Leading and Developing an Online, Competency-based Degree Program

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Planning/Looking ahead

• Developing competency-based, online courses for our institution’s cyber security program.

• Key issues for leadership when developing and implementing competency-based education (CBE).
  – personnel and their involvement
  – the CBE course development process
  – potential challenges along the way
What is CBE, and how does it differ from traditional instruction?
“CBE is an outcomes-based approach to earning a degree or other credential. Competencies are statements of what students can do as a result of their learning. While competencies can include knowledge or understanding, they primarily emphasize what students can do with their knowledge. Students progress through their degree or credential by demonstrating competency proficiency or mastery at the course or at the program level. The curriculum is structured around these specified competencies. Competency based education has two principle approaches: Credit-Course Based and Direct Assessment”.
## Traditional versus Competency Based

<table>
<thead>
<tr>
<th>Traditional</th>
<th>Competency-based</th>
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</thead>
<tbody>
<tr>
<td>Time is fixed</td>
<td>Time is variable</td>
</tr>
<tr>
<td>Learning (mastery) is variable</td>
<td>Learning (mastery) is fixed</td>
</tr>
<tr>
<td>Content/material is generalized</td>
<td>Content/material is personalized</td>
</tr>
<tr>
<td>Pace is fixed</td>
<td>Pace is variable</td>
</tr>
<tr>
<td>Some students succeed</td>
<td>All students succeed</td>
</tr>
</tbody>
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*(Brightspace D2L, 2015)*
Examples from Fast Start 3 Cyber Security courses

- ITNW 1325 (C2S6)
- ITNW 1345
- ITSY 2301 C1S1, C2S1
- ITCC 2341
Key issues for leadership with CBE

• Personnel

• Process of designing/developing CBE courses

• Potential challenges along the way
Personnel for CBE

Who should be included in your institution?

What do they need to be successful?
Personnel

• Curriculum development
  – project manners
  – faculty
  – instructional designers
  – industry partners

• Key players in other departments/offices
  – curriculum
  – online learning
  – financial aid
  – registration
  – advising
What do they need?

- Explanation of what CBE is and how it affects higher education
- Clarification of their new or differing roles in CBE
- Training for how to design CBE courses.
Process of designing and developing CBE courses

Organizing skills into competencies.

Designing and building

Tools for course design
Timetable

• Should include the following:
  – planning phase for entire process (multiple departments)
  – coming up with competencies
  – design of the courses
  – development of the courses
  – testing of the courses

• Each of these steps can potentially take months, depending on the amount of resources you dedicate to each phase
Developing competencies

• Faculty, industry partners, and other experts work together to identify skills, knowledge, and abilities needed.

• Organize these into competencies.

• Organize these into curriculum for courses in the way that your institution best sees fit.
  – We must connect everything back to WECM.
Designing/Developing CBE curriculum

• Curriculum developer versus teaching faculty.
  – Course development is about planning and organizing curriculum and instruction
  – Your instructors must see themselves as subject-matter-experts (SME).
  – More than just creating an online version of what instructor already has.
  – SMEs and Instructional Designers work together to create online assessments, curriculum, and instruction.
Shift in how we approach instruction

• Purpose becomes preparing students to complete required tasks/activities and gain the necessary competencies, as opposed to the coursework or passing exams.
Shift in how we assess learning

- Assessments must line up with what the competencies or tasks/activities associated with them require.
  - Think about a driver’s license

- Authentic Assessments
  - Don’t just give a multiple-choice quiz or exam because you always have.

- PC Hardware course on (dis)assembly of computer
Tools we used for CBE course design

- Instructional Guide
- Competency Outline
Challenges and issues to consider

Planning the project
Staffing for course creation
Accountability
Finances
Online Learning Management System
Planning the project

• Grant/project must be designed well, focusing on all phases of the project

• Institution may be unaccustomed to working on projects of this scale

• Try to avoid meeting shifting priorities during the project
Staff

• Opt in to participating in the project
  – Seek out your champions

• Training about CBE before the project work begins
  – Understand the commitment to the project that's required

• Reduce class load to accommodate for time spent on course development
  – Prepare to hire additional instructors.

• Instructors often inexperienced at course development at the program level.
  – Some have done it at the course level, but this is different.
Accountability

• Have a project manager with authority

• Accountability for instructors involved in progress - track progress during weekly meetings
Finances

- Budget for all phases of the project. More than just curriculum development.

- Get a grant!
  - We used a Fast Start grant from the Texas Workforce Commission.
  - Other funding agencies support CBE development.
Learning Management System

• You must determine if your LMS will do what you need it to
  – grading
  – badging
  – activities
  – different types of assessments
  – ease of use for instructor and student
Thank you.
Questions?

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