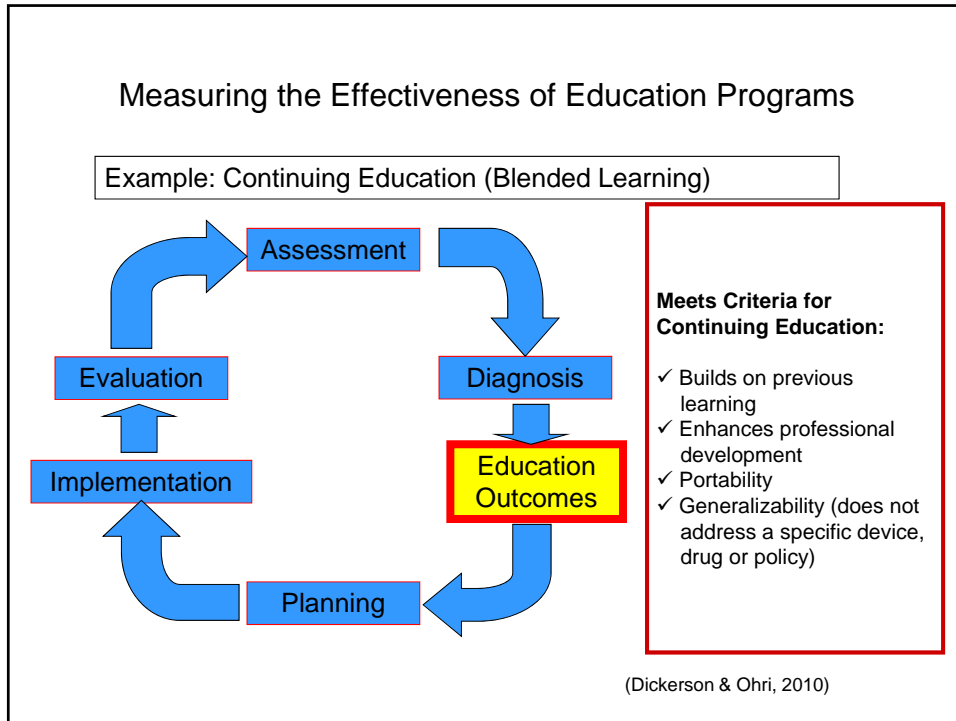
Impact: Quality

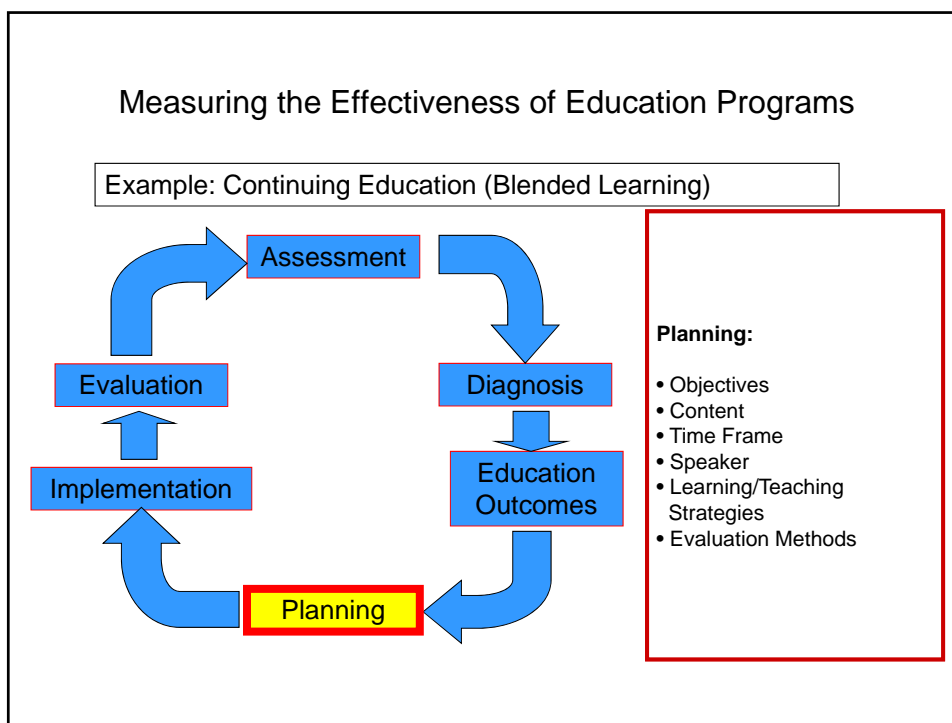


Up is Good!









Measuring the Effectiveness of Education Programs

Example: Continuing Education

Objectives	Content	Time	Speaker	Learning/Teaching Strategies	Evaluation Methods
Describe signs and symptoms of respiratory failure Comprehension	Definition Causes Risk factors Assessment •Signs •Symptoms Special considerations •Anemia •Obesity •Snoring/OSA	15 minutes	Hanna	Power Point Discussion Simulation Interactive Questions Within Program	Reaction: Survey Learning: Knowledge Post Test Confidence Behavior: Survey (3 mo) Impact: # of preventable codes outside The ICU related to respiratory failure

Measuring the Effectiveness of Education Programs

Example: Continuing Education (Blended Learning)

Objectives	Content	Time	Speaker	Learning/ Teaching Strategies	Evaluation Methods
Describe nursing Interventions for respiratory failure Comprehension	Goals <ul style="list-style-type: none"> •Maintain airway •Improve O2 •Improve CO2 •Treat underlying cause To do list <ul style="list-style-type: none"> •Protocols •RRT •Physician •Documentation 	15 minutes	Hanna	Power Point Discussion Simulation Interactive Questions Within Program	Reaction: Survey Learning: Knowledge Post Test Confidence Behavior: Survey (3 mo) Impact: # of preventable codes outside The ICU related to respiratory failure

Learning: Knowledge (Test Pre-Post) Objective # 2

Ms. W. is a 27 year old patient in a medical surgical care area. She is a recent transfer from the ICU. While admitting her to the room she states that she is "...unable to breathe..." You note her respirations are rapid and shallow. You note she is on a face mask at 50%. While taking her vital signs a MEWS alert is triggered for a score equal to or higher than 5. As you review her vital sign and MEWS trends you note the following:

UNIT	TIME	T	HR	RR	BP	SpO2	NEURO STATUS	TOTAL MEWS
ICU	0000	97.8	109	58	114/70	95	Awake	4
ICU	0400	98.6	110	42	107/66	95	Awake	4
ICU	0751	98.7	120	45	109/67	96	Lethargic	6
ICU	1040	99.1	120	54	105/68	93	Lethargic	6
MS	1445	100.4	130	68	121/68	93	Awake	6

Learning: Knowledge (Test Pre-Post) Objective # 2

Select and prioritize interventions.

1. Maintain a patent airway
2. Maintain breathing
3. Improve oxygen levels
4. Call a Code Blue
5. Call the RRT and/or physician
6. Monitor the patient and report any further deterioration because the physician knows that the patient is in respiratory failure.

Statements 1, 2, 4, 6

Statements 1, 2, 3, 5

Statements 3, 4, 5, 6

Statements 1, 2, 3, 4

AK: The correct interventions, in order of prioritization, are maintain a patent airway, maintain breathing, improve oxygen levels and call the RRT and/or physician. Option 4 - The patient is not quite ready for a Code Blue (awake and alert). Option 6 – As humans we are prone to mistakes. Often, we don't question things because we perceive someone as having more information. In this scenario the physician and intensive care nurse underestimated the severity of the patient's condition. If something seems wrong please speak up! In this scenario the medical surgical nurse notified the Rapid Response Team and the physician (chain of command). The patient was moved back to the intensive care unit.

Learning: Skill (Simulation)

Case One: Respiratory Failure: Hypoxemia

53 year old male with pneumonia

Problem: Use of low and high flow oxygen and COPD

Case Two: Respiratory Failure: Hypercapnea

62 year old male with gastric resection

Problem: Positioning of morbidly obese patient

Case Three: Respiratory Failure: Hypoxemia and Hypercapnea

60 year old male with altered mental status

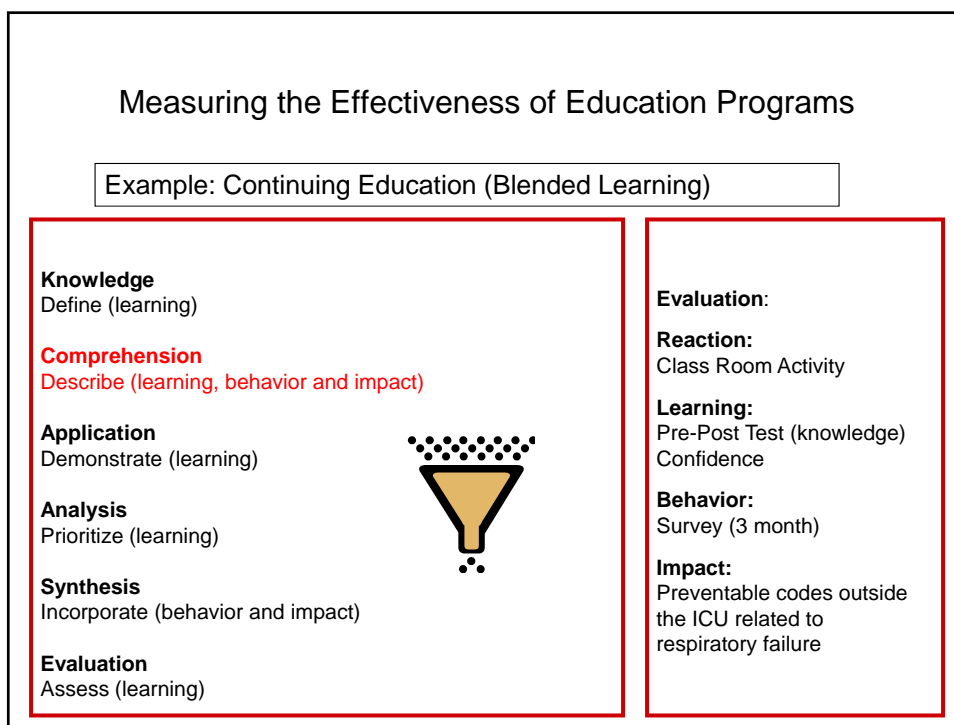
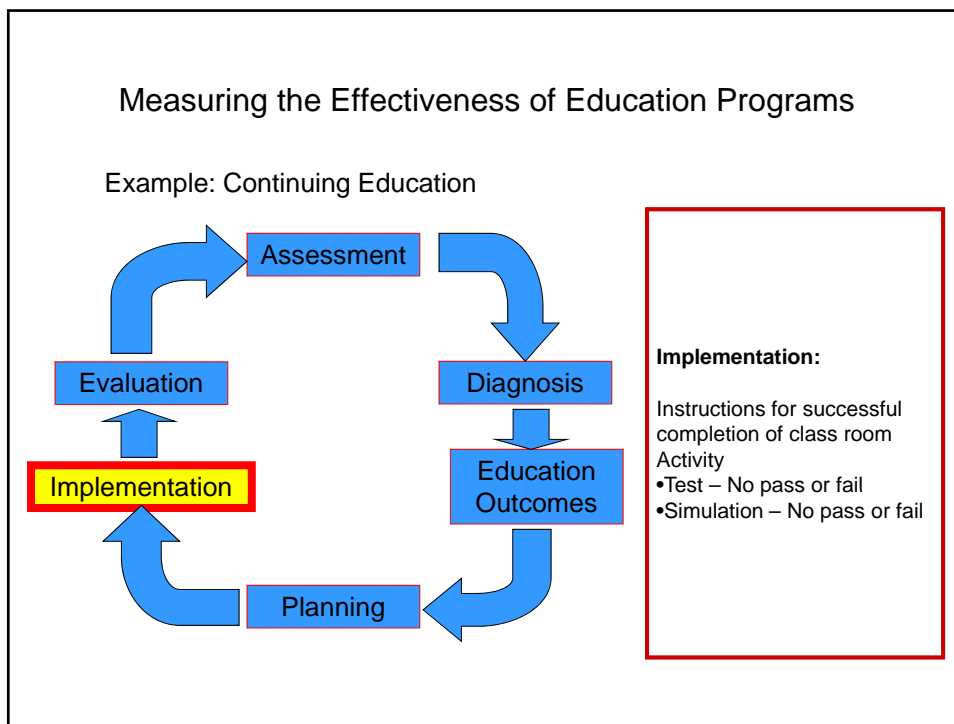
Problem: Apply 100% NRB instead of 100% BVM

•History

•Chief complaint

•Physical assessment

•Vital signs, neuro status, SpO2, MEWS, laboratory values



Reaction: Classroom

CONTENT	For the areas below, use the following scale: 1 = Unsatisfactory 2 = Fair 3 = Average 4 = Very Good 5 = Excellent					
	Relevance to Professional Practice	1	2	3x1	4	5x4
	Met Personal Objectives	1	2	3x1	4x1	5x3
	Objectives Support of Overall Purpose/Goal	1	2	3x1	4x1	5x3
	Advertised Objective # 1 was met	1	2	3	4x2	5x3
	• Describe signs and symptoms of respiratory failure					
	Advertised Objective # 2 was met	1	2	3	4x2	5x3
	• Describe nursing interventions for respiratory failure					

Reaction: Classroom

ROOM & SPEAKER	Speaker 1	Content Clear and Organized	1	2	3x2	4	5x3	
	Hanna	Presents Subject Material Effectively	1	2	3x2	4	5x3	
		Instructional Aids Supported Presentation	1	2	3x1	4x1	5x3	
		Teaching Methods Facilitated Learning	1	2x1	3x1	4	5x3	
		Physical Facility is Conducive to Learning	1	2	3x1	4x1	5x3	
		Room Temperature	1	2	3x1	4x2	5x2	
		AV Support	1	2	3	4x2	5x3	
	Seating	1	2	3	4x3	5x2		
BIAS	Was the information presented fair, balanced and without bias?			Yesx5		No		

Reaction: Classroom

CONFIDENCE	Did you learn anything today that increased your knowledge?	Yesx5	No	
	Did you learn anything today that improved your skills?	Yesx5	No	
	Did you learn anything today that will impact your practice?	Yesx5	No	
	Are there any barriers in your work environment that will prevent you from using your new knowledge and skills in your practice?	Yesx1	Nox4	N/A
	Please list and explain the barriers:			
Have anxiety re calling XXXXXXXXX surgeons and having anger directed at me for calling with issues (respiratory). Rapid response often overlooked and unable to respond.				

Reaction: Classroom

COMMENTS	Things That Went Well With The Learning Event	Things That Need To Be Improved With The Learning Event
	Refreshed my memory re resp failure and distress and I will be more prudent; Did like the relevance of the real case scenarios; It was OK;	It was confusing for the presenter to do something "wrong" in the scenario. Would rather go through steps of how to handle case "right"; Class could have been longer
General Comments:		
Informative; I would really like for this class to be longer; It was very informative		

Learning: Knowledge (N=27)

MEAN Test Score: Pre Post
57.04 83.7

Test Item Analysis (Missed Items)

- 1 Objective 1 – 4 (definition)
- 2 Objective 1 – 1 (causes)
- 3 Objective 1 – 9 (risk factors)
- 4 Objective 1 – 5 (assessment)
- 5 Objective 2 – 3 (intervention)

Paired T Test**Learning: Knowledge (Test Pre-Post) Objective # 2**

Prioritize the patients from the highest to the lowest risk of respiratory failure.

1. 18 year old female admitted for vaginal bleeding; Medical history negative
2. 48 year old female admitted for gastric bypass; Medical history positive for diabetes, hypertension and morbidly obesity
3. 60 year old male admitted for pneumonia; Medical history positive for hypertension
4. 75 year old male admitted for lung resection; Medical history positive for cancer, COPD, diabetes, heart disease, obstructive sleep apnea and obesity

- Patients 1, 2, 3, 4
- Patients 4, 3, 2, 1
- Patients 3, 4, 1, 2
- Patients 4, 2, 3, 1

AK: Patient 4 risks: surgical incision between neck and groin (will use narcotics for post pain control), COPD, obstructive sleep apnea and obesity (5); Patient 2 risks: surgical incision between neck and groin (will use narcotics for post pain control), obesity (3); Patient 3 risks: pneumonia (1); Patient 1 risks: none unless the anemia is profound (0)

Learning: Confidence (N=27)

Confidence level with correctly recognizing respiratory failure (1 = Lowest – 10 Highest):

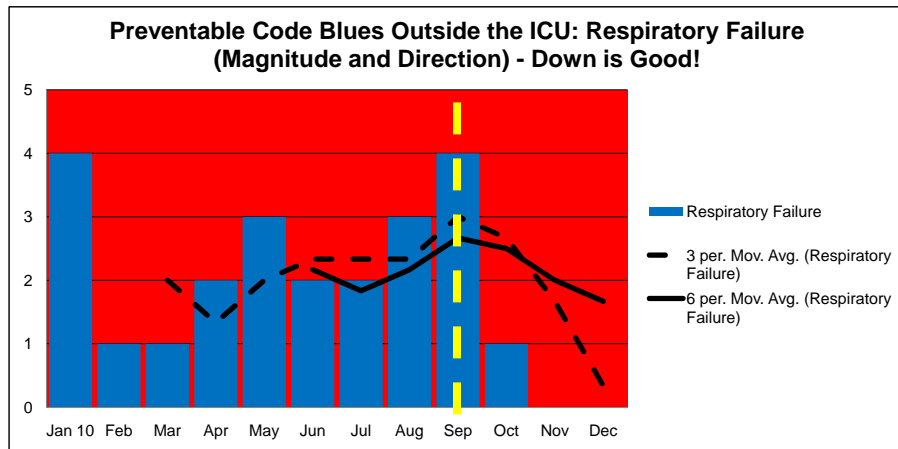
MEAN	Pre	Post
	6.65	7.85

Confidence level with correctly intervening for respiratory failure (1 Lowest – 10 Highest):

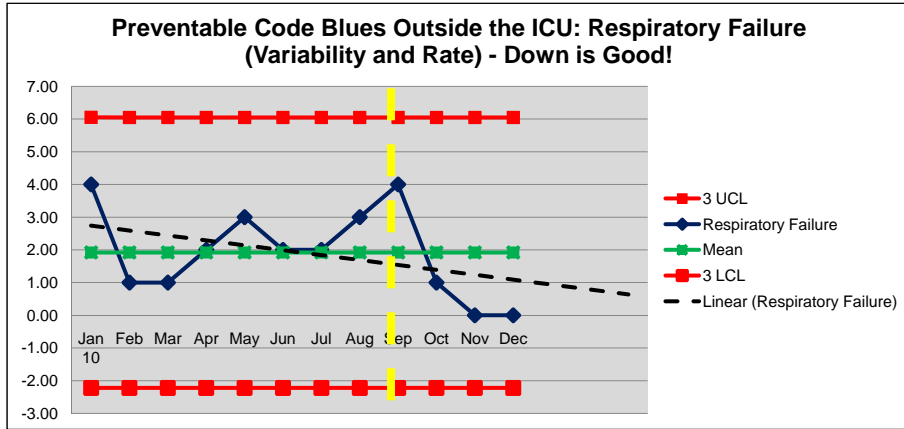
MEAN	Pre	Post
	6.54	7.77

Wilcoxon Paired Signed Rank Test

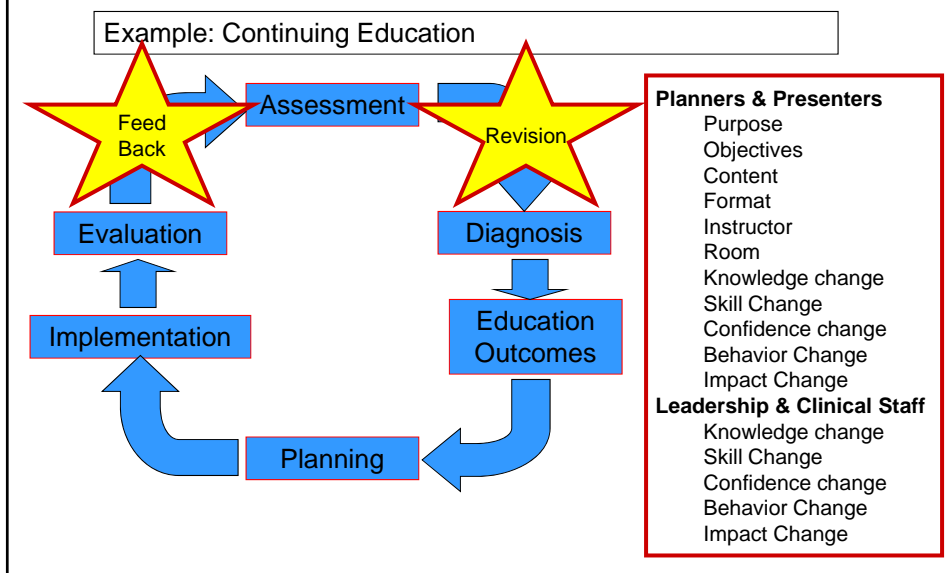
Impact: Quality



Impact: Quality



Measuring the Effectiveness of Education Programs



Measuring the Effectiveness of Education Programs

Objectives

- Upon completion of this continuing education activity, participants should be able to:
 - Define effectiveness as a measurement of educational activities.
 - Identify key institutional criteria for measuring effectiveness of education.
 - Differentiate effectiveness vs. outcomes of educational activities in healthcare education.
 - Differentiate effectiveness and evaluation of educational activities in healthcare education.



Measuring the Effectiveness of Education Programs

References

- Adrienne, A. (1998). The redesign of nursing staff development. Florida: National Nursing Staff Development Organization.
- American Nurses Association. (2007). Scope and standards of practice for nursing professional development. Maryland: Nursesbooks.org
- Dickerson, P., & Ohri, Z. (2010, June). Where are we and where are we going? In the Continuing Education Provider Training Seminar. Symposium conducted at the meeting of the Tennessee Nurses Association, Nashville, Tennessee.
- Joint Commission. (2008). Comprehensive accreditation manual for hospitals. CMC Intranet.
- Joint Commission. (2010). Comprehensive accreditation manual for hospitals. CMC Intranet.
- Rodriguez, L, Patton, C., Stiesmeyer, J., & Teikmanis, M. (1996). Manual of staff development. Missouri: Mosby.
- Wright, D. (2010). Competency Verification Methods: Going Beyond Checklists and Skills Fairs. Webinar hosted by Halogen.