

Good-bye Traditional– Hello Virtual!

Engage Your Students in Active Learning Using Technology

Objectives

After viewing this presentation, the participant will be able to:

1. *Discover the meaning of active learning*
2. *Identify three key instruments for effective student self-direction*
3. *Explore strategies on promoting active learning*

The Universal Nurse Educator

Transition to Practice

- Confidence
- Competence

Cost/Fees

- Cost for institution
- Cost for student

Student Engagement

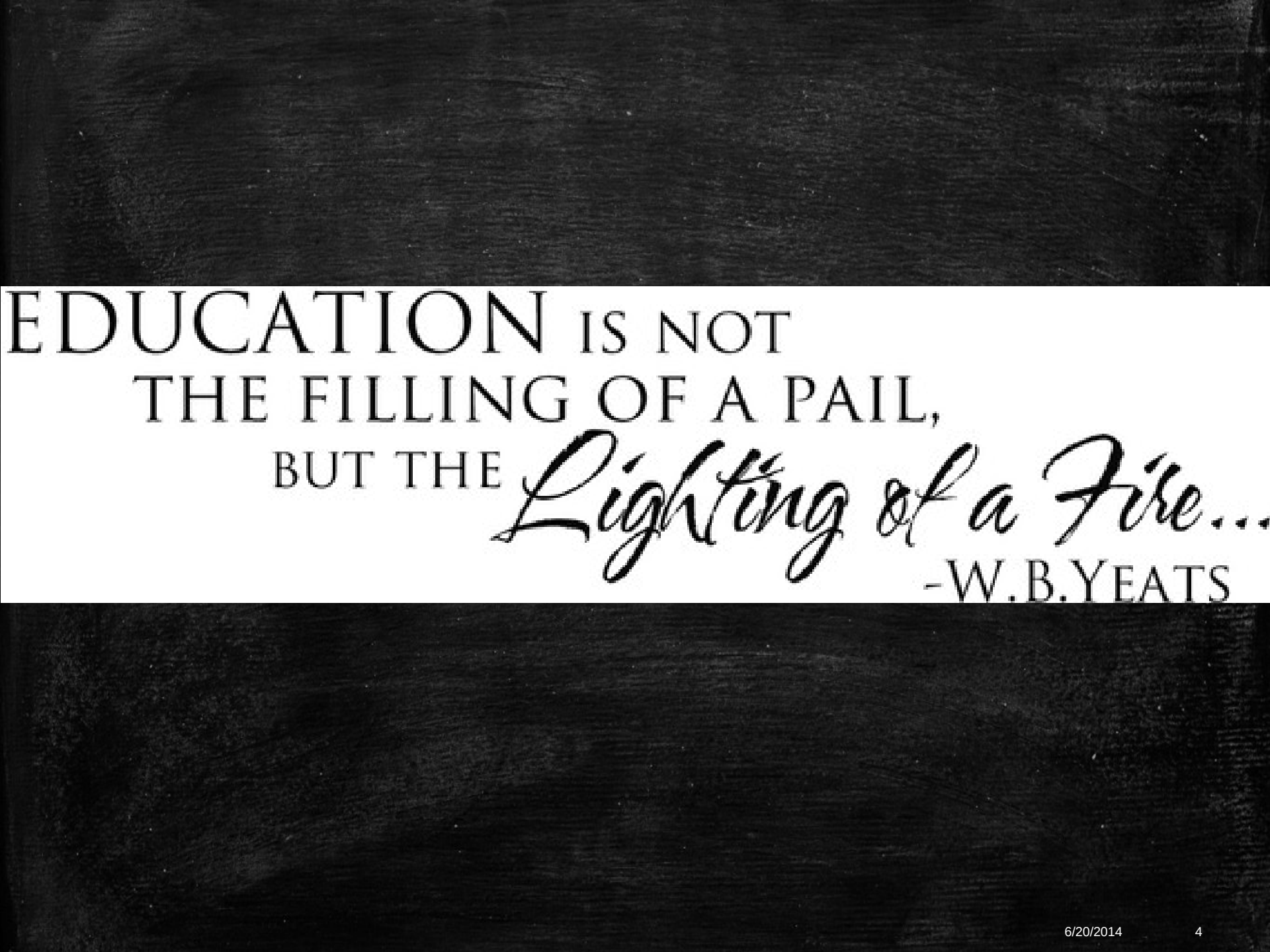
- Coming to class prepared

Clinical Placement

- Quality of site
- Lack of clinical sites

Faculty Workload

- Research and scholarship
- Integration of new products
- Innovation


EDUCATION IS NOT
THE FILLING OF A PAIL,
BUT THE Lighting of a Fire...
-W.B.YEATS

Active Learning

Active Learning

What exactly does that mean?

- Involves participation
- Stimulates higher cognitive processes
- Actively engages
- Increases critical thinking

Active Learning

Advantages

- Increases critical thinking
- Reveals how students think
- Reveals misconceptions during the learning process

Active Learning

Disadvantages

- Faculty awareness of difficult concepts
- Shifts focus
- Stressful for faculty and students
- Lack of support

Orm's Top 10 to Active Learning

1. Believe in it
2. Sell it
3. Cheerlead
4. Know your stuff
5. Fight the fear
6. Fight the norm—feel "naked"
7. Change one course at a time
8. Flip your classroom
9. Say good-bye to tradition
10. Believe in yourself!

If we teach today as we did yesterday, we rob our children of tomorrow…

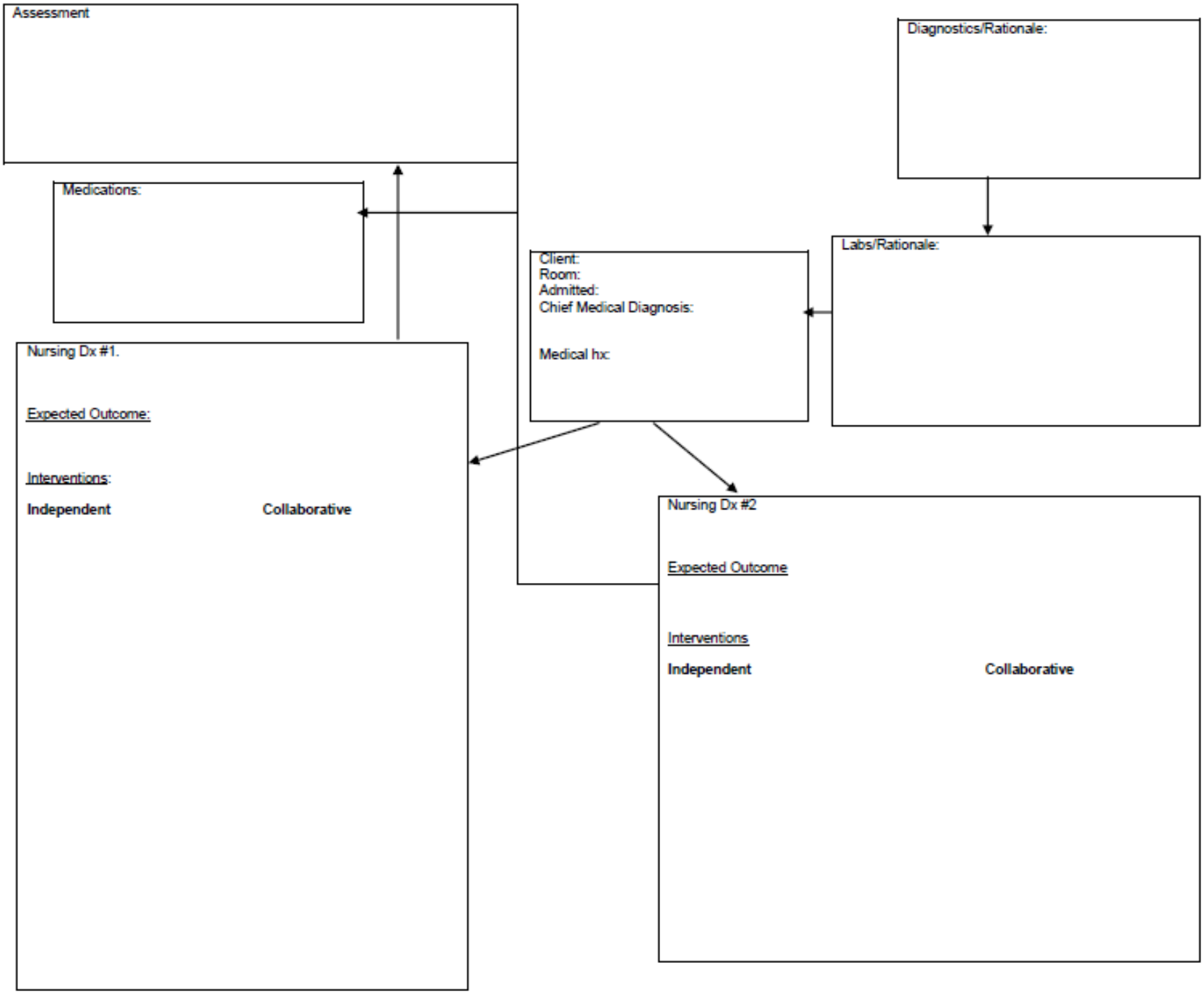
—John Dewey

Tools to Assist Active Learning

- Concept mapping
  - Pathophysiology
  - Care plans
  - Medications
- Compare/Contrast
- Case Studies/Reverse Case Studies
- Discussions with *purpose*
  - Comprehensive assessments
  - Focused remediation
  - **Computerized adaptive quizzing**
  - **Academic electronic patient charts**
  - **Virtual Simulation**

Concept Maps

PATHOPHYSIOLOGY CONCEPT MAP: Give a brief review of the following related to current disease process: (Include definition, etiology, pathophysiology, clinical manifestations, expected lab tests, medications)

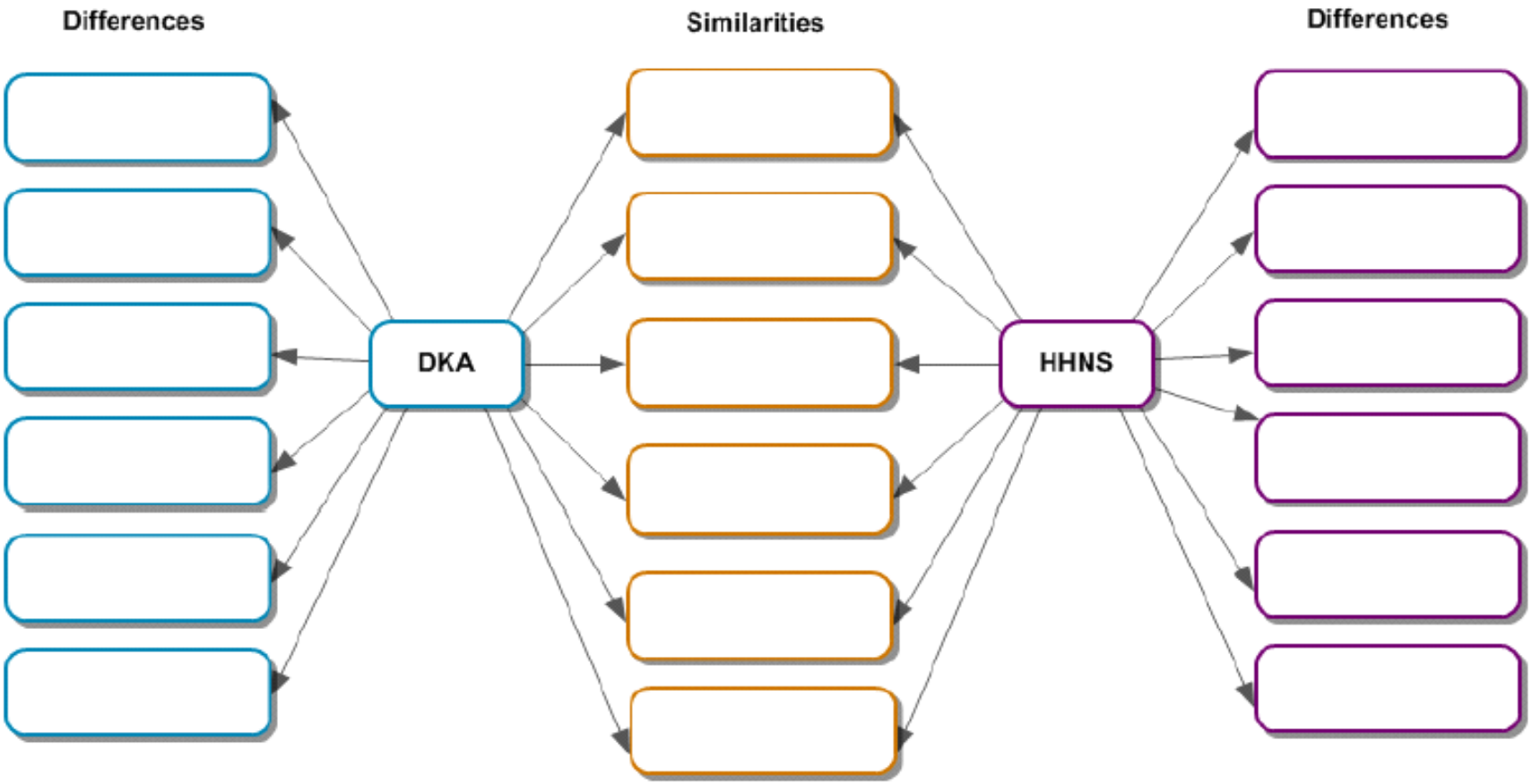

Assessment
Diagnostics/Rationale:
Medications:
Client:
Room:
Admitted:
Chief Medical Diagnosis:
Medical hx:
Labs/Rationale:
Nursing Dx #1.
Expected Outcome:
Interventions:
Independent
Collaborative
Nursing Dx #2
Expected Outcome
Interventions
Independent
Collaborative

“Passive learning is an oxymoron; there is no such thing”.

-Patricia Cross

Compare/Contrast

DKA and HHNS
Compare and Contrast



Reverse Case Studies

BEFORE Electronic Patient Records

Medications

- **Amoxycillin (Amoxil)** 1 gram po BID x 10 days
- **Clarithromycin (Klacid)** 500 mg po BID x 10 days
- **Omeprazole (Ozmep)** 20 mg po BID x 10 days
- **Lisinopril (Fibsol)** 40 mg po daily

Task

- Develop a case study and include:
  - Scenario statement
  - Pathophysiology
  - Diagnostic/Lab Tests
  - Clinical Manifestations
  - Nursing Dx
  - Interventions

Electronic Patient Records

4/30/2014 16:05 Show Learning Tips

Australia: Med-Surg: NLN I, Acute Coronary Syndrome Carl Shapiro – Part 1

Shapiro, Carl

Allergies: None

Gender: **Male** DOB: **7/20/1959** Age: **54** Height: **175.0 cm** Weight: **110.0 kg** MRN: **256978**

Diagnosis: Myocardial infarction

Facility: Newcastle Hospital, Room: C1, Bed: 4

Adm Provider: D. Py , Admitting

Adm On: 4/30/2014 16:05

Contact Precaution: Standard

Adv Directive: Full Code

Patient Information | Assessment | ADLs | Notes | Nursing Dx | Orders | MAR | I/O | Vital Signs | Diagnostics | Flowsheet

Neuro | Cardio | Respiratory | GI | GU | Musculoskeletal | Mental Health | Pain Scale | Integumentary | Vascular Access

Save Assessment | Clear | Past Assessments

Add New Musculoskeletal Assessment

Documented By:

Documented At:

0 days | 0 hours | 0 minutes | after admission

Musculoskeletal Symptoms

- Pain
- Joint Swelling
- Joint Stiffness
- Contractures
- Deformities
- Crepitus
- Weakness
- Amputation
- Fractures
- Spasm
- None

Muscle Tone / Strength

Motor Strength Grade

	All	LUE	RUE	LLE	RLE
5 / 5					
4 / 5					
3 / 5					
2 / 5					
1 / 5					
0 / 5					

Range of Motion

	All	LUE	RUE	LLE	RLE
Passive ROM					
Active Assistive ROM					
Active ROM					

Characteristic

	All	LUE	RUE	LLE	RLE
Spasm					
Paralysis					
Atrophy					

Weight Bearing / Gait / Posture

- Steady
- Independent
- Unsteady
- Dependent
- Asymmetrical
- Jerky
- Shuffling
- Spastic
- Developmentally appropriate
- Lordosis
- Scoliosis
- Kyphosis
- None
- N/A

“If you study to remember you will forget, but, if you study to understand, you will remember.”

- anonymous

Computerized Adaptive Quizzing

The National League for Nursing in the U.S. recently released a statement that addresses fair testing, which includes the following:

> "Tests and other evaluative measures should be used not only to evaluate student achievement, but, as importantly, to support student learning, improve teaching, and guide program improvements."

Adaptive Quizzing

- What is it?
  - Every time the examinee answers a question, the computer re-estimates the examinee's ability
  - With every additional answer, the ability estimate gets more precise

Prior to Adaptive Quizzing

Traditional approach

Reading requirements

Other before class preparation

After class 'catch up'

Misconceptions missed

Adaptive Quizzing

Advantages for Educator and Learner

- **Formative assessment**
- **Retrieval practice**
- **Pinpoint remediation**
- **Summative assessments**

Adaptive Quizzing

Learner Self-Assessment

- **Use Mastery Levels**
  - Student led
  - Chapter or Subject focus
  - Prior knowledge
  - Pre-class assessment
  - Post-class assessment
- **Monitor own progress**
- **Evaluate learning goals and revise**

Adaptive Quizzing

Educator Self-Assessment

- **Misconception alerts**
  - Question validity
  - Presentation of difficult concepts
  - Difficulty level/Bloom's Taxonomy
- **Identify learner's needs**
- **In class iClicker misconception quiz**

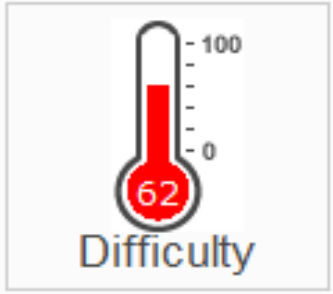
Question Example

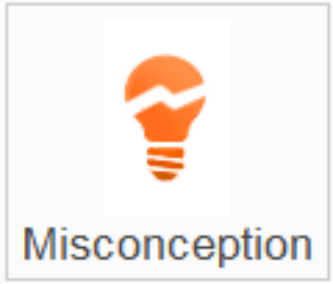
Your patient is scheduled for a tonsillectomy in the morning. Following the surgery, what will you assess the patient for?

- a) Restlessness
- b) Bradycardia
- c) Infrequent swallowing
- d) Difficulty ambulating

Submit your answer

Your patient is scheduled for a tonsillectomy in the morning. Following the surgery, what will you assess the patient for?





all students	this class	
0%	0%	**a)** Difficulty ambulating
38%	32%	**b)** Restlessness
48%	50%	**c)** Infrequent swallowing
14%	18%	**d)** Bradycardia

Explanation: Hemorrhage is a potential complication of a tonsillectomy. Increased pulse, fever, and restlessness may indicate a postoperative hemorrhage. Difficulty ambulating and bradycardia are not something you would assess a posttonsillectomy patient for. Infrequent swallowing does not indicate hemorrhage, frequent swallowing does.

Reference:
Smeltzer, S.C., and Bare, B. *Brunner & Suddarth's Textbook of Medical Surgical-Nursing,* 12th ed. Philadelphia: Lippincott Williams & Wilkins, 2009, p. 529.

(less)

Bloom's Taxonomy: 3. *Application*

"Unlearning is like quicksand. The more you fight it, the worse it gets." - Jack Uldrich

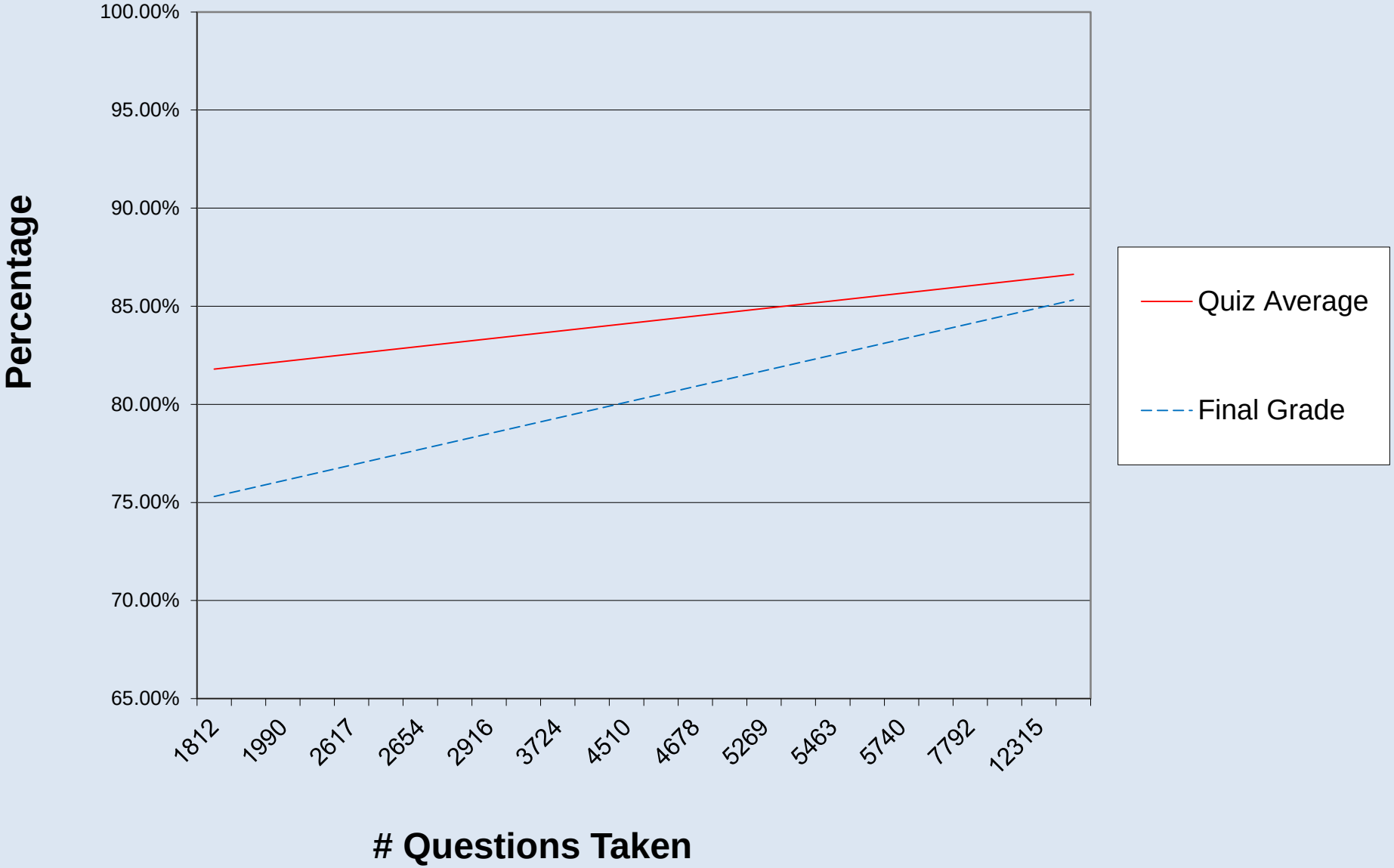
Additional Educator Advantages

Adaptive Quizzing

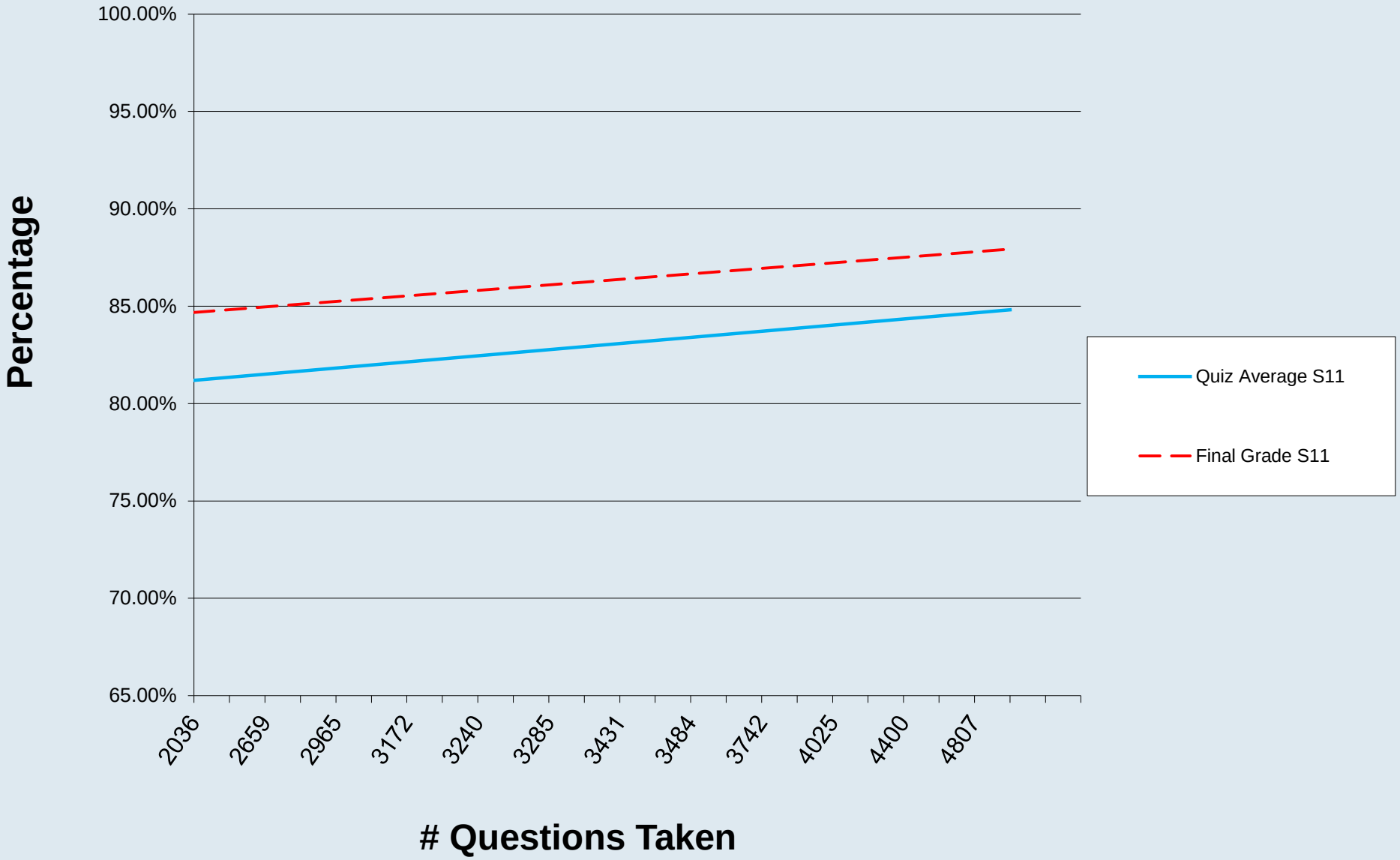
View student activity

- How many total/per quiz
- How long
- What time
- Strengths/Weaknesses
- Trends

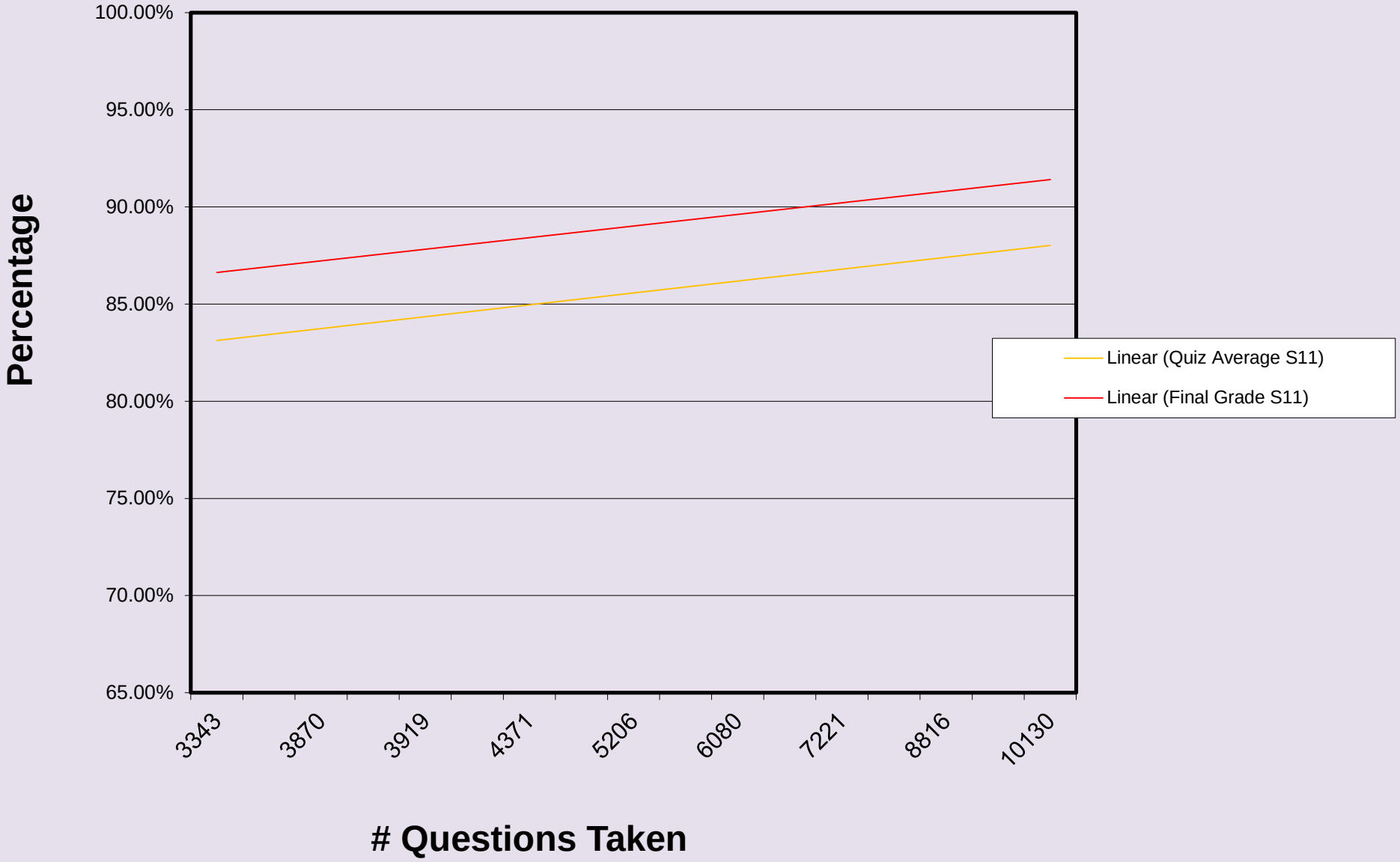
Adaptive Quizzing: Trend Lines F10



Adaptive Quizzing: Trend Lines S11



Adaptive Quizzing: Trend Lines F11



Adaptive learning using formative assessment deployed across the curriculum enabling retrieval practice and pinpoint remediation is the best way for students to develop mastery of course content and prepare for clinical learning.

Academic
Electronic
Patient
Records

A nursing student's experience with electronic patient records should enrich their studies and give them insight into the value of electronic patient records in a variety of settings

How to Use Electronic Patient Records in Nursing Education

- Simulation
- Clinical
- Classroom

Integration of an Academic Electronic Patient Record

CLASSROOM

Checketts, Stan C Gender: **Male** , DOB: **10/22/1960 (52y)** Height: **62 in** Weight: **198 lb** MRN: **PCS81300** Allergies: Codeine

Adm DX: Fluid and Electrolyte Imbalance
Location: ED Rm: 5 - a
Contact Precaution: Standard

Adm Provider: Dr. Lewis, Admitting
Adm On: 4/28/2013 21:22 (0 day(s))
Adv Directive: Full Code

Patient Information | Assessment | ADLs | Notes | Nursing Dx | Orders | MAR | I/O | Vital Signs | Diagnostics | Flowsheet | Sunday,

Demographics | Previous Visits | Current Care Providers

Medical Record Number:	PCS81300	**Marital Status:**	Widowed	**Address:**	62 Lisa Drive	**Diagnosis:**	Fluid and Electrolyte Imbalance
Gender:	Male	**Religion:**	Mormon		Brentwood,California 1XXXX	**Admitting Provider:**	Dr. Lewis, Admitting
Date Of Birth:	10/22/1960	**Race:**	White/Caucasian	**Aliases:**		**Provider:**	
Age:	52	**Occupation:**	Navy Seal	**Next Of Kin:**		**Location:**	ED Room 5 Bed a
Height:	62 in	**Employer:**	US Navy			**Contact Precaution:**	Standard
Weight:	198 lb	**Insurance:**				**Advance Directive:**	Full Code
SSN:							

Concept Mapping

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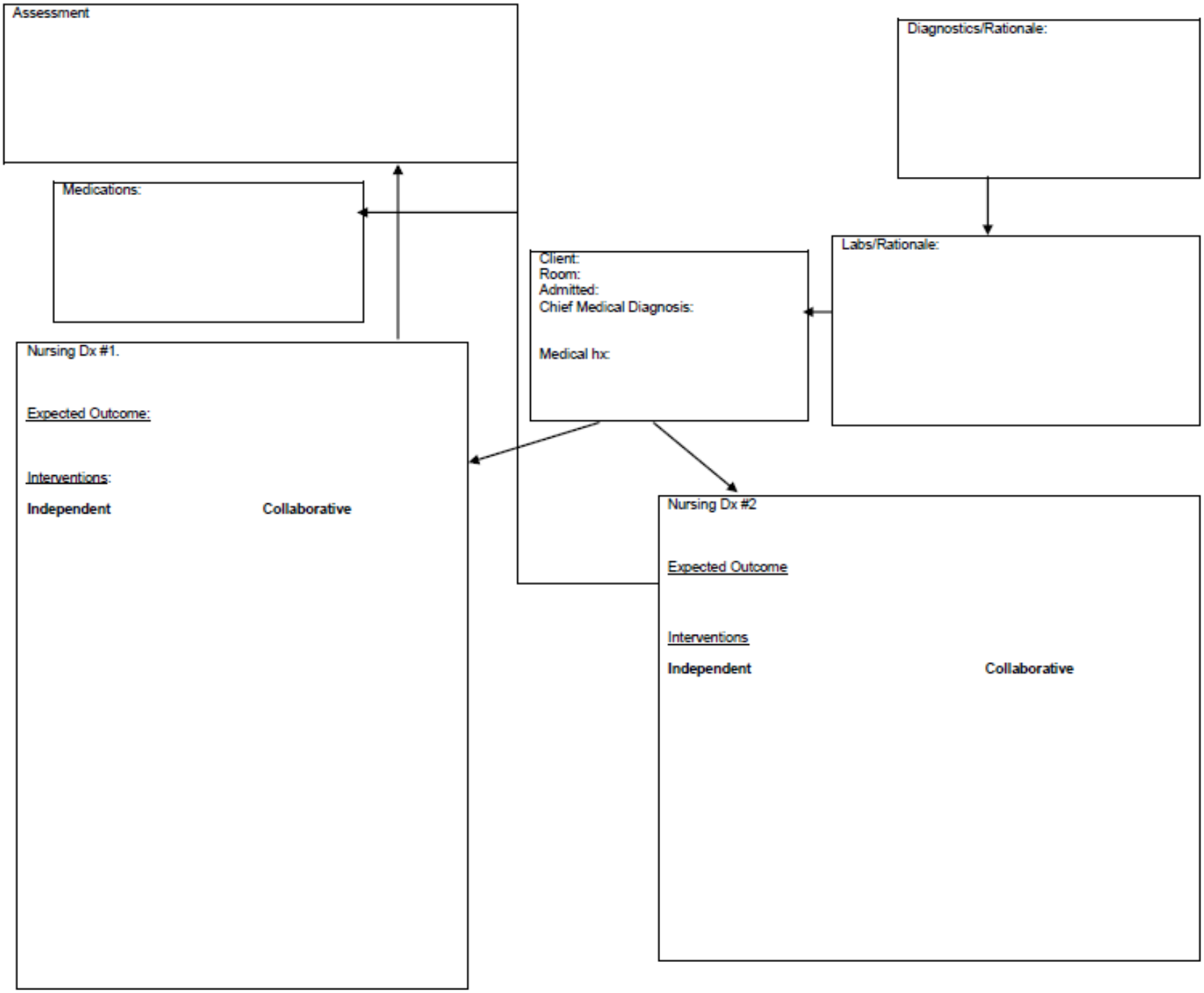
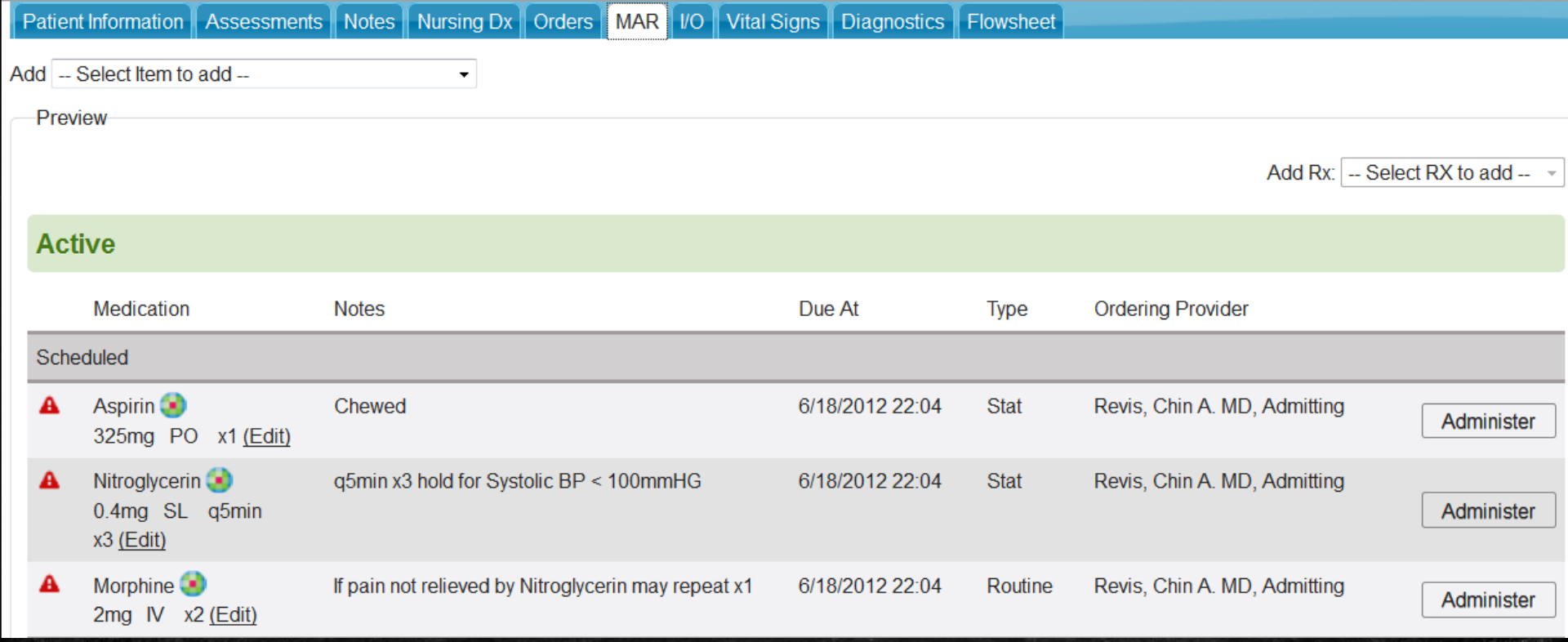

Assessment
Diagnostics/Rationale:
Medications:
Client:
Room:
Admitted:
Chief Medical Diagnosis:
Medical hx:
Labs/Rationale:
Nursing Dx #1.
Expected Outcome:
Interventions:
Independent
Collaborative
Nursing Dx #2
Expected Outcome
Interventions
Independent
Collaborative

Reverse Case Studies



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Unfolding Case Studies

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Age:	52	**Occupation:**	Navy Seal	**Next Of Kin:**		**Location:**	ED Room 5 Bed a
Height:	62 in	**Employer:**	US Navy			**Contact Precaution:**	Standard
Weight:	198 lb	**Insurance:**				**Advance Directive:**	Full Code
SSN:							

Cardiac Enzymes-6/18/2012 22:49

	Value	Last Value	Reference
CK (ng/mL)	250/h		38-120
CK-MB (ng/mL)	1		0-3
Troponin (ng/mL)	<0.4		<0.4

	Order	Order Note	Frequency	Status	Order On	Type	**Due At**	Provider	Department
⚠	12-Lead ECG (Edit)		x1	Ordered	6/18/2012 22:26	Stat	6/18/2012 22:26	Revis, Chin A. MD, Admitting	Emergency
⚠	Oxygen at 4 Liters/minute (Edit)	Titrate to maintain SpO2 greater than 92%	x1	Ordered	6/18/2012 22:26	Stat	6/18/2012 22:26	Revis, Chin A. MD, Admitting	Emergency
⚠	Cardiac Monitoring (Edit)		x1	Ordered	6/18/2012 22:26	Stat	6/18/2012 22:26	Revis, Chin A. MD, Admitting	Emergency
⚠	Cardiac Enzymes (CK, CK-MB, Troponin) (Edit)		x1	Ordered	6/18/2012 22:26	Stat	6/18/2012 22:26	Revis, Chin A. MD, Admitting	Emergency

Pre/Post Class Assignments

Critical Thinking Exercise

- Create a complete medical record using your academic electronic patient record for a someone with COPD.

Integration of an Academic Electronic Patient Record

SIMULATION/SKILLS LAB

4/30/2014 16:05 Show Learning Tips

Australia: Med-Surg: NLN I, Acute Coronary Syndrome Carl Shapiro – Part 1

Shapiro, Carl

Allergies: None

Gender: **Male** DOB: **7/20/1959** Age: **54** Height: **175.0 cm** Weight: **110.0 kg** MRN: **256978**

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Patient Information | **Assessment** | ADLs | Notes | Nursing Dx | Orders | MAR | I/O | Vital Signs | Diagnostics | Flowsheet

Neuro | Cardio | Respiratory | GI | GU | Musculoskeletal | Mental Health | Pain Scale | Integumentary | Vascular Access

Save Assessment | Clear

Past Assessments

Add New Musculoskeletal Assessment

Documented By:

Documented At:

0 days | 0 hours | 0 minutes | after admission

Musculoskeletal Symptoms

- [ ] Pain
- [ ] Joint Swelling
- [ ] Joint Stiffness
- [ ] Contractures
- [ ] Deformities
- [ ] Crepitus
- [ ] Weakness
- [ ] Amputation
- [ ] Fractures
- [ ] Spasm
- [ ] None

Muscle Tone / Strength

Motor Strength Grade

	All	LUE	RUE	LLE	RLE
5 / 5	○	○	○	○	○
4 / 5	○	○	○	○	○
3 / 5	○	○	○	○	○
2 / 5	○	○	○	○	○
1 / 5	○	○	○	○	○
0 / 5	○	○	○	○	○

Range of Motion

	All	LUE	RUE	LLE	RLE
Passive ROM	○	○	○	○	○
Active Assistive ROM	○	○	○	○	○
Active ROM	○	○	○	○	○

Characteristic

	All	LUE	RUE	LLE	RLE
Spasm	☐	☐	☐	☐	☐
Paralysis	☐	☐	☐	☐	☐
Atrophy	☐	☐	☐	☐	☐

Weight Bearing / Gait / Posture

- [ ] Steady
- [ ] Independent
- [ ] Unsteady
- [ ] Dependent
- [ ] Asymmetrical
- [ ] Jerky
- [ ] Shuffling
- [ ] Spastic
- [ ] Developmentally appropriate
- [ ] Lordosis
- [ ] Scoliosis
- [ ] Kyphosis
- [ ] None
- [ ] N/A

Learning Objectives

- The student will be able to demonstrate appropriate documentation of a wound in an electronic patient record.

- The student will be able to enter a primary nursing diagnosis in an electronic patient record.

Suggested Reading

- Taylor, Lillis, LeMone, & Lynn. Fundamentals of nursing: The art and science of nursing care (7th ed.). Chapter 32.

Pre-Sim Assignment

Pre-Simulation/Skills Lab Activity

- Pre-Sim *vSim*®

Virtual Simulations

Bring your patients to life.

Pre-Simulation/Skills Lab Activity

- Preview pathophysiology of wounds

Post-Simulation Activity

Post-Sim *vSim*®

Virtual Simulations

Bring your patients to life.

All-in-One Platform

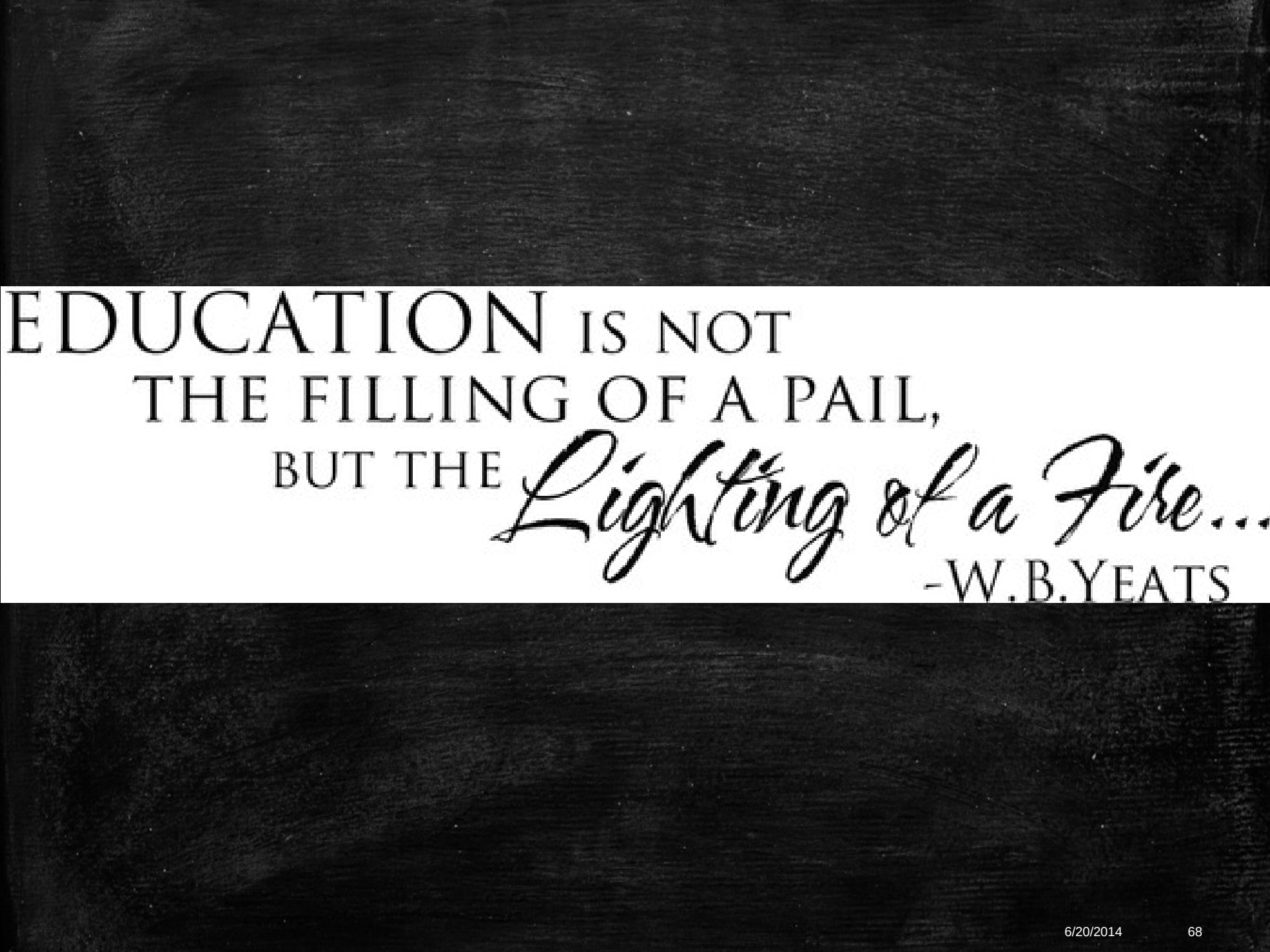
- One sign-on
- Digital Textbook (interactive)
- Adaptive Quizzing
- Procedures and Nursing Advisor
- Videos/Animations
- Drug monographs
- Electronic patient record

Teaching Resources (Instructor Only)

- Adaptive Learning Powered by PrepU
- Test Generator
- Pre-Lecture Quizzes and Answers
- Case Studies and Answers
- Assignments and Answers
- Discussion Topics and Answers

Course Grading

Course Grading:	**Possible Points**	**Percentage of Final Grade**
Unit Exams (5)	500	35%
Final Exam	100	35%
PrepU Pre-Lecture Mastery Quizzes	300	5%
Docucare/vSim Assignments	100	5%
Comprehensive Care Plan (2)	200	15%
Teaching Plan	100	5%
Campus Skills Lab Competency		Satisfactory/Unsatisfactory
Clinical Experience		Satisfactory/Unsatisfactory
ATI Assessments		Satisfactory/Unsatisfactory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