



Competency-Based Education (CBE)

Considerations for the Future

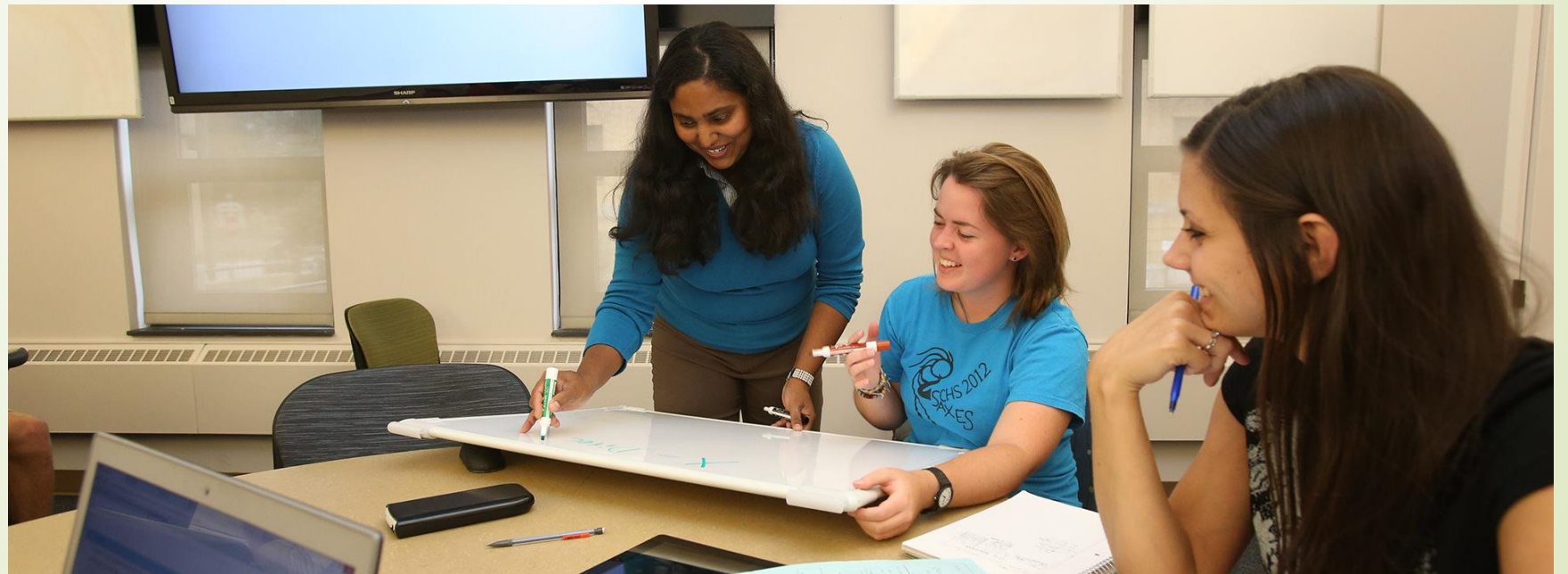
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August 2016

History

- Approach started in 1960s in adult learning programs as a reaction to employer feedback on graduates that did not have expected skills when entering the workforce



History

- 1970s DOE offered grants to institutions offering adult learning programs to experiment with CBE, primarily concerned with adult basic skills



History

- Broader paradigm shift started with Western Governors in 1990s as first higher ed institution to award degrees based on competencies



- **MAJOR BREAKTHROUGH** - March 2013 the DOE approved federal financial aid for CBE students

History

- As of April 2015 Southern New Hampshire and Capella Universities were the first to receive both regional accreditation and DOE approval for direct assessment programs
- Currently 600 institutions considering offering CBE programs



★ Nine competency clusters



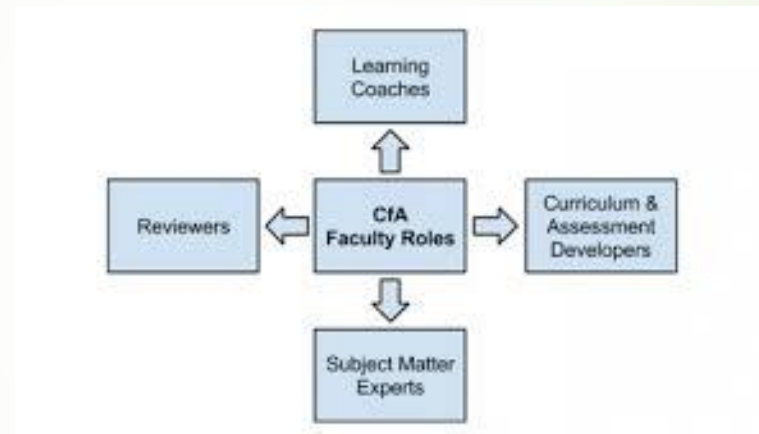
Characteristics

- Based on mastery of **skills** not time
- Self-paced
- Fully online
- Personalized learning paths
- Project-based
- Assignments structured to allow demonstration of mastery



Characteristics

- Learning coaches and subject matter expert assessors



- No grades (no failure!) – practice until you get it
- Start date each month
- Targets adult learners who bring pre-existing experience, knowledge, skills and abilities

Two CBE Models



- **Course-based model with credit equivalency**
 - E.g. 120 competencies map to 120 credit hours qualifies students for federal financial aid
 - Allows for traditional transcript plus competency transcript
- **Direct assessment**
 - Direct measure of student mastery of competencies via assessment. No clock hours or credit hours
 - Portfolios, competency transcripts



Pricing Model



| | |
|--|--------------------------|
| ➤ Western Governors University | \$2,890 per 6-month term |
| ➤ University of Wisconsin Flex | \$2,250 per 3-month term |
| ➤ Northern Arizona University | \$2,500 per 6-month term |
| ➤ Southern New Hampshire U (College for America only) | \$1,250 per 6-month term |
| ➤ Capella University | \$2,000 per 3-month term |

Lower cost not lower quality

Process – Backward design

- ➔ Identify the competencies/skills required for successful completion of a program (what must students know and be able to do)

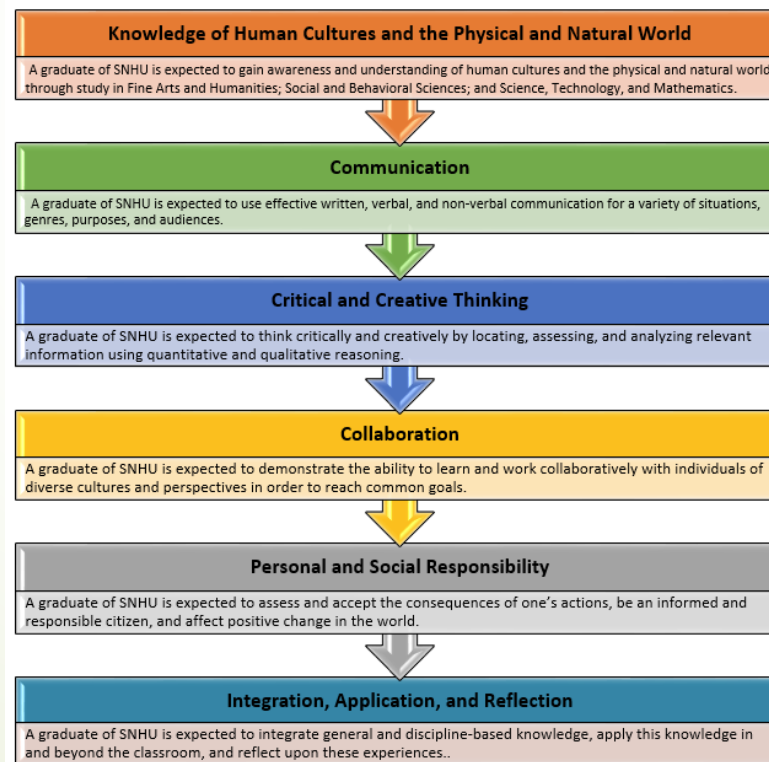


Figure 1: SNHU General Education Program Outcomes

Process – Backward design

- Design assignments/activities for each competency that will move students toward successful demonstration



Compose academic essays in various rhetorical styles

Write a summary of a major position in Weber, Veblen, Cooley, and Mead and a research proposal and paper in a liberal arts discipline with an annotated bibliography.



Demonstrate knowledge of potential and limitations of technology's advances

Demonstrate understanding of impacts of technology on institutions and humanity. Discuss impact of technology on facets of psychology and Sociology, the perpetuation of stereotypes through technology and possible changes in human nature and ethics due to technology.

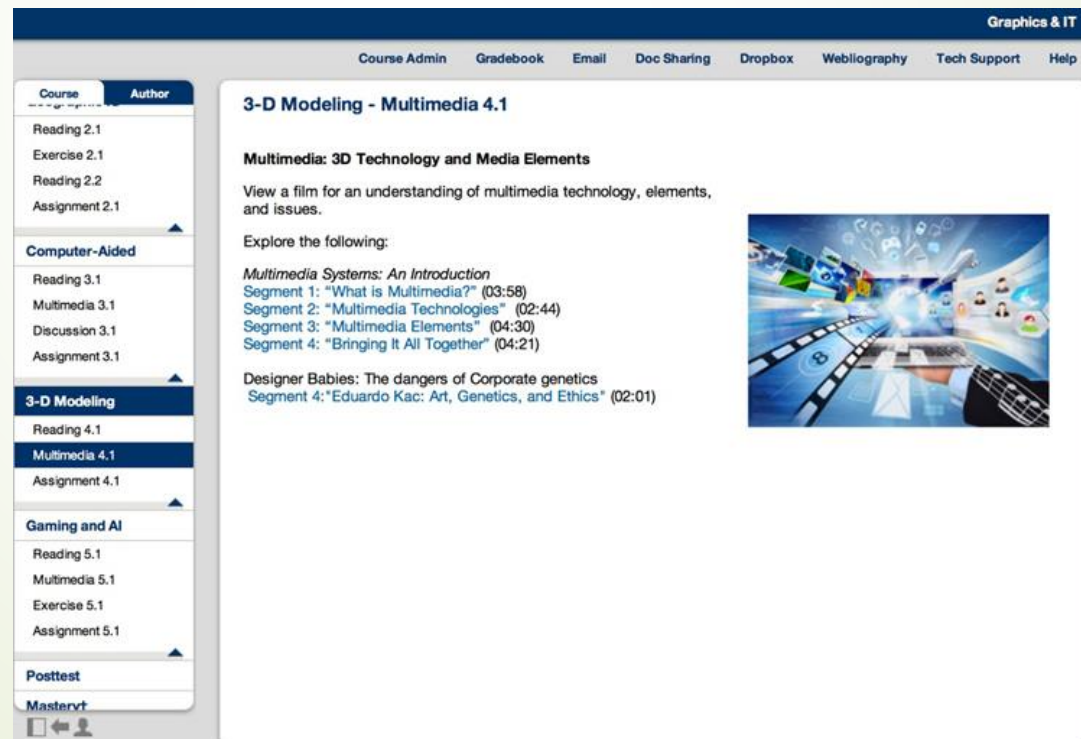


Practice an examined or self-reflective life

Discuss a personal statement of the importance of literature, film, and art in understanding human nature; also discuss a personal statement about film's impact in understanding culture. Journal about the meaning of life, explore connections between religion and art and explore connections between history and art/literature.

Process – Backward design

- Provide learning resources in variety of media to allow choice by learning style



The screenshot displays a course management system interface. The top navigation bar includes links for Course Admin, Gradebook, Email, Doc Sharing, Dropbox, Weblogography, Tech Support, and Help. The sidebar on the left lists course content under various categories: Course, Author, Reading 2.1, Exercise 2.1, Reading 2.2, Assignment 2.1, Computer-Aided, Reading 3.1, Multimedia 3.1, Discussion 3.1, Assignment 3.1, 3-D Modeling (highlighted), Reading 4.1, Multimedia 4.1, Assignment 4.1, Gaming and AI, Reading 5.1, Multimedia 5.1, Exercise 5.1, Assignment 5.1, Posttest, and Mastervt. The main content area is titled '3-D Modeling - Multimedia 4.1' and contains the following text:

Multimedia: 3D Technology and Media Elements

View a film for an understanding of multimedia technology, elements, and issues.

Explore the following:

Multimedia Systems: An Introduction
Segment 1: "What is Multimedia?" (03:58)
Segment 2: "Multimedia Technologies" (02:44)
Segment 3: "Multimedia Elements" (04:30)
Segment 4: "Bringing It All Together" (04:21)

Designer Babies: The dangers of Corporate genetics
Segment 4: "Eduardo Kac: Art, Genetics, and Ethics" (02:01)

To the right of the text is a colorful illustration depicting a futuristic, digital environment with various icons, a film strip, and a hand holding a device.

Process – Backward design

- Craft rubrics that allow for consistent and rigorous assessment of student work that identify mastery elements

| Criteria | Exemplary 4 | Competent 3 | Acceptable 2 | Unacceptable 1 | Not Attempted 0 |
|--------------------------|--|--|--|---|---|
| Purpose or goal | Identifies clearly and addresses consistently a realistic and significant purpose or goal | Identifies clearly a realistic and significant purpose or goal | Identifies a reasonable purpose or goal | Identifies an unclear and/or unrealistic purpose or goal | Does not identify a purpose or goal |
| Hypothesis | Identifies and addresses consistently an important hypothesis | Identifies an important hypothesis | Identifies a hypothesis | Identifies an insignificant hypothesis | Does not identify a hypothesis |
| Evidence | Presents clearly and accurately all of the necessary data | Presents clearly and accurately most of the necessary data | Presents accurately some of the necessary data | Presents inaccurately some data or irrelevant data | Does not present data |
| Conceptual understanding | Responds clearly and effectively using appropriate and sufficient course content and outside sources | Responds clearly using appropriate and sufficient course content | Responds using appropriate and sufficient course content | Responds using insufficient and/or inappropriate course content | Does not respond using course content |
| Assumptions | Presents and justifies crucial and consistent assumptions | Presents and justifies consistent assumptions | Presents consistent assumptions | Presents extraneous and/or contradictory assumptions | Does not present assumptions |
| Inferences | Draws clear and valid conclusions or inferences supported by content | Draws valid conclusions or inferences supported by content | Draws valid conclusions or inferences | Draws inaccurate conclusions or inferences | Does not draw conclusions or inferences |

Process – Backward design

- Scaffold activities for progressive levels of difficulty
- Provide extensive feedback from subject matter experts to guide student mastery

Student Name – Unit Challenge Feedback – 5/20/2015
Generally a good job for your first try!

TABLES:

1. **Merchants:** The Phone number field was not loaded correctly. The data file had a leading 1, which makes the format look incorrect.
2. **Customers:** Same issue with the phone number.
3. **Cards:** The instructions are not clear here, but this field should be mandatory. Frequently when linking two tables together, the fields should be mandatory, otherwise the users can leave the field blank and you don't know who is the owner of the credit card.
4. **Charges:** It looks like you ended up with additional records in this table.

SPECIFY RELATIONSHIPS:

Mostly OK, but you need to make sure you check the box "Enforce Referential Integrity" and the type of join.

QUERIES:

1. **Merchant Query:** Looks good but make sure that you sort the query results as indicated in the instructions.
2. **Cards Crosstab:** The value in the crosstab should be the value of the credit limit, not the sum.
3. **Update_Cards:** This is a query that is used to change values in a table.

FORMS:

1. **Customers:** OK
2. **Merchants:** OK

SNHU College for America Interface

The screenshot displays the SNHU College for America user interface. At the top, a dark navigation bar contains the logo and the text "COLLEGE for AMERICA", along with links for "DASHBOARD" and "GOAL". A secondary blue bar features a user profile picture, the name "Dina", a progress bar, and the date "August 27, 2014". Below this, the "Activity Feed" section is visible, with tabs for "IN PROGRESS", "MAILED", "FEEDBACK", "MESSAGES", and "ALL". Two activity items are listed: "Build Teamwork Through Marketing Blue Project: On Top of Mount Rubric Team" (due August 30, 2014) and "Evaluate Popular Psychology Blue Project: I've Got a Secret Individual" (due September 20, 2014). To the right, the "Connections" section shows a profile picture, and the "To-Do" section includes a task list for "ON TOP OF MOUNT RUBRIC" with items like "Extra Survival Gear List", "Providing Constructive Criticism on Peer Work", "Dealing with Conflict in Project Teams", and "Planning and Setting Deadlines".

COLLEGE for AMERICA DASHBOARD GOAL

Welcome to College for America, Dina August 27, 2014

Rubric: 70 Total | 0 Last Week | 70 This Week

Activity Feed

IN PROGRESS MAILED FEEDBACK MESSAGES ALL

Build Teamwork Through Marketing Blue Project: On Top of Mount Rubric Team
This project is due on August 30, 2014. [Edit your due date](#)
Team Status: Scheduled
Individual Status: Status: Scheduled
POSTED: AUGUST 27, 2014 08:41 PM

Evaluate Popular Psychology Blue Project: I've Got a Secret Individual
This project is due on September 20, 2014. [Edit your due date](#)
Status: Not Yet

Connections

To-Do

Add an item to your to-do list **ADD**

ON TOP OF MOUNT RUBRIC

- ☐ Extra Survival Gear List
- ☐ Providing Constructive Criticism on Peer Work
- ☐ Dealing with Conflict in Project Teams
- ☐ Planning and Setting Deadlines



Challenges



- Retrofitting **legacy SIS** systems to accommodate 12 monthly start dates, tracking competencies versus credit hours, mapping competency sets to 3-credit courses for academic transcripts, recording mastery not grades
- **Financial aid** model for “full-time” and “part-time” students; producing student activity metrics for reporting
- Bursar – **billing cycles** for 6-month subscriptions, managing **refunds**
- Hiring/training **learning coaches** to monitor student engagement and progress
- New model for **faculty workload**



Challenges

- Working with subject-matter experts (SMEs) to design relevant and authentic activities/assignments and determine consistent and clear performance indicators (compensation for SMEs) Working out how **assessors** are **compensated**
- Lack of off-the-shelf **LMS systems** to track competency mastery
- Different **business model**
- **Student** pre-assessment, orientation, workflow and support
- Transcribing previous credit courses with competencies
- NEASC **Accreditation**