Software to Support ABET Criteria 3
Feb. 21 (Friday) 11:00-11:50am
Main 209

Attendees:

Justin Bak, Business Analyst, JBak@mtech.edu
Kaleb Bausch, Business Analyst, KBausch@mtech.edu
Diedrich Brush, Business Analyst, DBrush1@mtech.edu
Carson Fiechtner, Business Analyst, CFiechtner@mtech.edu
Phil Curtis, Science Mine, PCurtis@mtech.edu
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Celia Schahczenski, Manager, CSchahcenski@mtech.edu
Larry Smith, Geological Engineering, LSmith@mtech.edu
Jacob Vesco, Business Analyst, JVesco1@mtech.edu

11:00 Review last meeting — Carson Fiechtner

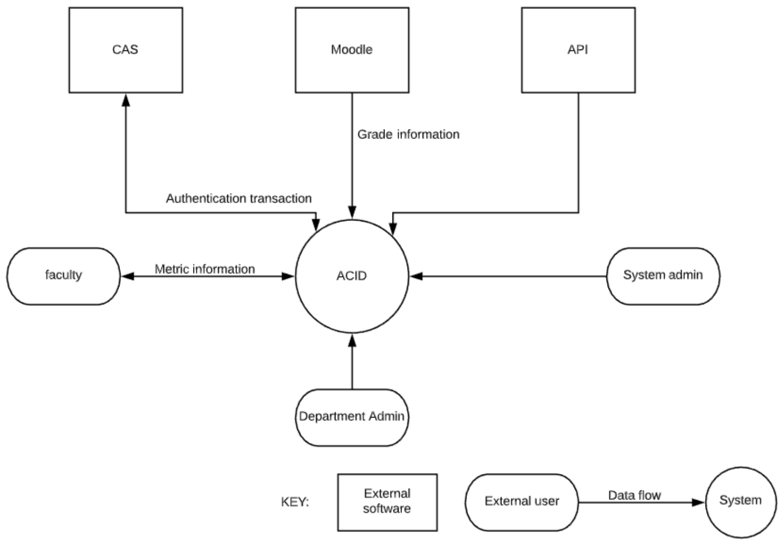
- Users

The expected user categories are:

- Department chair/ABET coordinator
- Department admin
- Faculty member
- System administrator
- API for external application
- ABET accreditor (optional)

We discussed whether the department chair/ABET coordinator would have any functional differences from a department admin, and whether we could combine the two into a single user category. It was decided that for flexibility these should be kept separate. Department admins are typically more involved with data input, while department ABET coordinators generate and review reports. The system should have enough user categories that permissions can flexibly be assigned as needed. A single user can belong to many user categories.

- Environment



The above environment diagram seems acceptable.

- Features

At the previous meeting the following features were suggested:

  - Generate reports
  - Personalized dashboard for each user login - listing programs and courses for a given semester
  - Report builder tool
  - Change history & generate historical reports
  - Map old criteria to new criteria
  - Audit trails - track who did what and when
  - Backup data & purging data
  - Tracking improvements and remediation model
  - Easy data input & flexible for different data entry frequency
  - Tool tips to annotations for input fields

These seemed ok. It was pointed out that the use cases explored in this meeting concern the 2nd to the last bullet, "Easy data input & flexible for different data entry frequency" feature.

- Reports

At the previous meeting the following characteristics were mentioned for reports.

  - Flexibility in the way outcomes are tracked
  - Include sample size data and other statistics in report

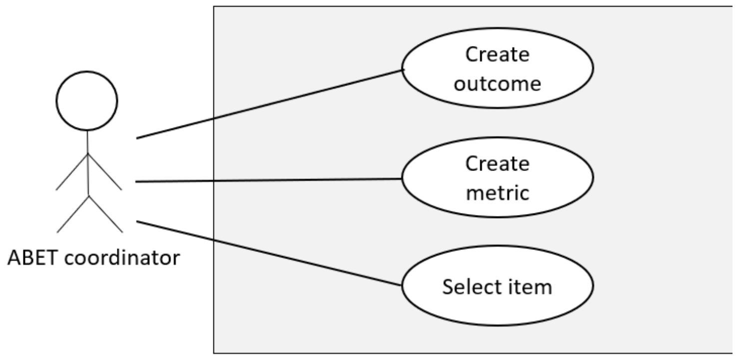
This seems acceptable.

11:10 Use cases Jacob Vesco

- Description

Use cases are a list of actions or event steps typically defining the interactions between a user class and a system to achieve a goal.

- Diagram



No one had any issues with or comments on this diagram.

11:15 Create outcome use case — Jacob Vesco

- What will interact with the software

References 'Create student outcome' use case in the attached use case document.

Clients want to see the process of creating student outcomes separated from the process of associating a student outcome with a program. Automatically associating a new outcome with the creator's program would be confusing and seems to be mixing responsibilities.

An audit log was mentioned as a system feature. Writing to this log needs to be mentioned in each flow of the use case. Each audit log entry needs to have a date and time stamp, and to record which user performed the action. An entry should be added to the log even when a transaction was attempted but was unsuccessful.

The normal flow should make it clear that when a student outcome is being created in the system, a prefix is selected, while an identifier and outcome text are entered.

The alternate flow describing what to do if a student outcome is duplicated, needs more detail. Here are some example cases:

- The user wants to make changes to the text of the outcome (say a word was misspelled) and that change will be in effect for all departments, and will appear in historical reports.
- The user wants to make changes to the text of the outcome which will only be in effect for the future. Historical reports should not change.

In 'Exception', it should be added that the user is informed that no changes were made in the case of an internal error.

In ‘Frequency of Use’, it should be added that this use case will also be used whenever ABET updates program outcomes.

In ‘Special Requirements’ and/or ‘Business Rules’, the existence of program specific student outcomes is needed, and that these may change more frequently than the non-program specific student outcomes.

In the ‘Assumptions’ the first 2 items need to be removed since they refer to associating the student outcome to a program.

A timestamp for changes was brought up to track when outcomes have been created or changed. For audit logging purposes a timestamp was deemed acceptable, but some people suggested that for other uses a simple semester timestamp (i.e. F19, S20) would work.

A client suggested including a “group” field with each outcome. A group field would allow for easy tracking when that group was created, what outcomes come from which group, and quickly expiring all old outcomes. A group field could hold things like an id, a start date, and a mapping to help with historical logging and reporting. Using semesters for the start and end date for these groups might be sufficient, instead of dates.

In ‘Postconditions’, something should be added stating that the audit trail was updated with the creation of the new outcome.

11:30 Select item use case Kaleb/Marcus

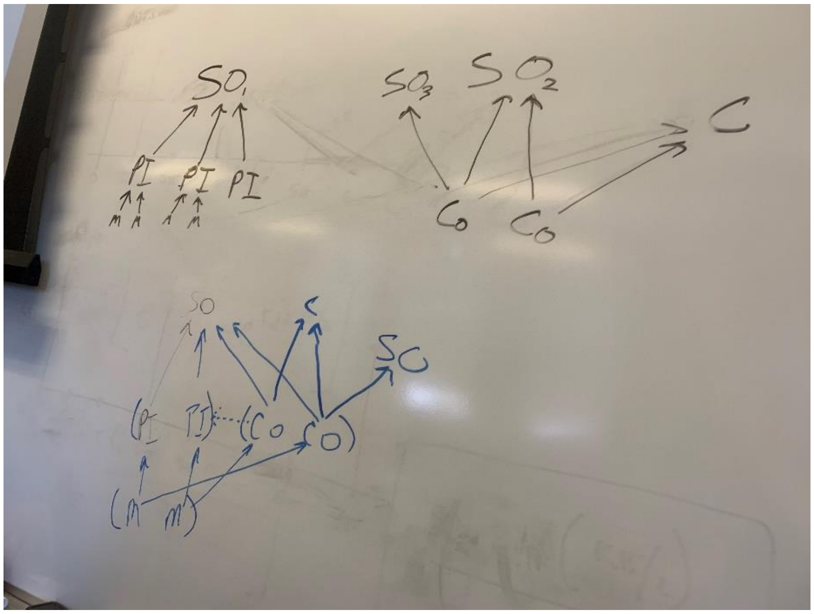
The name of the ‘Select item’ use case was changed to ‘Choose PI and/or CO’. This use case is given in the attached use case document.

When discussing the differences between performance indicators (PIs) and course outcomes (COs), it was brought up that PI’s are determined by the department and are written to be measureable.

COs, on the other hand, are standardized at the MUS level (see https://ccn.mus.edu/search/). COs are allowed to vary from that standard, and many Montana Tech classes are only offered on this campus, so the standard COs were developed by the department.

Someone said that they couldn’t see a successful continuous improvement model existing with only PI’s being used. Another attendee responded that introductory courses are changed when a PI has poor performance, and that it’s easier to quantify a PI than it is a CO.

Clients know that ‘student outcomes’ belong at a top level, while ‘metrics’ belong at a base level. PIs and COs could be at the same level, or PIs could be above COs. At least one client felt that having course outcomes below PIs might be wrong. They wanted to see course outcomes and PIs on the same level.



In the above, only using PI’s (top left), only using course outcomes (top right), or using both (bottom) is shown.

It was decided to allow departments to use PIs, COs or both, and to allow departments to change their selection periodically.

Someone asked whether it was possible for a program to change what items they measure mid-semester. Another responded that, while theoretically possible, the formatting of their data had to match. If it didn’t, the department would have to wait until the next semester, let their old methods expire and create new ones with a new item (PI, CO or both). Thus the normal flow needs to be clearer that changes would only be made between semesters and that information for that semester must not already be in the system.

It was suggested that metrics could be related to PIs or COs. about on a semester by semester basis.

In ‘Postconditions’, something should be added stating that the audit trail was updated with the new choice of method.

11:40	Create metric use case We didn’t make it to this use case, but changes made to the other use cases (i.e. add audit trail as postcondition) will also apply here.	Diedrich Brush
11:50	Next Meeting – develop models – March 6	Carson Fiechtner