University of North Alabama
Institutional Effectiveness
Case Study

Economics & Finance
Student Learning Outcomes

RAPID IMPROVEMENT with LEAN TOOLS

FACILITATORS:

Bliss Adkison
Academic Affairs
University of North Alabama

Janyce B. Fadden
College of Business
University of North Alabama

The University of North Alabama
Rapid Improvement with Lean Tools Case Study
Institutional Effectiveness
Economics and Finance Programs Student Learning Outcomes

Purpose: The purpose of this case study was to identify the student's pathway through the learning outcomes for the program, identify changes that needed to be made to the learning outcomes, modify those outcomes, and provide a successful demonstration of continuous improvement to program learning outcomes and the assessment of those learning outcomes by using Rapid Improvement with Lean tools.

Design/methodology/approach: This case study used Lean with Rapid Improvement Tools in order to facilitate a faculty led conversation that resulted in positive change and improvement in assessment of the program's learning outcomes. Faculty were asked to meet for four hours during the month of August in 2019 in order to discuss institutional effectiveness within their department and the assessment of their student learning outcomes. Faculty within the department were asked to list their student learning outcomes, complete a BOSCARD, map the current state of their program, complete a cause and effect diagram, map an ideal state, and then create an action item list. Lean with Rapid Improvement tools enabled faculty to thoroughly see how a student flows through the program's courses and the advancement of content throughout the program. This approach allowed for the accurate assessment of where specific content was being taught to the student and how learning outcomes were being measured within the program content.

Findings:

The following findings that are within control of the department were found during the exercise using Rapid Improvement with Lean Tools:

Student Learning Outcomes

1. Measurement of student learning outcomes were not used for effective change in curriculum on a consistent basis
2. The tools for measuring assessment of student learning outcomes need to be reevaluated. They currently do not yield data that is usable for the demonstration of continuous improvement
    a. Tool used for measurement of all student learning outcomes is embedded questions
    b. No benchmark data for improvement
    c. Timeframe of assessment does not allow for adequate change and tracking of improvement to the student
    d. Questions for learning outcomes should be refined
3. Lack of mapping of courses to program learning outcomes

Measures that are Causing Unsuccessful Outcomes

1. Lack of mapping content of exam to class work
2. Lack of evaluation of prerequisites content for EC, FI
3. Poorly constructed questions
4. Exam content not challenging
5. Not enough retest on inadequately mastered content
6. Math proficiency and problem-solving not measured

Causes concerning People that Contribute to Unsuccessful Outcomes

1. Self-selection of major by student (not good at math)
2. Lack of student cognizance of SLOs EC and FI
3. Teacher is not same as question/measure designer. Content may not agree
4. Consistency in coverage in EC 251-252
5. Consistency in coverage in FI 343

Methods that are Causing Unsuccessful Outcomes

1. Lack of reinforcing learning through practice
2. Lecture does not engage student. Alternatively: discussion distracts from "clean" answer
3. Continuity between lower level and upper level content
4. Uniformity in class assessment EC, FI
5. Lecture only multiple learning styles EC 251 and EC 252
6. Feedback to students in class does not reinforce or correct the students

Tools that are causing Unsuccessful Outcomes

1. Textbook above level of class C
2. Textbook electronic media includes convincing and skeptical content
3. Too many models can confuse students within Economics

Rapid Improvement with Lean Tools Event

The above presented to the reader the purpose, method, and findings in correlation with the Department of Economics and Finance Rapid Improvement with Lean Tools Event. A variety of tools were used during the event in order to facilitate the faculty lead discussion of improvement within their program learning outcomes. These tools included:

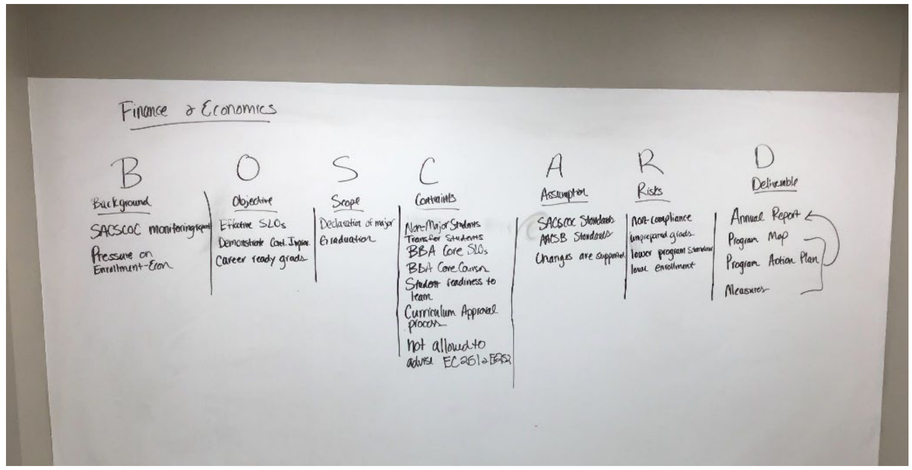
1. A BOSCARD
2. Listing of Student Learning Outcomes
3. Listing of Courses within the program
4. A Current State Map of the Student's Journey through the Program
    a. Identification of the sequence of courses
    b. Identification of student learning outcome assessments
    c. Identification of where each learning outcomes is taught and in which course it is taught
5. Idea Cards
6. A Cause and Effect Diagram
7. A Future State Map/brainstorming
8. An action list

Each of the tools above will be thoroughly explained in the outline of events below.

Event:

The Department of Economics and Finance faculty gathered in a mutual meeting space in order to conduct the Rapid Improvement Event. The event was facilitated by Janyce Fadden and Bliss Adkison. The faculty understood that they were participating voluntarily in a case study in order to demonstrate how Rapid Improvement with Lean Tools could contribute to Institutional Effectiveness at UNA.

The Department of Economics and Finance's department chair expressed a need for the reevaluation of the program's student learning outcomes and thus, this event was scheduled. The goal of the department was to evaluate their student learning outcomes, the assessment of those outcomes, and how the results are used for continuous improvement. According to those in the department, the student learning outcome assessment measures had not been evaluated by the faculty as a whole in some time.



The event began with the development of the BOSCARD. The BOSCARD is a tool that promotes conversation centered around the following topics concerning the Department of Economics and Finance learning outcome assessment:

B-Background
O-Objective
S-Scope
C-Constraints
A-Assumptions
R-Risks
D-Deliverables

Faculty identified the following for each topic listed above:

Background	• SACSCOC Monitoring Report and Accreditation • Pressure on Enrollment in Economics
Objective	• Effective SLOs • Demonstrate Continuous Improvement • Career Ready Graduates
Scope	• Beginning: Declaration of Major • End: Graduation
Constraints	• Non-major students • Transfer students • BBA Core SLOs • BBA Core Courses • Student Readiness to learn • Curriculum Approval process • Not allowed to advice EC 251 and EC 252
Assumptions	• SACSCOC Standards • AACSB Standards • Changes are supported
Risks	• Non-compliance • Unprepared graduates • Lower program standard • Lower enrollment
Deliverables	• Annual Report documentation • Program Map

	• Program Action Plan • Measures

The faculty were then asked to list the program learning outcomes that they currently have:

Economics:

1. Role of Prices
2. Purpose of the Firm
3. Aggregate Economic Analysis

Finance

1. Time Value of Money
2. Risk of Return
3. Primary Firm Goal

After listing the student learning outcomes of the program, the faculty were asked to list the courses required for the program and also any electives. The following list was created:

BBA Core

- MG 331 (pre: MG 330)
- MK 360
- MG 382W
- MG 395
- FI 393
- MG 491
- MG 498

Business and Finance

- FI 410
- FI 423
- FI 492
- FI 493
- FI 498
- AC 390
- AC 391
- 3 AC/FI Electives

Economics

- EC 240
- EC 341
- EC 391
- EC 425
- EC 428

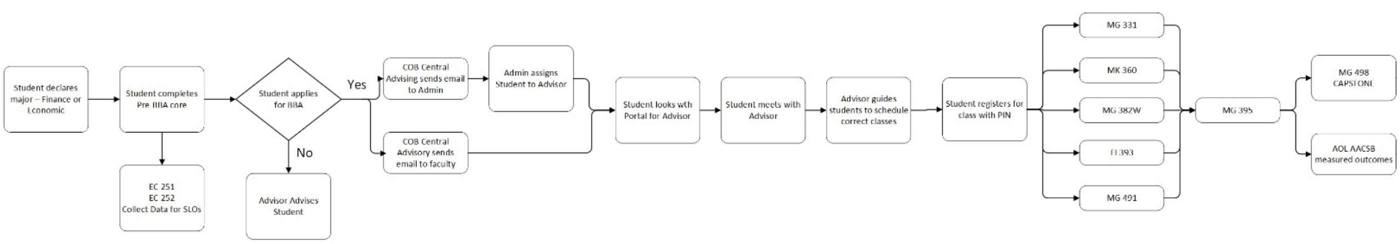
- QM 295
- 2 EC/QM Electives

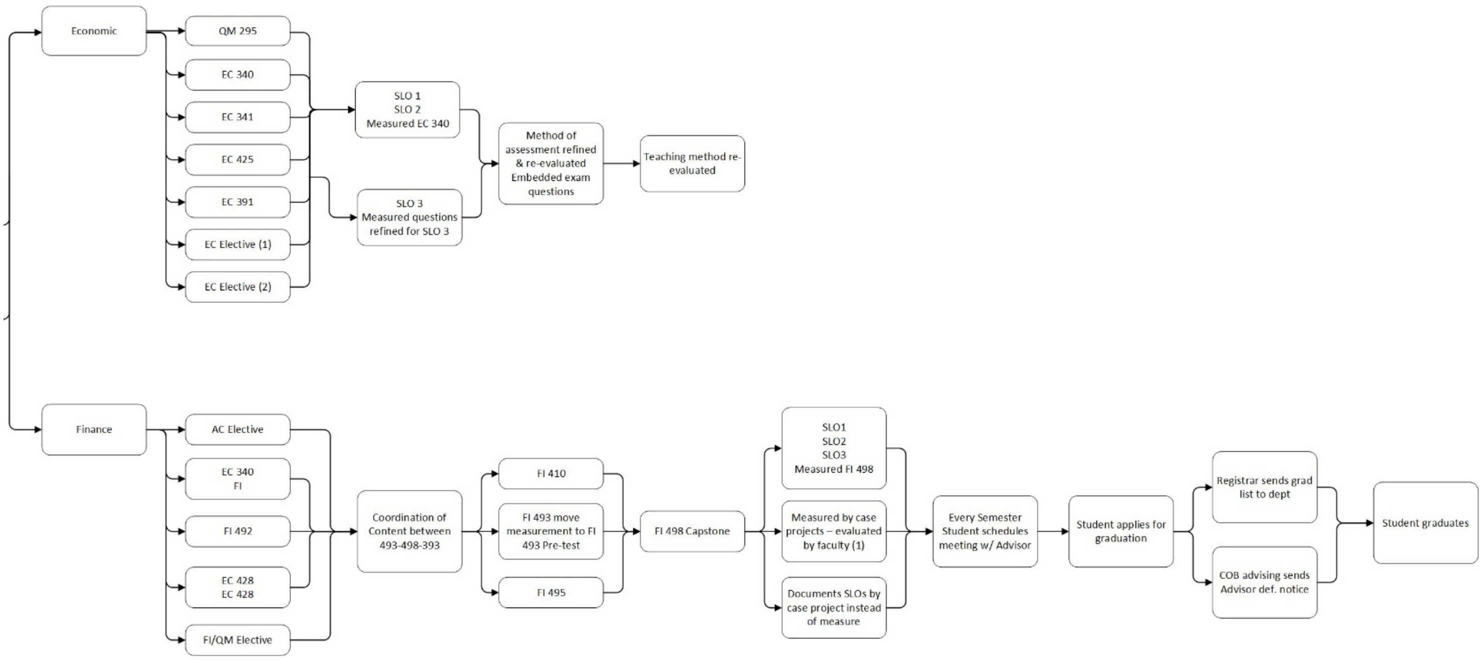
Finance

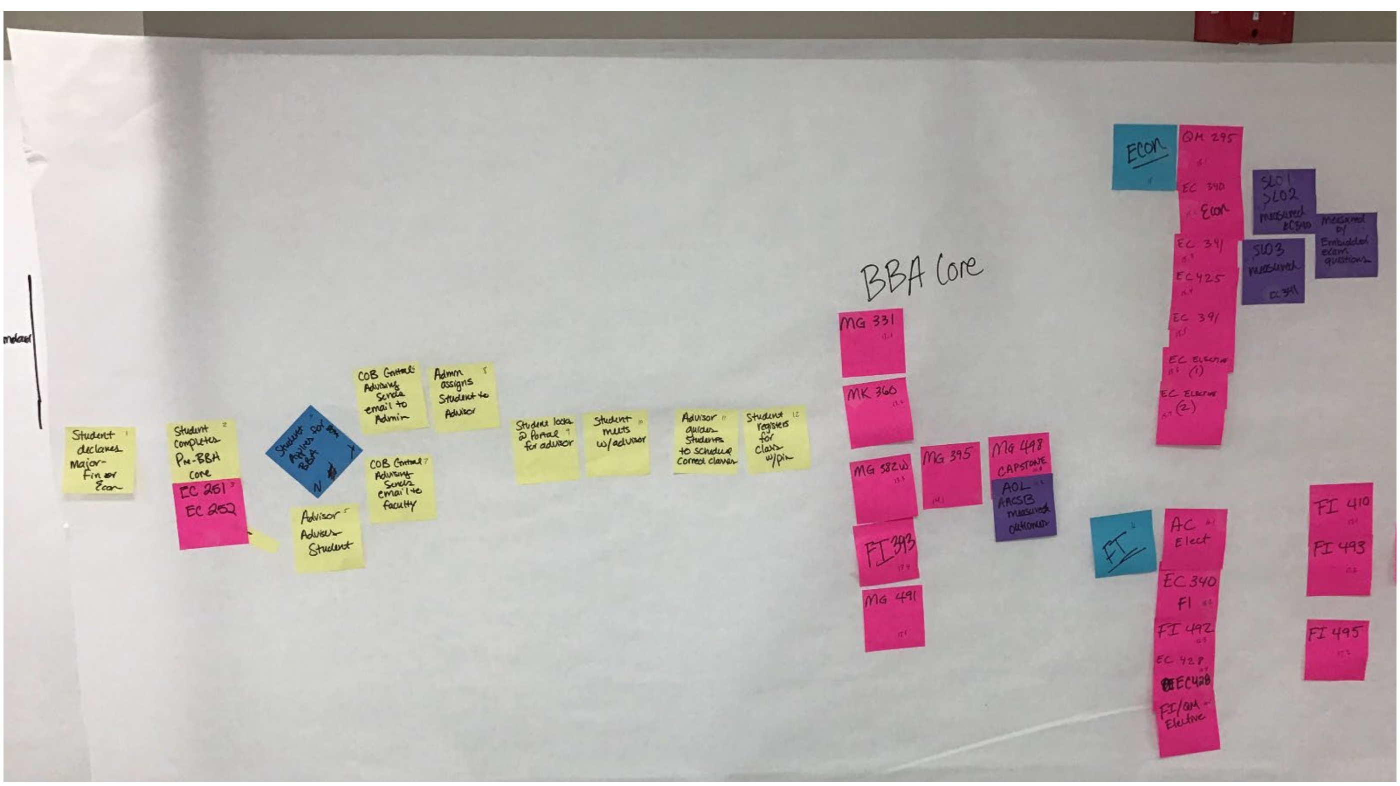
- EC 340
- AC Elective
- FI 410
- FI 492
- FI 493
- FI 495
- FI 498
- FI/QM Elective

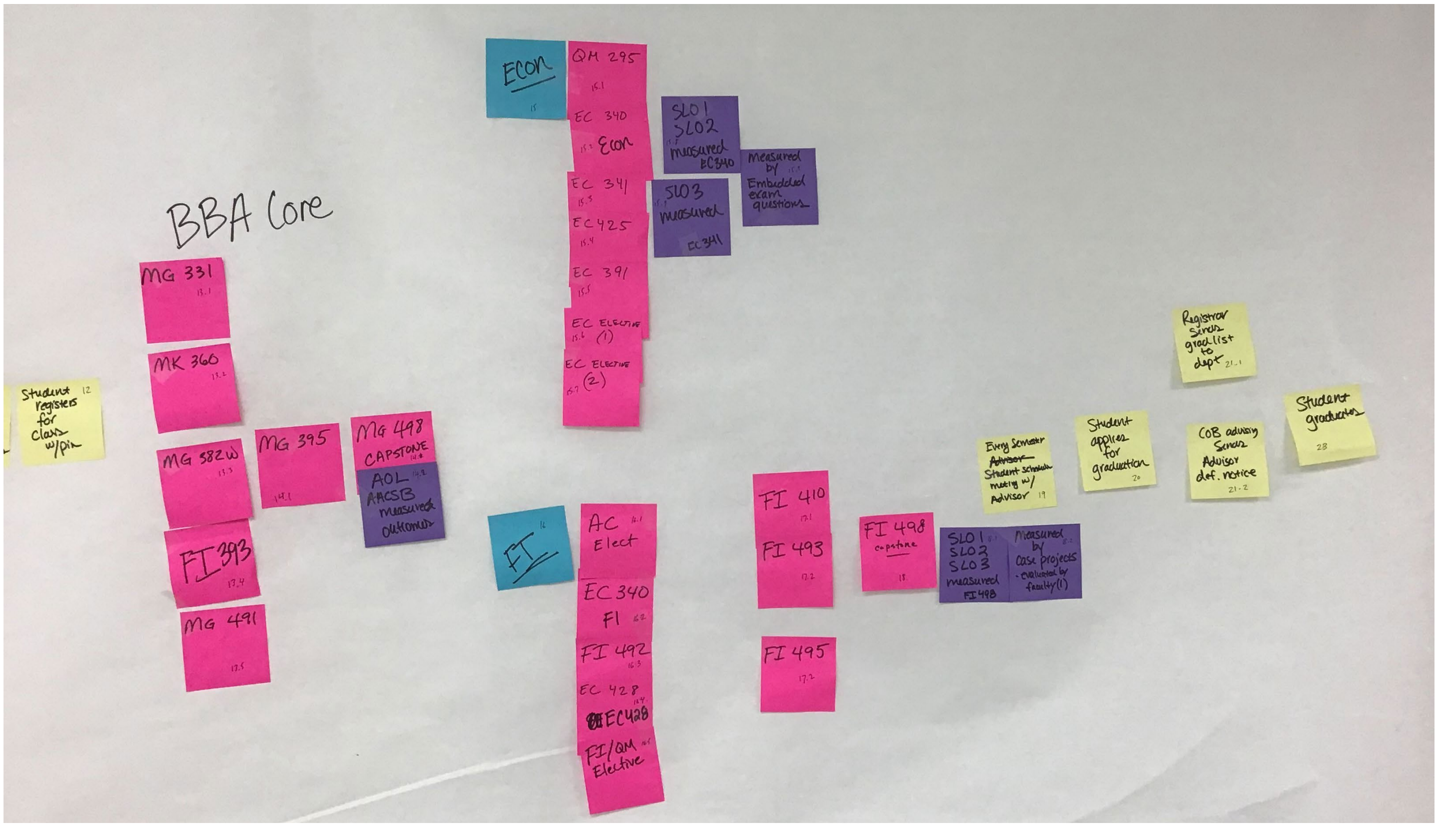
Faculty then created a current state map of how the student flows through the program. While advising information is included in this map, for the purpose of our scope, faculty focused on the student's progression through the course work to graduation. The maps below are the result of the current state mapping:

BBA CORE

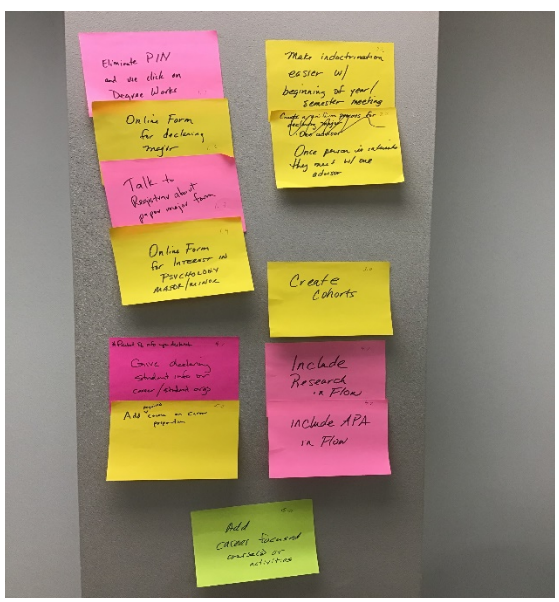



Economic
QM 295
EC 340
EC 341
EC 425
EC 391
EC Elective (1)
EC Elective (2)
SLO 1
SLO 2
Measured EC 340
SLO 3
Measured questions refined for SLO 3
Method of assessment refined & re-evaluated Embedded exam questions
Teaching method re-evaluated
Finance
AC Elective
EC 340 FI
FI 492
EC 428
EC 428
FI/QM Elective
Coordination of Content between 493-498-393
FI 410
FI 493 move measurement to FI 493 Pre-test
FI 495
FI 498 Capstone
SLO1
SLO2
SLO3
Measured FI 498
Measured by case projects – evaluated by faculty (1)
Documents SLOs by case project instead of measure
Every Semester Student schedules meeting w/ Advisor
Student applies for graduation
Registrar sends grad list to dept
COB advising sends Advisor def. notice
Student graduates


BBA Core
Econ
FI
QM 295
MG 331
MK 360
MG 395
MG 498
CAPSTONE
FI 410
FI 493
FI 495
FI 492
EC 340
AC Elect



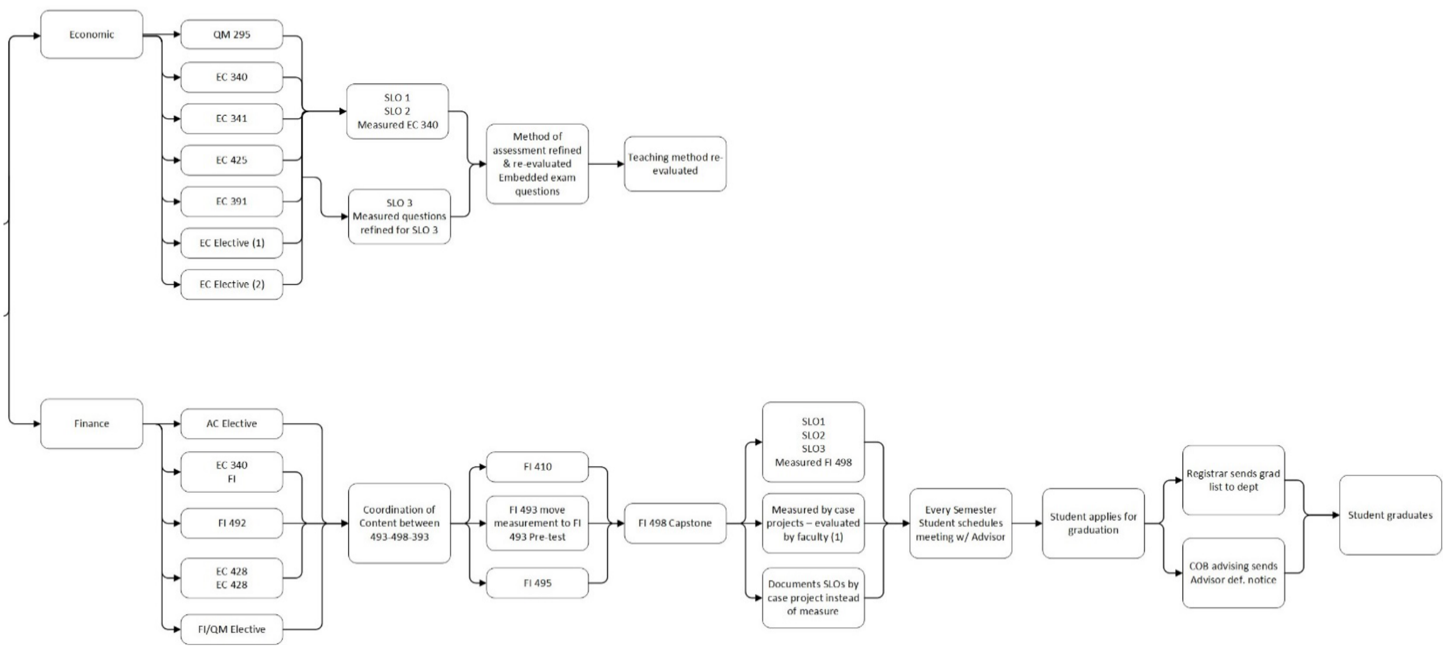
Faculty members created over 15 idea cards during the mapping which are statements about ways the process could be improved. These ideas were categorized and kept for consideration during the creation of the future state map and the action item list.



The faculty then evaluated the current state and their idea cards. The faculty were then asked to participate in completed a cause and effect diagram. This diagram was used in order to facilitate a conversation and bring awareness to what causes student learning outcomes assessment to be unsuccessful. The faculty identified many of the concerns that were mentioned above in the "Findings" section of this report.

Faculty were asked to review the cause and effect diagram after completion. Faculty identified the causes that were within their control to change and also those that were not within their control to alter.

After the development and conversation shifted from the cause and effect diagram, the faculty were led to construct a future state map and also create action items that they could take immediately to improve student learning outcome assessment. The following diagram demonstrates some of the changes that were identified.



As a result of this conversation, the faculty produced the following action item list, which would begin implementation immediately. These changes can also be incorporated into the department's annual report; thus, creating evidence of continuous improvement for the program. Changes made should be reevaluated each cycle to complete the loop of assessment.

Action Item	**Person Responsible**	**Status**
Refine Question for SLO3-EC	Pete	
SLO2 and SLO1- Refine method of assessment	Pete	
SLO2 and SLO1-Refine teaching method to concentrate on SLO content	Pete/Keith	
SLO1-3-FI- Pretest in FI 493 to measure all SLOs	Mark/Heather	
Set up the process of documenting only in FI 493	Mark	
Coordinate content for FI 393-FI 493-FI 498	Mark	
Follow up Meeting with all Faculty	Doug	

Look at EC 251 and EC 252 and collect data for items that match up to program SLOs in order to collect data	Mark/Doug	
Map courses to SLOs	Doug	
Develop system for comparing results of assessment and making adjustments- articulating those adjustments in the Annual Report	ALL	

Results and Analysis: The results of this case study yielded numerous action items and positive changes to the program. Learning outcomes will be updated and measurements will be re-evaluated in order to ensure compliant assessment of learning outcomes. The program will be able to identify specific learning outcomes that need improvement and also pinpoint exactly where those learning outcomes are addressed within the students' progress through the program. Where program learning outcomes have been outdated and measurements have not been addressed in the past, positive and aggressive movement is underway to implement relevant learning outcomes. The use of these tools created a positive conversation around change and growth in the program. Also, these tools created a safe space for conversation and brainstorming that facilitated change within the program as well.

Practical implications: This department will be able to demonstrate compliance with the Institutional Effectiveness standard 8.2 in the Southern Association of Colleges and Schools Commission on Colleges by reporting the assessment results and changes for continuous improvement within their annual report.

Participants: Dr. Doug Barret, Dr. Mark Foster, Dr. Peter Williams

Facilitators: Janyce Fadden; Bliss Adkison;