Competency-Based Learning: An Opportunity?

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The more things change --
The more they don't!

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Now, we can do things better, faster, cheaper, and deeper

Direct Assessment/Competency-Based Programs

Technically, a direct assessment program is a program that uses direct assessment of student learning, no matter the type of learning or level at which learning is defined.

- Competencies are one type and level of student learning. They describe what a student must know or be able to do to be judged "competent" in a certain field.
- Learning can be defined at levels other than competency. One example is "mastery" which can be defined as a level of learning that includes but exceeds "competency." Definitions of excellence in learning can even be open-ended.
- Despite differences, the USDOE and accreditors treat **competency-based and direct-assessment programs as synonymous.**

"Competency-based programs are particularly appropriate for career education!"

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Direct Assessment

- Student work …must be equivalent or superior to work performed in traditional courses (e.g., successful completiong of tests, assignments, or projects)
- Student learning outcomes and goals … must be equivalent or superior to [those] defined …in a traditional academic program
- Student learning assessments (e.g., examinations, portfolios…, etc.) must be equivalent or superior to [those] pursued in traditional courses

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Why Consider Competency-Based Learning Models

- There is evidence and understanding that students learn subjects at different rates
- Employers want evidence of skills and knowledge
- Politicians and the public question the value of education
- A shift toward outcomes-based measurement (e.g., instead of the time-based credit hour) has spurred interest in competency-based learning models
- Trends in philanthropy, public policy, education and the labor market

"Competency-based learning models represent an important opportunity for educational institutions."

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What is Competency-Based Learning?

- In a nutshell, competency-based learning represents a radical departure from traditional higher education credentials based on "seat time" or credit hour and assessment. Instead, students are **credentialed based upon the demonstration of the knowledge and capabilities** required to meet an established skill set or competency.
- "Unlike the credit hour, which is standardized around time, competency-based systems give "**credit for learning no matter where it happens [or how long it takes**]...students would be able to build on their own skills, abilities and knowledge, the time required to obtain a degree would be reduced, resulting in a less expensive and higher-quality education." ~ Louis Soares, A Disruptive Look at Competency-Based Education, 2012.

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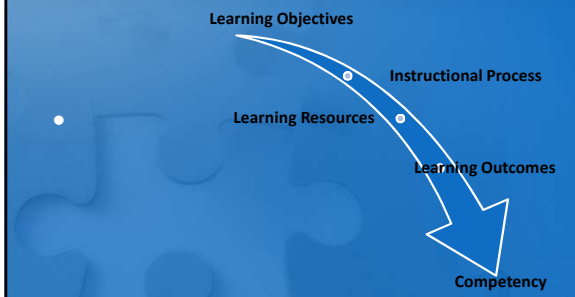
Outcomes or Competencies?



What are Competencies?

- Competencies are statements of *doing*:
  - what kinds of tasks can a student actually accomplish
  - what kinds of skills can he or she apply in a particular context
- Competencies can range from fairly broad statements at the program level, to extremely detailed statements for course-level outcomes
- ".. the particular levels of knowledge, skills, and abilities that a student has attained at the end (or as a result) of his or her engagement in a particular set of collegiate experiences … Goals describe not only what is to be learned but also the specific levels of performance that students are expected to master (Ewell, 2001, p. 6)"

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Competency-Based Learning Models Vary

- Athabasca University in Canada
- Northern Arizona University
- Western Governors University
- Southern New Hampshire University
- Cappella

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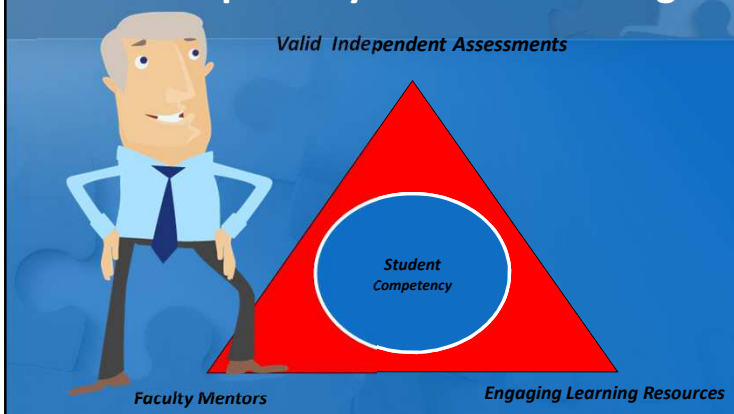
Competency –Based Learning



Seat Time

- 39 states have enacted seat time waivers or competency education laws:
- Four states (IA, ME, NH, OR) have implemented statewide policies to redesign their education systems to support competency based learning
- Fourteen states (AL, AZ, CT, CO, FL, ID, KY, NC, NY, OH, RI, TN, UT, WV) have implemented competency education pilots, credit-flexibility policies, or advanced next generation policies for equivalents to seat-time
- Eight states (MI, NJ, SC, TX, VA, VT, WA, WI) are beginning to explore competency education through district waivers or exploratory task forces
- Ten states (CA, IA, KY, ME, NH, NY, OH, OR, WV, WI) have joined the Council of Chief State School Officers (CCSSO) Innovation Lab Network to identify new designs that further student centered learning and the conditions to help these innovations thrive

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Future?

Demand for Competency-Based Credentials Is High. According to a recent Gallup/Lumina Foundation poll:

• 87 percent of respondents said they believe students should be able to receive college credit for knowledge and skills acquired outside of the classroom

• 75 percent indicated they would be more likely to enroll in a higher education program if they could be evaluated and receive credit for what they already know

• 75 percent don't believe learning should be time based and agree that if a student demonstrates they have mastered class material in less than the traditional 16-week session, they should be able to get credit for the course without sitting through the entire academic term

Certification Leads the Way

• Independent, portable, achievement-based certification of particular levels of achievement is not new

• Licensure in professional fields like nursing has been in place for many years – based not upon course or program completion but upon demonstrated achievement

"A century ago (and until only recently in California), passing the bar was all that was required to be an attorney."

CBL - Common Threads:

- Third-party assessment
- Competency learning statements (demonstrate – can do)
- Self-paced, not linked to "butt in the seat" time
- Faculty roles and goals
- Competency-based curriculum refers to explicit learning outcomes
- Competency-Based Curriculum is the set of courses, course work, and content needed to reach learning outcomes that are aligned with industry-driven competencies and skill standards

Problems with Competency Based Learning Models?

- Transcripts
- Transfer credits
- Centered on assessments not faculty
- Some say, academic freedom
- Scheduling
- Faculty beliefs
- Valid assessments
- Agreed upon competencies – academics and industry

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Keys to Effective Competency-Based Learning Models

- Valid third-party assessments ("the secret sauce")
- Job task analysis (commitment to implement advisory board feedback)
- Secure assessments
- Faculty willing to take constructive feedback from assessment systems
- Faculty that believe, "it is about learning, not teaching"
- Faculty engaged in mentoring and guiding the learning process
- Dynamic learning resources

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Benefits for our Sector

-
- Students can use competency-based assessments as proof of their skills and knowledge
- Students can improve their ability to navigate careers and work transitions across industry sectors
- Educators can use assessments as evidence that they prepare students for employment
- Educators can ensure their curricula is well aligned with job skill requirements
- Politicians and public policymakers are more likely to support our sector because we demonstrate learning and lower the cost of education
- Standards-based competencies, curricula, and assessments help prepare graduates to meet the demands of the labor market and ensure that businesses have the human capital they need to flourish

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Core Elements of a Competency-Based Learning Model

•Job Task Analysis – Key to Designing Effective Assessments:

A Job Task Analysis identifies the core knowledge areas, critical work functions, and/or skills that are common across a representative sampling of practitioners , often known as "subject matter experts.

The results from the job analysis provide the basis of a valid, reliable, fair and a realistic assessment that reflects the skills, knowledge, and abilities required for competent job performance.

•The secret sauce -- *assessment instruments*:

Formative (measuring interim skill acquisition)
Summative (measuring final learning outcomes)
Measurement of student performance (against expectations)

Questions?

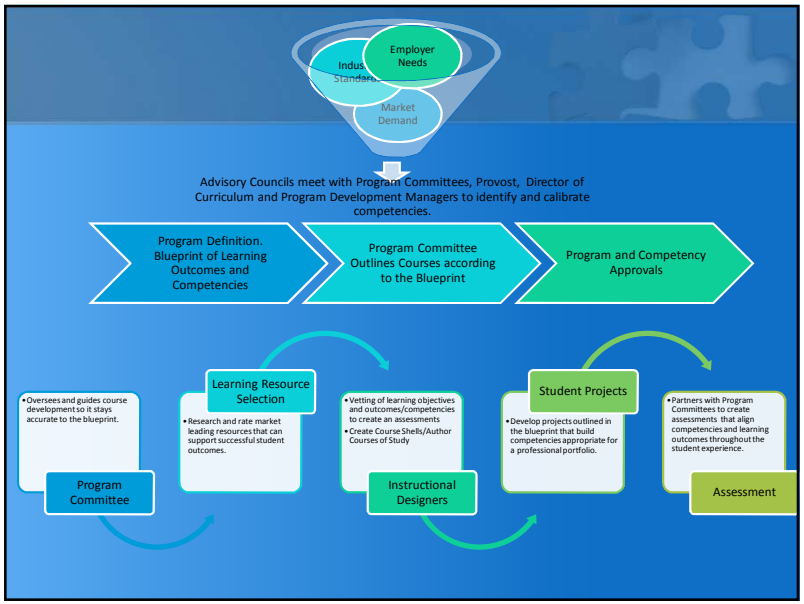
- How do we know students know what they need to know?
- How can we demonstrate that students can do what they will need to do on the job?
- Can learning outcomes assessments be used as both summative and formative assessments to measure skills, knowledge, behavior, aptitude, and the quality of instruction?
- How can we integrate the competencies needed by employers with learning outcomes and instruction in ways that support instructional goals and still meet the desired courses and program outcomes?

Tips - Things to Ponder

Advisory Councils and Program Committees

- The Advisory Council's role is to create high level descriptions of skills and knowledge that graduating students should be able to demonstrate mastery
- Program Committee/Advisory Council outlines (blue prints) the competences of the program
- Program Committee/Advisory Council reviews best practices, current research, and trends

"Employability factors are carefully reviewed and linked in order to develop a program learning path."



Example of Business Competency Requirements

The WAFC (Western Association of Food Chains) endorsed Retail Management Certificate is a comprehensive, academic, for-credit college program designed to prepare current and future employees for the fast-paced changes encountered in the grocery industry, so they are better prepared to fill the numerous and varied management opportunities that are available.

The 10 content areas are directly linked to the core competencies required for success at the managerial level in the food industry. All courses are accredited and nearly all are transferable

- Computer Applications
- Oral Communications (Business or Speech)
- Written Communication (Business or Engl)
- Business Mathematics (or higher level)
- Bookkeeping or Accounting
- Introduction to Management
- Marketing
- Human Resources Management
- Retail Management /Merchandising
- Leadership/Human Relations

WAFC – Detailed Competencies Example:

Business Math

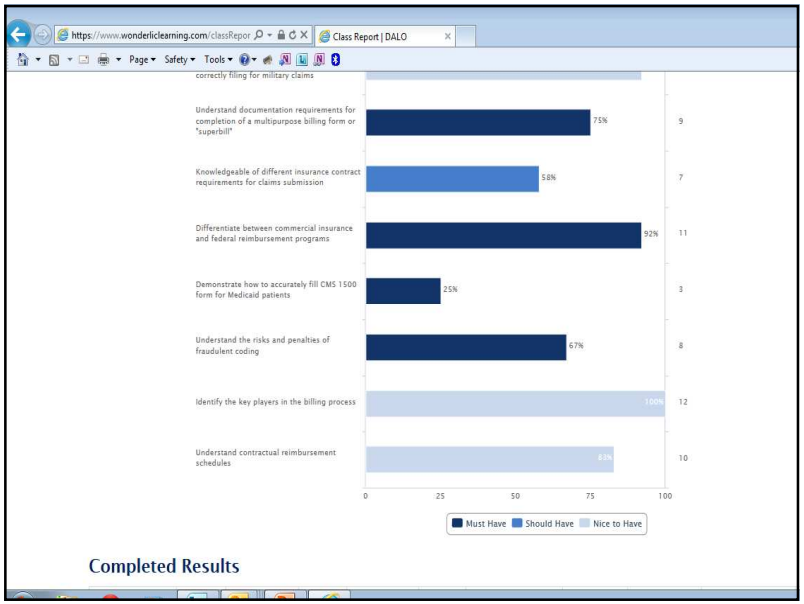
Upon completion of the course students will be able to: Apply their understanding of basic arithmetic and relate these basics to problems encountered in common business situations.

- Advance mathematical competence in the fundamental processes of solving business problems.
- Solve business problems using algebraic formulas.
- Demonstrate ability to read, write, round off, add, subtract, multiply, & divide whole decimals.
- Add, subtract, multiply, divide, reduce and raise fractions.
- Calculate base, rate, portion, percent of increase and decrease, gross and net amounts, single and series discounts, selling price based on cost or selling price, simple interest using ordinary or exact time, cost of installment buying, add-on interest and cost of open-end credit.
- Compute total wages based on hours worked, straight commission, graduated commission, salary plus commission, piecework, and net wages.
- Compute straight-line method of depreciation, book value, annual depreciation, accumulated depreciation and distribution of overhead.
- Calculate mode, median, and mean as well as construct and interpret a frequency histogram.

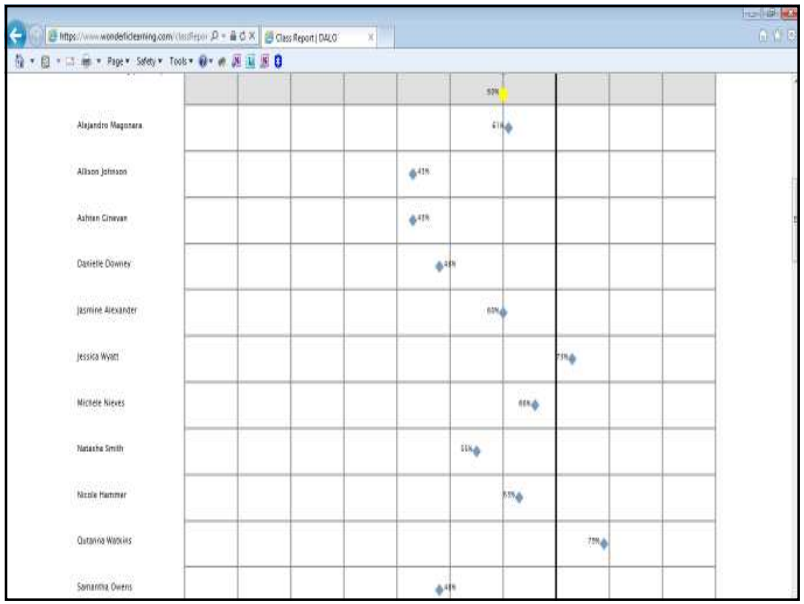
Assessments

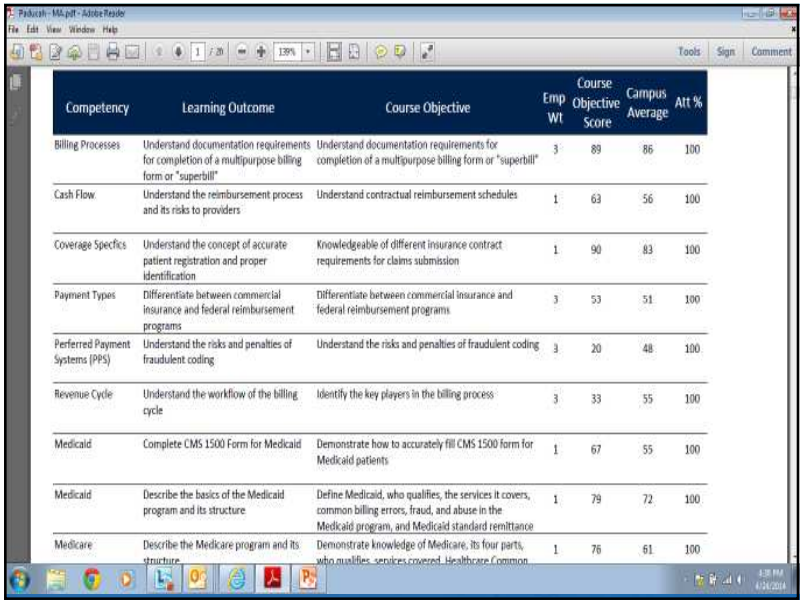
- Assessment is the process of measuring and documenting a student's competence and a demonstration that she or he has the knowledge and skills necessary to perform required job functions
- Learning objectives form the basis for developing an assessment
- Assessments should be secure and separate from faculty
- Assessments can be performed on a diagnostic basis as a pre-assessment, as an assessment of prior learning, and as a learning outcomes assessment that follows targeted instruction to document skill and knowledge acquisition

"The most effective assessments are deeply embedded at all stages of the learning process."



Completed Results





Competency	Learning Outcome	Course Objective	Emp Wt	Course Objective Score	Campus Average	Att %
Billing Processes	Understand documentation requirements for completion of a multipurpose billing form or "superbill"	Understand documentation requirements for completion of a multipurpose billing form or "superbill"	3	89	86	100
Cash Flow	Understand the reimbursement process and its risks to providers	Understand contractual reimbursement schedules	1	63	56	100
Coverage Specfics	Understand the concept of accurate patient registration and proper identification	Knowledgeable of different insurance contract requirements for claims submission	1	90	83	100
Payment Types	Differentiate between commercial insurance and federal reimbursement programs	Differentiate between commercial insurance and federal reimbursement programs	3	53	51	100
Perferred Payment Systems (PPS)	Understand the risks and penalties of fraudulent coding	Understand the risks and penalties of fraudulent coding	3	20	48	100
Revenue Cycle	Understand the workflow of the billing cycle	Identify the key players in the billing process	3	33	55	100
Medicaid	Complete CMS 1500 Form for Medicaid	Demonstrate how to accurately fill CMS 1500 form for Medicaid patients	1	67	55	100
Medicaid	Describe the basics of the Medicaid program and its structure	Define Medicaid, who qualifies, the services it covers, common billing errors, fraud, and abuse in the Medicaid program, and Medicaid standard remittance	1	79	72	100
Medicare	Describe the Medicare program and its structure	Demonstrate knowledge of Medicare, its four parts, who qualifies, services covered, Healthcare Common	1	76	61	100

Integrating Employability Skills into Competency-Based Learning Models

The American Association of Community Colleges' 21st Century Commission called for expanding the use of competency-based learning approaches

Competency-based learning models fit well with a core and growing part of many community colleges' mission/business—to meet local employer needs and effectively serve adult learners

"Yet relatively few schools are actively working with business associations or regional sector partnerships to advance the broad-scale use of high-quality competency-based learning."

The main point: Align programs with current and future labor market needs.

Questions for Institutions to Ask:

- How does the institution support faculty as they collaborate to explicitly define student learning outcomes?
- How can faculty members be encouraged to use defined student learning outcomes to facilitate learning?
- How do institutions support faculty members in the agreement upon and development of assessments?
- How can institutions instill respect and security of assessment processes that can capture student abilities on stated learning outcomes in a credible fashion?
- What processes do institutions have in place to support documentation of student learning?
- What support and documentation does the institution have for learning obtained outside (for example, from on-the-job, military experiences, or extracurricular activities)?
- Are faculty evaluated and promoted based on how well they use appropriate pedagogy to support students in achieving competence?

Student Success

- Incorporate 21st Century Technology
- Programs Synchronized with Industry Expectations
- Evidence of competency and outcomes
- Competencies – According to Industry Standards
- Assess for Mentoring: Students and Faculty
- Dynamic and Engaging Learning Resources

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How?

- Passionate Program Committees
- Vetted Competencies and Outcomes Matched with Learning Objectives
- Independent Assessment
- Kaizen (continuous improvement)
- Proactive Student and Faculty Mentoring
- Faculty and Student Feedback
- Advisory Councils
- Job Task Analysis for Employability Requirements

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Summary

Competency based learning models and standards are in the "forming stage of development." Accreditors are developing standards and some forward thinking institutions are piloting various forms of direct assessment/competency based learning models. Perhaps, the following list will spark questions that we can address in a series of

1. Independent assessment (the secret sauce)
2. Some models are self-paced, not all
3. The instructional process is assessment centered, not faculty centered
4. Assessments should be linked and vetted to learning objectives
5. Learning objectives are developed from job task analysis, advisory boards, associations, and faculty
6. Competency is demonstration and application
7. Some competency based models are not tied to credits or time – and some are
8. Competency-based assessments have been around for a long time: NCLEX, Law, CPA, etc.
9. Don't confuse outcomes with competencies – they are related
10. Creating an excellent assessment is an art and a science – a profession, too

Summary

- Developing and implementing a high-quality, competency-based learning models is ambitious – but achievable goal.
- Competency-based combined with blended learning may well be the future of higher education.
- Competency-based learning models are a significant opportunity for our sector.