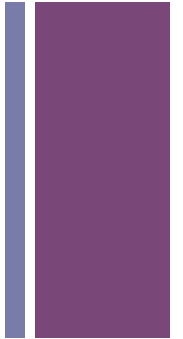


Student Centered Learning: Building & Delivering Competency Based Education Programs

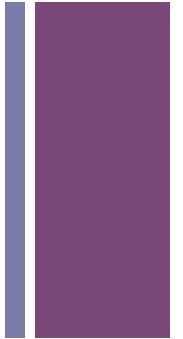
By: Rhonda D Blackburn, PhD

+ Hello! My Name Is...



- Introductions!
- What is competency based education?
- How do you plan for it?
- Where do you find them?
- What does an initiative look like?

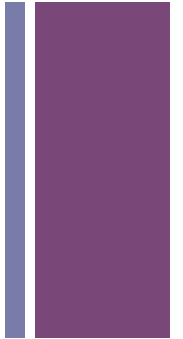
+ Skills



- Turn to your neighbor, introduce yourself and ask:

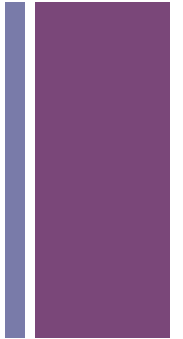
What skill are you considered a master?

+ Break down that skill



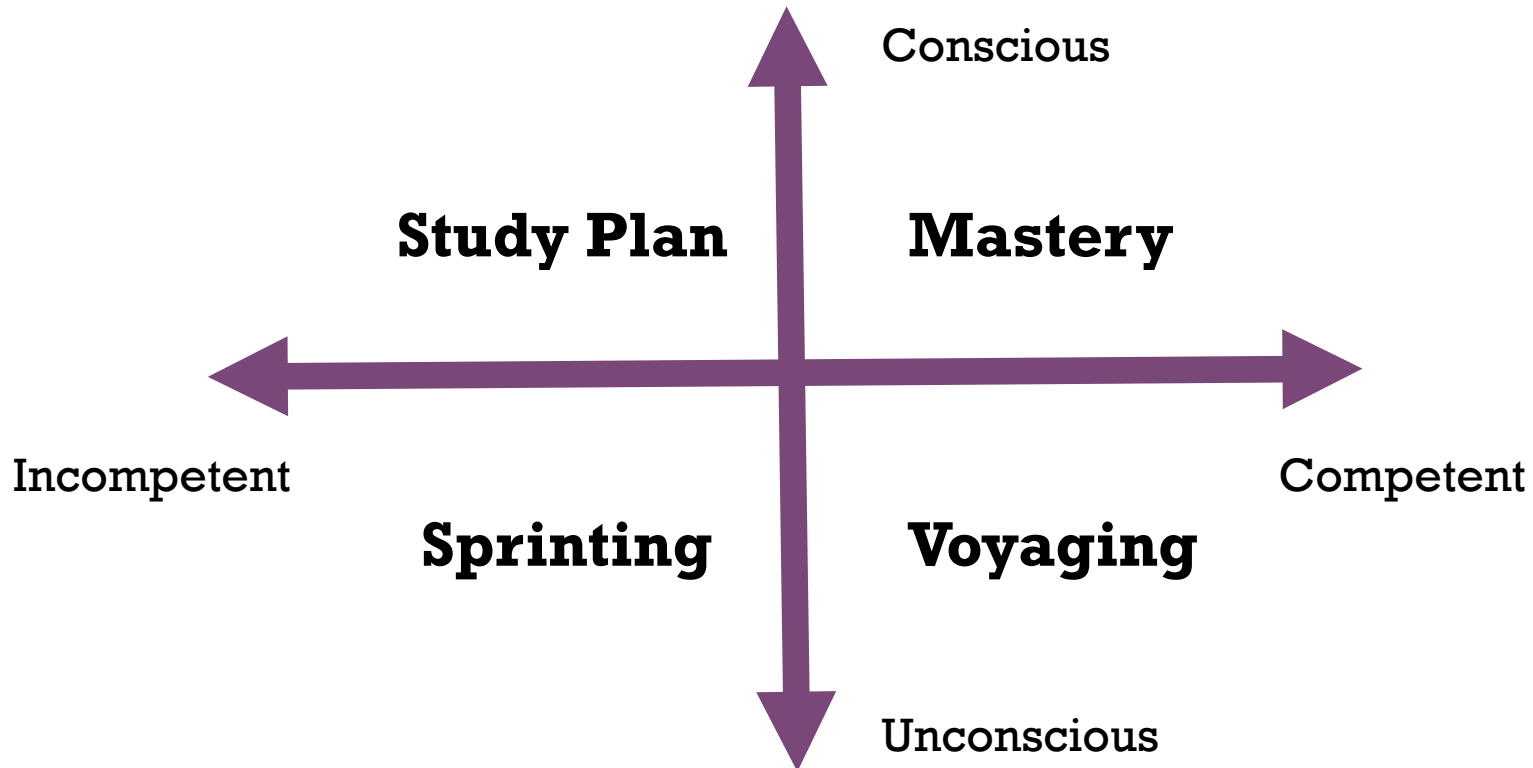
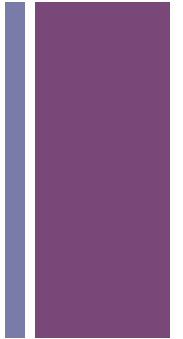
- What ways can you demonstrate that you know that skill?
- How can I evaluate you on it?
- What would you do if you wanted to teach your neighbor that skill?
- How do you know that they mastered it?

+ Now...



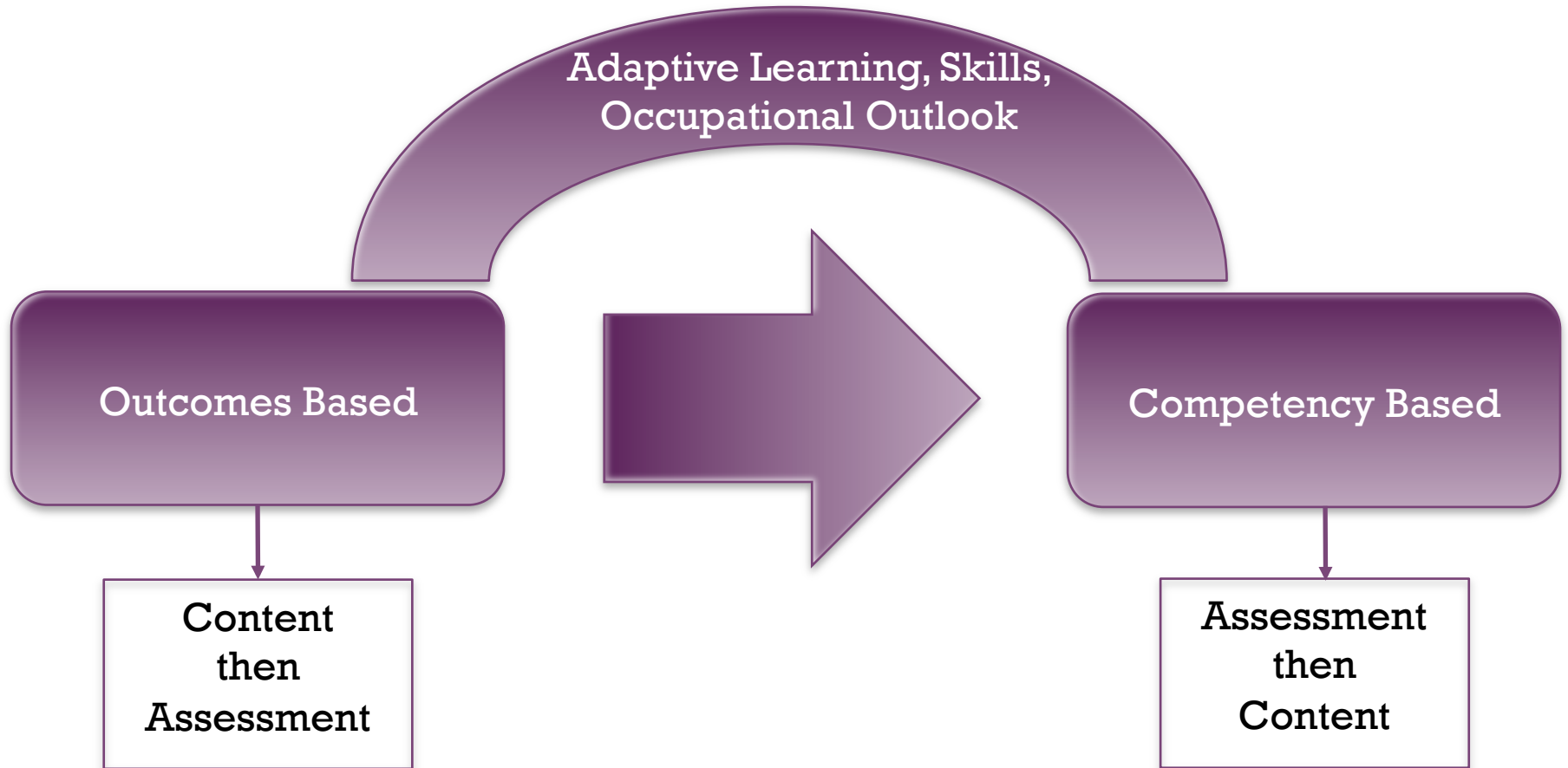
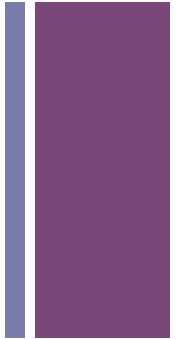
- From what you talked about, what is a behavior and what is a competency?

+ Metacognitive Model



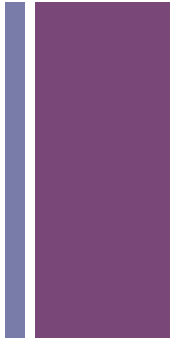


What is Outcomes Based vs Competency Based Education

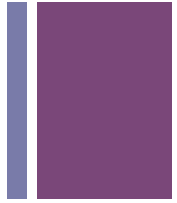


+ Key Features of Competency Based Education

- Mastery of learning
- Granular learning units
- Mapping to competencies
- Assessments
- Accelerate learning pathways
- Reallocation of faculty time
- Decrease cost
- Admit more qualified students
- Personalized learning
- Grow enrollment



+ Building on the Learning Platform



Competency Structure

Flexible Design

Personalized Path

Opportunities for Collaboration

Study / Adaptive Planner

Competency / Grade Achievement

Alerts and Notifications

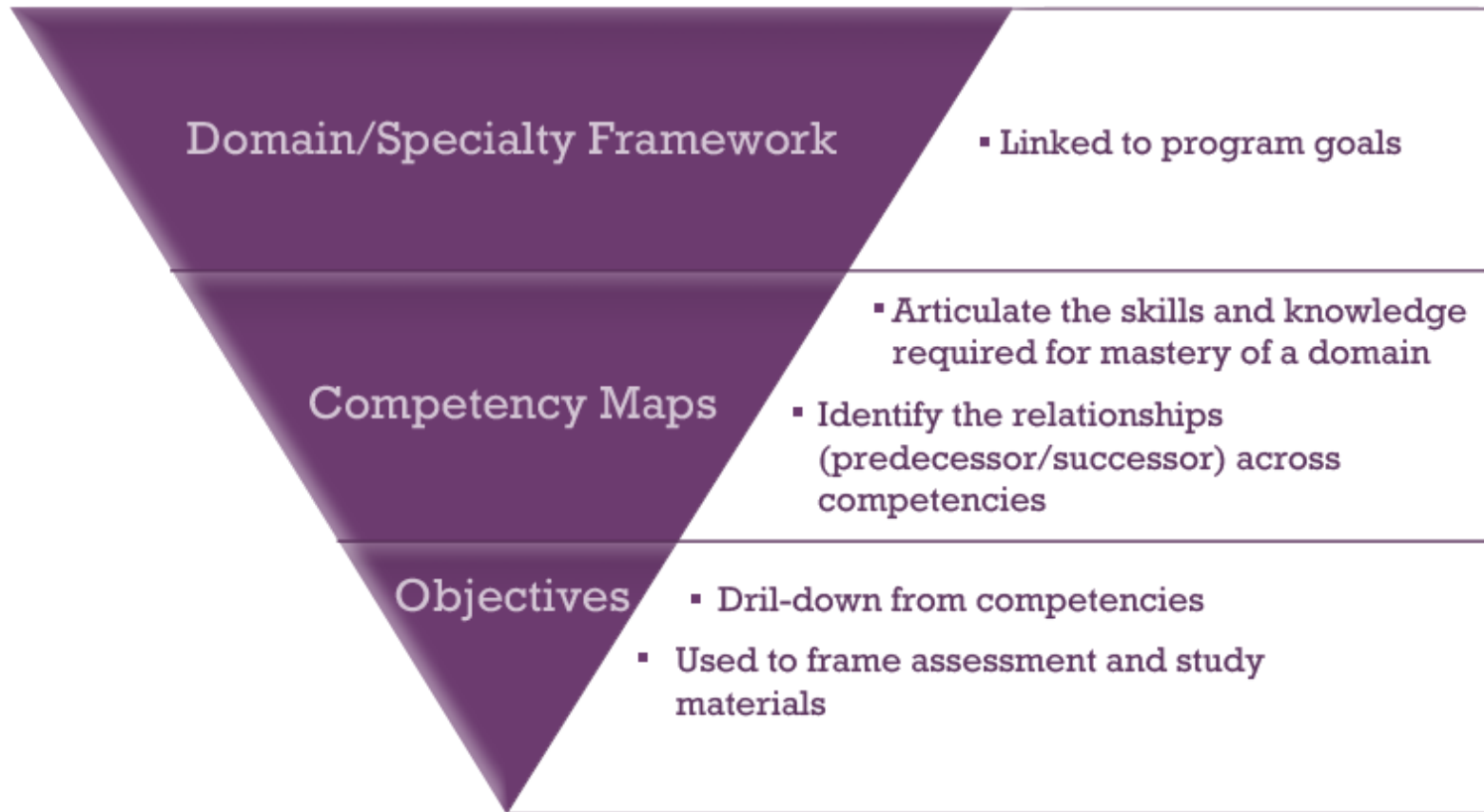
Non-Term Enrollment

Integrated Dashboard

Report Name	Authorized By	Modified By	Type	Points	Admin Alert Level	Instru
Safety				3.0	--	Percentage
assessment 1			Assignment	6.0	--	Percentage
1.1a Knowledge Check	Stan Block	--	Quiz	6.0	--	5.0 Absolute V
1.1c Final Exam			Quiz	27.0	--	Percentage
1.1c Assignment - Bicycle Safety Equipment			Assignment	50.0	--	Percentage

+ Before You Begin: Plan!

High-level competencies based on occupational skills and knowledge drill-down to measurable course-level learning objectives



+ Building a Competency Map

Build a competency map and align course level competencies to occupational standards

The screenshot displays the LoudTrack interface, which is used for building a competency map. It features two main panels: Academic Competencies and Occupational Competencies. The Academic Competencies panel is white and lists four items: 'Preventing and Treating Canine Diabetes' (Nov 19, 2014), 'Clinical Pharmacology & Therapeutics for th...' (Nov 19, 2014), 'Icsqa' (Nov 18, 2014), and 'Math 101' (Oct 27, 2014). The Occupational Competencies panel is yellow and lists four items: 'LCS QA' (Aug 27, 2014), 'Testing' (Jun 09, 2014), 'Maths' (Apr 22, 2014), and 'Occupational Competencies' (Apr 09, 2014). Both panels have a 'View All' link and an 'ADD COMPETENCIES' button at the bottom.

LoudTrack

Academic Competencies [View All](#)

- Preventing and Treating Canine Diabetes
Nov 19, 2014
- Clinical Pharmacology & Therapeutics for th...
Nov 19, 2014
- Icsqa
Nov 18, 2014
- Math 101
Oct 27, 2014

ADD COMPETENCIES

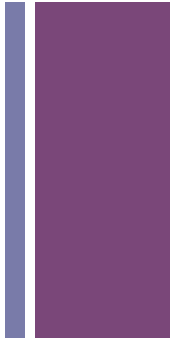
Occupational Competencies [View All](#)

- LCS QA
Aug 27, 2014
- Testing
Jun 09, 2014
- Maths
Apr 22, 2014
- Occupational Competencies
Apr 09, 2014

ADD COMPETENCIES



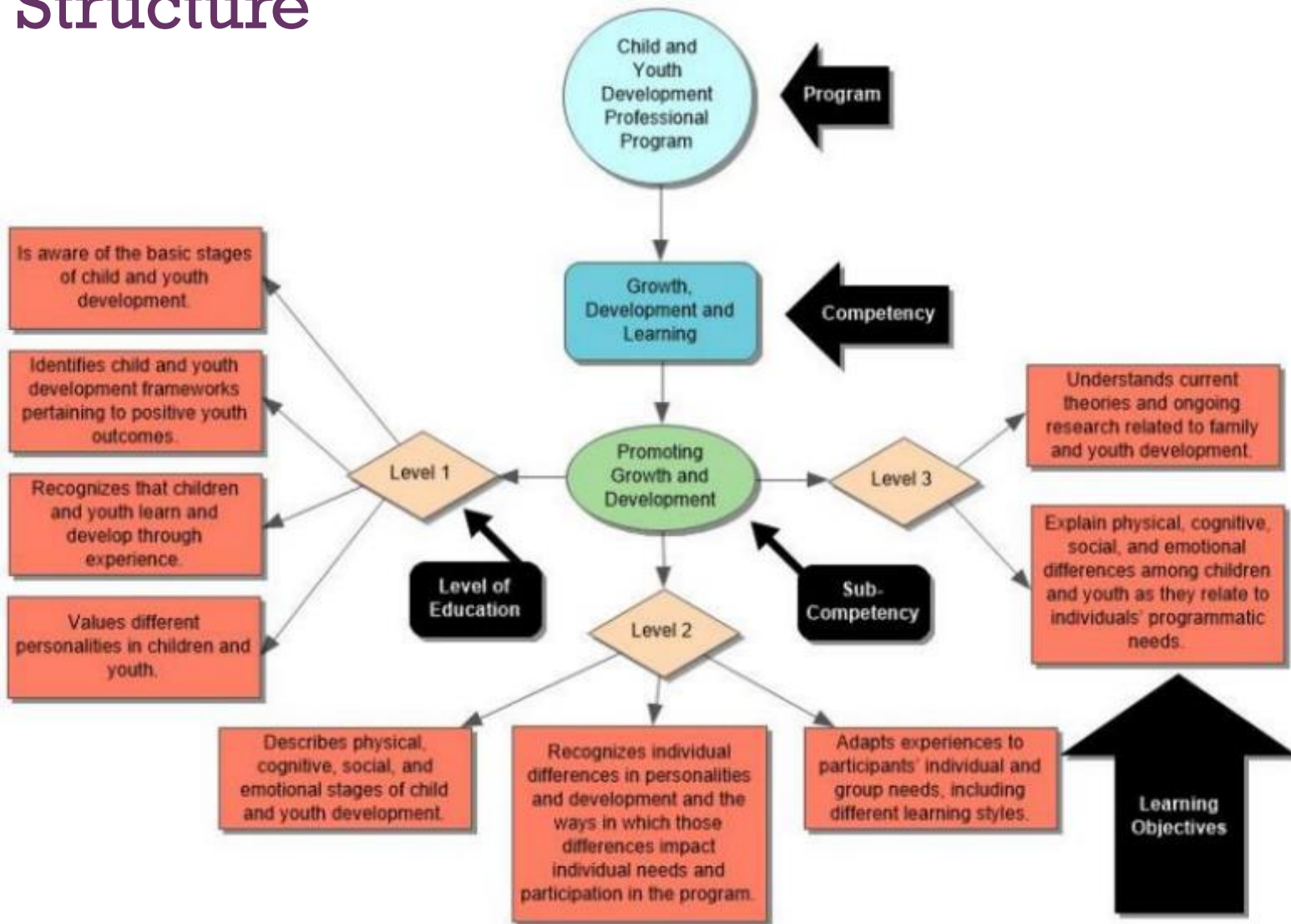
Where do you find competencies?



- <http://www.onetonline.com>
- <http://www.hrsg.ca>
- <http://www.hr.wa.gov>
- <http://www.workforce.co>
- Talk to employers in your area.



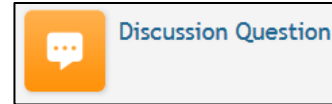
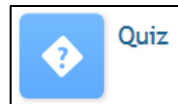
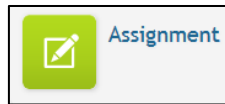
Example of a Competency Structure



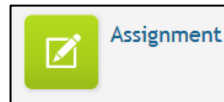


Tie one learning object / competency to many assessments.

GROWTH-L2-LO1 Describes physical, cognitive, social, and emotional stages of child and youth development.



Tie one assessment to many learning objectives / competencies.



✓ **GROWTH-L2-LO1** Describes physical, cognitive, social, and emotional stages of child and youth development.

✓ **GROWTH-L2-LO2** Recognizes individual differences in personalities and development and the ways in which those differences impact individual needs and participation in the program.

✓ **GROWTH-L2-LO3** Adapts experiences to participants' individual and group needs, including different learning styles.

Criteria of a Rubric

View Rubrics	
Description	Points
Safety and Equipment	9.0
LO 1.1a Demonstrate the ability to select the right bicycle depending on circumstance and personality.	3.0
LO 1.1b Analyze and demonstrate how to properly tune a bicycle depending on make and model.	3.0
LO 1.1c Demonstrate the proper use of safety equipment.	3.0

Competency Alignment

Resources

Tied to Questions

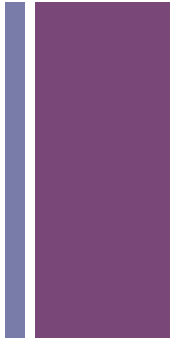
Competencies

Manage Competencies

9 Measurable Competencies ?			
Search by Code or Description			
<input type="checkbox"/>	SELECT ALL		0 SELECTED
<input type="checkbox"/>	LO 1.1a	Demonstrate the ability to select the right bicycle depending on circumstance and personality.	1 questions required out of 4**
<input type="checkbox"/>	LO 1.1b	Analyze and demonstrate how to properly tune a bicycle depending on make and model.	1 questions required out of 6**
<input type="checkbox"/>	LO 1.1c	Demonstrate the proper use of safety equipment.	1 questions required out of 4**



Let's think about your initiative!



- What are the things you need to think about?

+ Direct Assessment vs Credit Equivalency

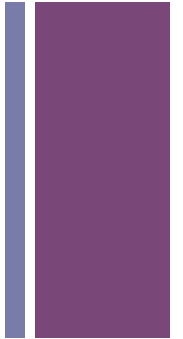
■ Direct Assessment

- Assessment drives the content (if needed)
- “Testing out”
- Competencies (bundled or independent)

■ Credit Equivalency

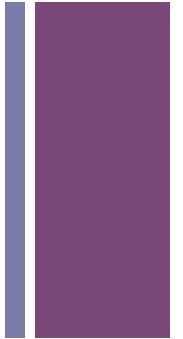
- Tied to credit hour
- Assessment may drive path
- Content may be more central
- Competencies bundled into course
- Can “Test out”
- Cohort model

+ Design Principles



- Self-paced
 - Flexibility – time bound
 - Flexibility – content or assessment driven
 - Flexibility – open at once or restricted
 - Mastery completion
- Traditional-paced
 - Time bound
 - Content driven
 - Flexibility – open at once or restricted
 - Grade and seat-time completion

+ Independent vs Cohort



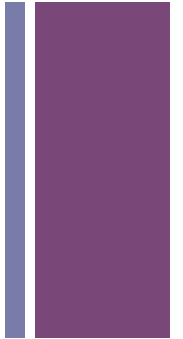
■ Independent

- Open course materials and Study Planner
 - Work at their speed
 - Work in their order
- Pre-assessment
 - Work with only the competencies they need
- Receive feedback and support when needed
 - Students may not be in the same module/competency

■ Cohort

- Content released by date, topic, completion
- Students work in same order and mostly in same pace
- Receive feedback and support throughout course

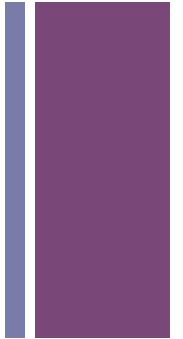
+ Competency Structure



- Create multiple sets
- Flexible tree structure
 - Competency – Sub-competency – Learning Objective
 - Competency – Learning Objective
 - Program Outcome – Competency – Sub-competency – Learning Objective
 - Program Outcome – Competency – Sub-competency
- Link Academic and Occupational Competencies



Competency vs Traditional Course Definitions



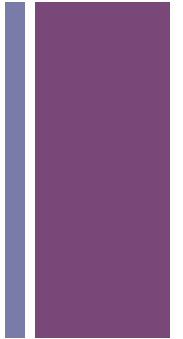
■ Assessments

- Quizzes – knowledge checks, practice quizzes
 - Questions tied to competencies
- Assignments – authentic assessments, activities, practice, case studies
 - Rubrics tied to competencies

■ Resources

- Content, resource, materials, remedial, supplementary
 - Tied to competencies

+ Assessments Are Critical



- Authoring robust assessments
- Aligning to competencies
- Aligning to resources
- Tied to time?



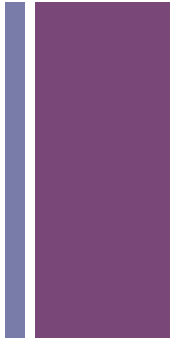
Mastery Learning Cycle

	Cycle 1	Additional Cycles
Evaluate	Pre-Assessment and Determine Mastery	Re-evaluate mastery
Plan	Study Planner	Evaluate Study Planner
Learn	Content Resources, Activities, Flash Cards	Same or Additional Resources
Practice	Practice Quizzes, Knowledge Checks, Activities	Same or Additional Practices Quizzes, Knowledge Checks, Activities
Perform	Summative Assessment	Re-take or Additional Summative Assessment

How to track and manage student achievement through the competency structure.



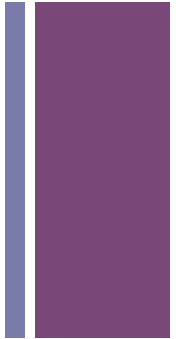
Example of an Implementation



- Institution
 - Program
 - Pilot 2 courses within program
 - Build rest of program
 - Logistics
 - Accreditation
 - Financial Aid
 - Competency structure
 - Develop content and structure
 - Lessons Learned
 - Pace of students
 - Pace of development
 - Motivation



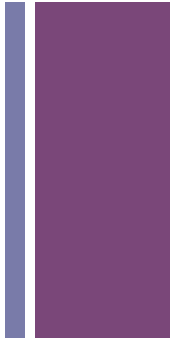
Characteristics of CBE Offerings



- Learning units structured on the basis of competencies
- Mentors and faculty play a facilitative role – changing roles?
- Formative assessments to identify prior and continual mastery
- Learners allowed to “test out” of competencies
- Competencies may be tested as they are taught, not solely in a summative manner
- Mastery of a competency or its absence determines the path
- Multiple opportunities to practice
- Assessments that involve application and creation of knowledge (e.g., e-portfolios) are encouraged
- Grade “F” (Failed) is never an option
- Ability to create unique grading systems
- Using data to improve on curriculum



Personalized, Adaptive Learning Plans



- Pre-author learning paths
 - Conditional Release
- Curate and recommend learning pathways and resources through data based on
 - Performance
 - Achievement
 - Longitudinal
 - Behavioral
 - Key Words
- Study Planner
 - Building different study plans



Child & Youth Development Professional Program 3 Competencies

Amy Hill
Pre-Assessment – Met
3/3

Linda Odea
Pre-Assessment – Met
2/3

John Black
Pre-Assessment – Met 0/3

Individualized Learning Path

Already achieved all
competencies –
straight to Post-
Assessment

Achieves Competency
2

Competency 1

Competency 2

Competency 3

Conditional
Release

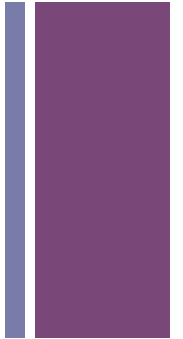
Post-Assessment

Post-Assessment

Post-Assessment

Program Mastery of all 3 Competencies

+ Behaviors



- What behaviors do you look at to determine mastery or path?

Accessing content

What content is accessed

How often is content
accessed

Interacting with content

Collaborating about content

Speed of completion

Showing mastery before
accessing

Checking knowledge

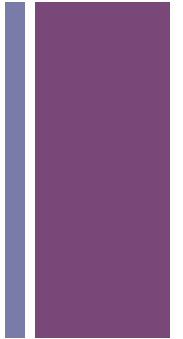
Check of mastery

+ How can a system help?

- Aid in a students learning, motivation, and speed
- Build a student profile
- Can build to any pedagogy

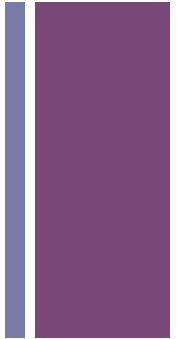


+ Aid in student learning



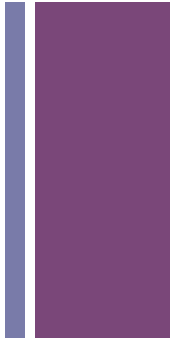
- Study planner
- Recommendations
- Clear path
- Feedback mechanism
- Assessment profile
- Content when they need it
- Collaborative opportunities

+ Aid in student motivation



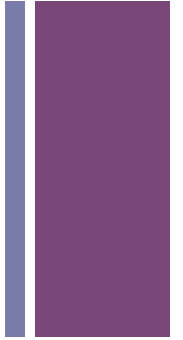
- Faculty / student support
- Badges
- PLA
- Collaboration

+ Aid in student speed



- Course design
- User experience
- “Testing out”
- Encouragement
- Collaboration
- Content curation
- Understandable pathways

+ Intersection of competencies and behaviors



**Provides evidence of
student learning and
achievement!**



Thank you!

Rhonda D Blackburn, PhD

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LoudCloud Systems

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