# Competency-Based Education (CBE)

*Considerations for the Future*

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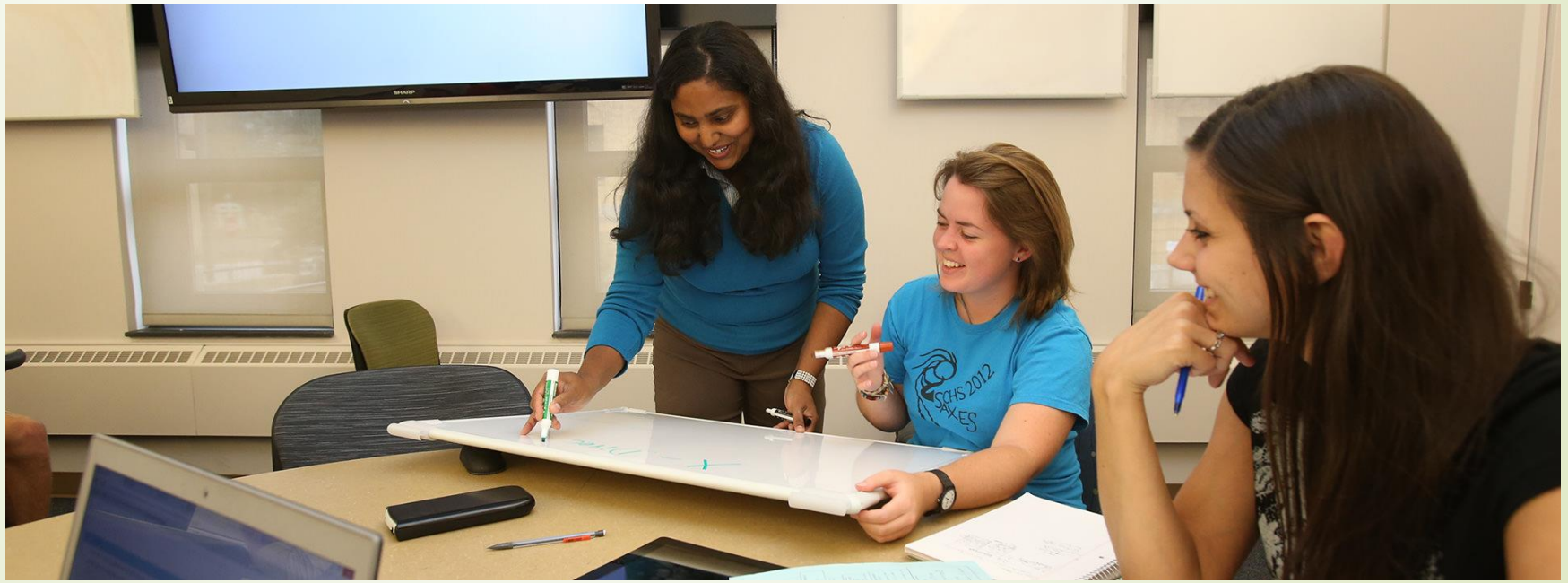
# History

- 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

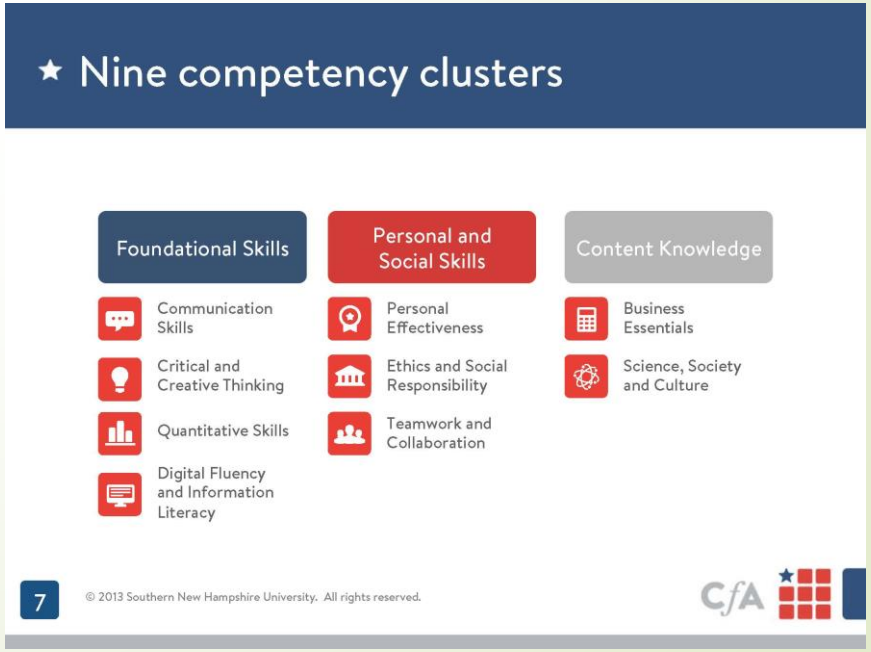
# History

- 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

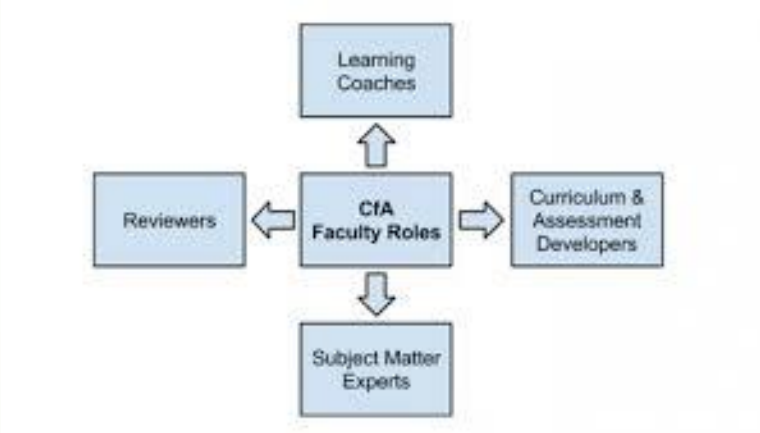


# Characteristics

- 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)

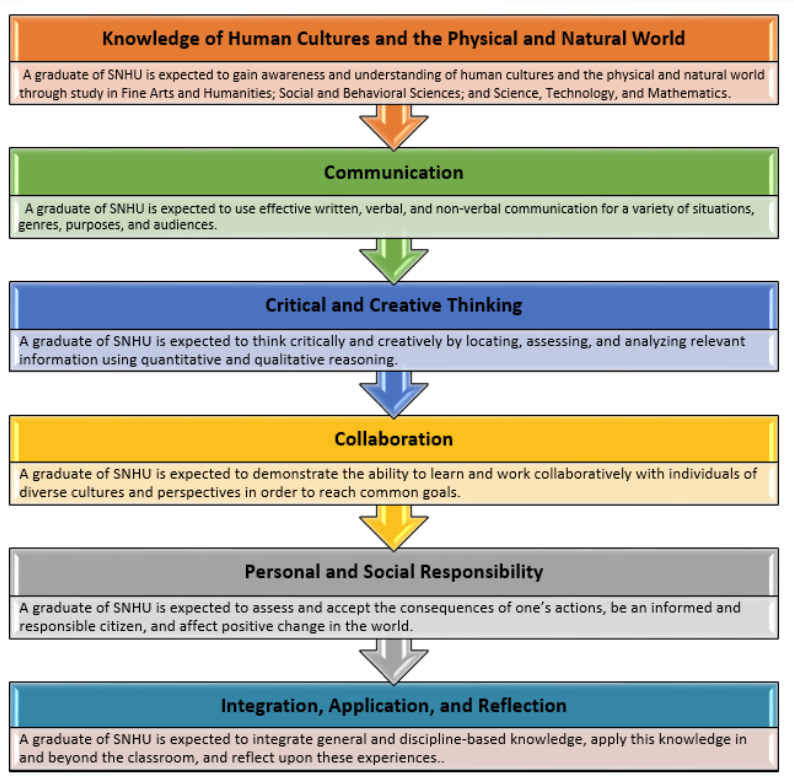
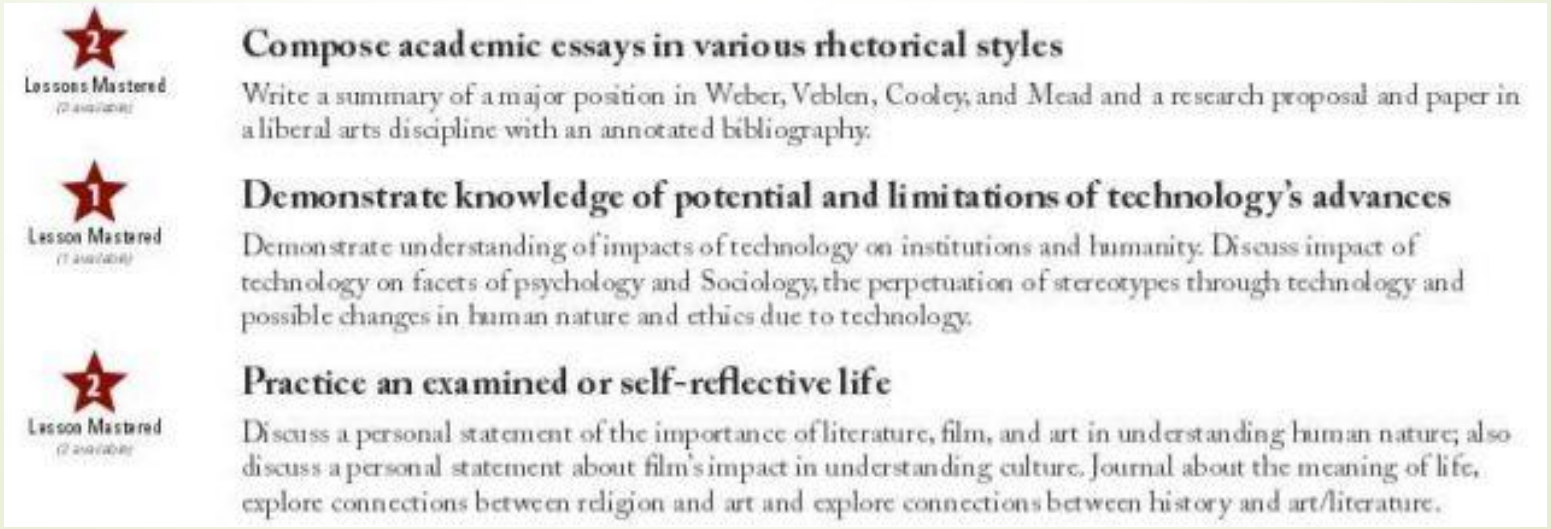


Figure 1: SNHU General Education Program Outcomes

# Process – Backward design

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



# Process – Backward design

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

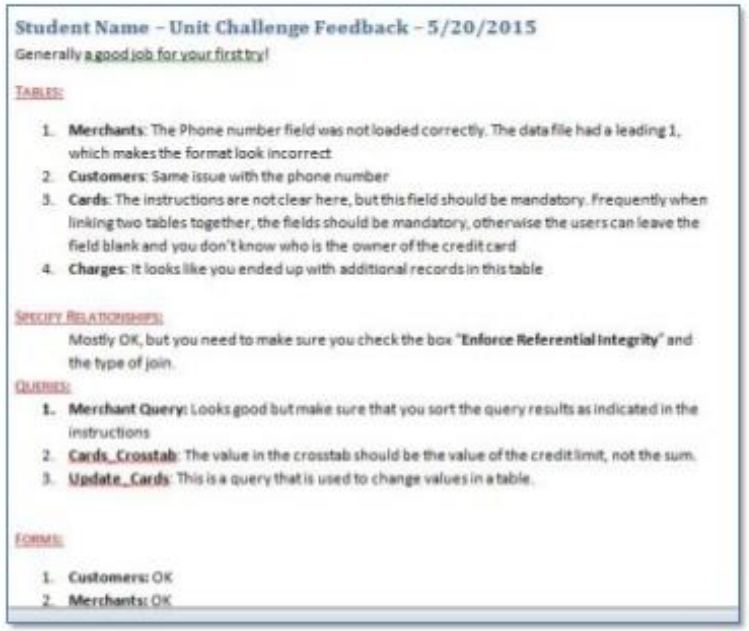
# Process – Backward design

- 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.

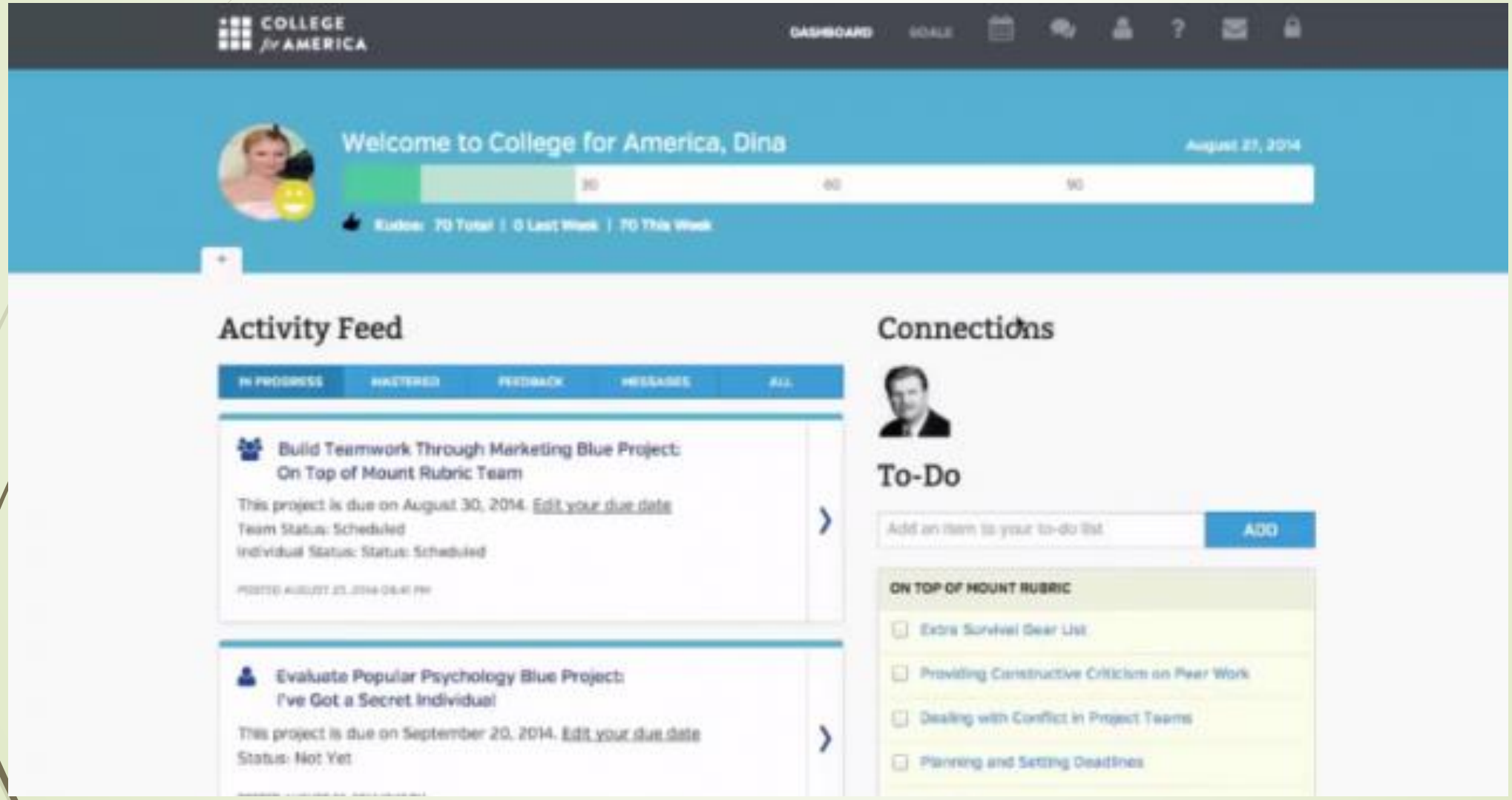
QUERIES:

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



# 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
- Transcripting previous credit courses with competencies
- NEASC **Accreditation**