Assessment at Michigan Technological University

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1. **User Research**

    ○ Who is commissioning this project and what are their needs?
    The Provost's Office at Michigan Technological University, specifically the Associate Provost, has commissioned this project. Due to the University's outside accreditation agency being changed to the Higher Learning Commission (HLC) within the last few years, the University is working diligently to be prepared for their accreditation review scheduled for 2021-2022. This is a rather complex process, so the goal of this project is to make a recommendation to the Associate Provost with regard to how an overview of the assessment process can be displayed on the homepage of their assessment web site.

    ○ Who are the potential users of this project and what are their needs?
    The potential users of the project will be faculty at Michigan Technological University. Faculty include assistant professors, associate professors, professors, lecturers, senior lecturers, principal lecturers and professors of practice. Although not all faculty are required to have an in-depth knowledge of the entire process, all need to have a general understanding of the assessment process at Michigan Tech.

    ○ What should they believe, know, or be able to do with access to the project?
    The faculty should be able to gain a general knowledge of how assessment works and know why it's important. Specifically, they should know that Michigan Tech assesses both General Education and Degree Programs. Additionally, they should know there are eight learning goals - six are assessed for general education and all eight are assessed by degree programs. Users should also be able to tell who assesses the learning goals, whether it is for general education or degree programs.

2. Heuristic Evaluation

    ○ How do things work now?
    Currently, faculty are experiencing poor communication about what assessment is and how to perform it. As a result, there is inconsistent execution between various departments on campus. Some faculty members have also expressed negative perspectives of assessment and its timeline.

    ○ What do people have to do to accomplish the goal of the project?

Due to the various ways faculty collect student work, the process currently varies by department.

3. Development of Personas

To gather information about the nature and content of the document we were to create, the group conducted interviews with potential users. The following questions were asked of each interviewee.

Questions:
1. What do you know about the assessment that is currently happening?
2. What is your attitude about assessment?
3. What is your perception or attitude toward how you are learning about assessment?
4. Are you familiar with what courses are assessed for general education?
5. What is your role in assessment?

Demographics:
1. How many years have you done assessment?
2. How many years have you worked for the university?
3. What is your official title?

*Persona 1 - Jane
Personal Information
Jane is a 28-year-old Assistant Professor in the Department of Chemistry. She accepted her position at Michigan Tech three years ago straight out of a PhD program.

Use of Focus Area, Relation to Focus Area
Jane knows very little about the assessment process and is sometimes overwhelmed with it. She understands that assessment exists and some of the broad issues associated with the assessment process, such as how much time assessment will take. She feels like the process has not been adequately communicated to her.

Description of Work/Daily Life
Jane is a full-time employee of the University who teaches classes outside of general education, so her courses are are not considered as part of the university's current assessment process for general education.

Other Relations to the Focus Area
Jane is aware that specific courses are required to meet the general education assessment; however, she does not know exactly what courses these would be. She tried to find the names

of the specific course online but could not find a list of them; however, she expected she should be able to.

Personal Information

Frank has been involved with an accreditation process through the School of Technology, where he has worked as a Senior Lecturer for the past twenty years. Despite this, he has not yet been involved with the general education process.

Use of Focus Area, Relation to Focus Area

Frank has utilized assessment and accreditation in his home department. Frank also understands the general education assessment process (through involvement with accreditation through their home area); however, he feels as though administration is requiring too much from the department without offering any additional resources.

Description of Work/Daily Life

Frank is a full-time employee of the university whose work has been assessed for accreditation, though it was most likely assessed for their area's accreditor, ACCE.

Other Relations to the Focus Area

Like Jane, Frank is aware that general education courses must be assessed; however, he does not know exactly what courses these are without looking them up.

Persona 3 - Adena

Personal Information

Adena is an Assistant Professor who has worked in the the Department of Civil and Environmental Engineering. She feels knowledgeable in the university's current assessment process, and currently teaches a course every fall semester that is assessed under the Global Literacy rubric.

Use of Focus Area, Relation to Focus Area

Adena works closely with the university's assessment team, as her class is one that is assessed in order to work toward accreditation. Like Jane and Frank, she understands the general education assessment process; however, she feels that it is difficult to coordinate materials and learning goals with her colleagues who teach the same course in the summer and spring semesters. She also sometimes struggles to convert student's written work on to a university rubric in a way that she feels captures the student's knowledge and progress.

Description of Work/Daily Life

Adena is a full time Assistant Professor in the Department of Civil and Environmental Engineering, teaches courses that are assessed and is actively involved in the university's assessment process.

Other Relations to the Focus Area

As with Jane and Frank, Adena is knowledgeable in the general education requirements for assessment; however, without looking up a specific course, she does not know what the exact courses are.

For the purpose of this usability test, the group is going to follow the persona of Jane as she does not have prior knowledge of assessment or another accreditation type. Other personas that were identified had either a working knowledge with regard to Michigan Tech's assessment or a specific area's accreditation (e.g., ABET for engineering). Without having any knowledge of Michigan Tech's assessment process, Jane should be able to look at the infographic and have a broad understanding of the assessment process.

4. Test Plan

In order to confirm that our final document will meet the needs of our users, we plan to hold several informal usability study sessions with faculty members who match with our "Jane" persona.

- ○ What do the users and potential users believe, know, and can do at the moment?

The faculty members for whom this infographic is designed feel like they are "out of the loop" as far as assessment is concerned. Although they are aware that assessment is conducted, they feel that the process is a metaphorical "black box." As a result, they do not understand the structure of the current assessment process, although they tend to be slightly wary of the process overall.

- ○ What are their challenges/knowledge gaps?

Currently, the largest challenge for these users is communication. Most, if not all, of the information they have received has come through meetings hosted within their own department. As a result, most knowledge is departmentally-focused, so they don't have a full understanding of the University-wide assessment process, especially in regards to general education. So while this infographic cannot answer all of the questions faculty members might have, this is the first step towards ensuring that all users have a broad overview of the larger assessment structure available to them.

During our meetings with faculty members that meet the profile of Jane, we will ask these users to review the infographic that we created. We will then ask the following question:

1. Based on this infographic, what broad areas is Michigan Tech concerned with assessing?

2. Can you identify the University learning goals? Based on this infographic, which are assessed annually? Can you tell me which are assessed as part of general education and which are assessed for degree programs?
3. Based on this infographic, can you tell me who is responsible for assessing general education courses and who is responsible for assessing degree programs?
4. Is there anything you'd like to add, or any suggestions, modifications or changes that you'd suggest or like to see.

Although these questions are designed to "test knowledge," we hypothesize that if faculty members are able to answer these questions correctly, our infographic will have provided an adequate overview.

5. Pilot Testing and Conducting the Test

Following the development of the infographic, we met with the person commissioning this project - the Associate Provost at Michigan Tech University. The associate provost had a few suggestions with regard to the look and function of the infographic. Updates to the infographic were then implemented based on these suggestions. The updated infographic was then taken to the users who fit the persona of Jane. Each interviewee was asked the four questions listed above, and following are the responses from these interviews.

1. The users were not able to tell which areas Michigan Tech assesses. They all went straight to the learning goals section; however, we were looking for an answer of degree programs and general education.
2. They were all able to answer this series of questions appropriately. They all knew what the learning goals were, which are assessed annually, as well as which are assessed as part of general education and which are assessed for degree programs. Answering this question took a little bit of reading and time, but with everything there is to know about assessment, we did not expect the answers to stand out without any reading.
3. The users did not think the gears showing who assessed the learning goals was apparent.
4. Some users suggested having headings above the gears. This would make it clear who assessed which learning goals. They also suggested have a line or something of this sort to make it clear that both general education and degree programs were assessed.

6. Interpreting the Test Results

From the user interviews, it was apparent that the users did not realize that both degree programs and general education are assessed at Michigan Tech. The infographic is being updated to make it clear that these two areas areas are different, but both assessed. To do this, the heading was changed and an ampersand (&) added.

Subheadings to the gears were also added so that it was apparent that degree programs and general education were assessed separately - with degree programs being assessed by the assessment council, and general education being assessed by both assessment council and general education council.

The group is also trying to make it clear that the key is for all eight learning goals by moving it from one side of the goals to the bottom of the learning goals. This will avoid confusion as to what the key might be for.

7. Making Recommendations & Producing the Final Report

The group's recommendation is to utilize this infographic on the assessment web page. Additionally, links should be made to each of the areas. Degree Programs could have a link to another page explaining the assessment process for degree programs. General education could have multiple links - one to the heading that would go to a page explaining the assessment process for general education. In addition, links to each of the four pieces of the puzzle (core courses, HASS, co-curricular and STEM) could be linked. These links could go to additional information about each area and possibly list the approved courses in each area.

Moving down the graphic, each of the University learning goal could be linked to the rubric for each goal. Links to the council members noted inside each of the gears would also be recommended.

If the above recommendations are met, the group believes this will give faculty a general overview of the assessment process at Michigan Tech without having to spend a large amount of time reading. For an in depth understanding of the process, faculty can read more, or better yet, become involved in the process.

Appendix A - User Interview Data

Demographics

Interviewee A:
1. Involved with ABET accreditation for ten years, involved with general assessment for the last year
2. 25 years
3. Presidential Professor

Interviewee B:
1. 4 years with MTU assessment plus 8 years with ABET
2. 8 years
3. Associate Professor

Interviewee C:
1. Involved with ABET accreditation
2. Not really involved with general assessment
3. 21 years
4. Associate Professor

Interviewee D:
1. Involved with assessment for two years.
2. Worked at the University for 2 years; however, also worked in an administrative staff position for 3.5 years many years ago. Interviewee also had three years experience with a different assessment at a previous university.
3. Assistant Professor

Interviewee E:
1. Involved with program accreditation since ~2010-11 academic year & involved with University assessment for the last few years (~2013)
2. At the University for 35 years
3. Senior Lecturer

Interviewee F:
1. None, only involved with ABET
2. At the University for 9 years
3. Senior Lecturer

Interviewee G:
1. Involved for the last 4 to 5 years
2. At the University for 8 years
3. Assistant Professor

Interviewee H:
1. 3 years, Leading 2
2. Involved at university for 4
3. Intern Coordinator, Advisor

Interviewee I:
1. about 3

2. over 25
3. Professor

Interviewee J:
1. 2
2. 4
3. Lecturer

Interviewee K:
1. Has taught a class that was assessed for global literacies assessment, but not involved with the actual assessment process, rubric
2. 2.5 years
3. Assistant Professor

<u>Assessment Questions</u>

1. What do you know about the assessment that is currently happening?
2. What is your attitude about assessment?
3. What is your perception or attitude toward how you are learning about assessment?
4. Are you familiar with what courses are assessed for general education?
5. What is your role in assessment?

Interviewee A:
1. Interviewee feels confident that they are more in-the-know about assessment than many others in their department and is able to explain much of the assessment process (more than the interviewer knew)
2. Interviewee recognizes the importance of establishing and reviewing learning goals. Interviewee feels like faculty evaluations alone do not capture the whole picture of what students are doing in the classroom. However, interviewee does feel that faculty, particularly those in their department feel that assessment is overly bureaucratic. They stress that assessment must be communicated carefully. Generally, they feel that faculty will resist if they feel like assessment adds to their workload.
3. Interview expresses that colleagues often interpret assessment as very top down and "my way or the highway." Currently, the best way to fix this is to have better communication about the benefits of assessment. But the interviewee cannot suggest a "best way" to do this.
4. Yes. Very familiar with assessment - understands the difference between ABET and the learning goals and rubrics
5. Interviewee teaches a course that is assessed for the Global Literacies criteria

Interviewee B:

1. Knows quite a bit about the current assessment at Michigan Tech; the interviewee went on to say they have a different position compared to other faculty - is currently the chair of a goal committee and previously served on the committee.
2. Interviewee has mixed feelings regarding assessment at Michigan Tech - understands what and why it is done. Went on to say that Michigan Tech has made good progress throughout the last couple of years, though faculty may not have accepted the way it was brought forward. Interviewee has strong feelings that Michigan Tech does not have enough resources to do a good job with assessment, and this was reaffirmed by a guest that was recently on campus. Interviewee was also concerned that the culture at Michigan Tech does not allow for assessment - focus is on writing papers and research proposals and then teaching with service being last on the list. Interviewee also didn't believe the current structure would bring in additional students, at least not for a long time.
3. Interviewee believed stakeholders are trying to communicate assessment to everyone; however, some aspects are not communicated well as there is always a lot of confusion at the beginning. One phrase that was used and is a mouth full was that it comes down to it being a "matter of interest" for faculty.
4. Interviewee was aware of the courses assessed for general education, but did not know have them memorized. They also felt the current assessment web site should be updated to include a list of courses that count toward general education and should not be buried on the site.
5. Interviewee is currently the chair of a goal committee and was the liaison for their home department's assessment.

Interviewee C:
1. Knows very little about current general assessment
2. It's necessary but disagrees with the way it's currently being done
   a. "Misdirected and a little convoluted"
   b. Current problem is that it's based on students caring about assessment
3. The committee is responsible for general assessment. If he's involved it's as an ABET assessor. He works with ABET website which he likes, maybe use this as a reference?
4. No
5. None

Interviewee D:
1. Interviewee knew this year Michigan Tech is focusing on the goals regarding global literacy. Interviewee's program is accredited so they currently have an assessment plan in place, though this is directly related to their specific program.
2. Interviewee felt assessment was a "necessary evil." They went on to say that in order for improvement to occur, assessment is a requirement. In fact, they would be doing their own assessment if one wasn't required. This person also felt "efficiency is key."

3. The interviewee thought they had a higher awareness of assessment within their program's accreditation as they were on the undergraduate curriculum committee for this - not the University's. They also understood the program's accreditation and said this falls under the University, and they rely on the University to do their part.
4. Interviewee was not familiar with the courses required for general education; however, they did know there were different areas, such as HAASS. They also knew what courses within their program were considered for part of this assessment.
5. Interviewee currently participates in assessment at the program level - assessing critical thinking for their program's assessment.

Interviewee E:
1. Interviewee is not currently heavily involved in the University's assessment. They did know there are eight learning goals, and a different one is focused on each year. The interviewee also does some assessment of ethics/social reasoning in their courses.
2. Interviewee said that assessment is time consuming, though it can be meaningful. They did say the objectives can be tricky as their program accreditation requires twenty student outcomes which are somewhat different that what the University has. They added that it is beneficial when looking in detail at specific areas within the program. For example, when looking at a specific question on a test, it is interesting to see how the students did, rather than looking at the overall score.
3. Due to the interviewee's current position, their focus is on the program assessment and accreditation, through the University's learning goals are not tied into this. With limited time during the semester, this person copies all the student's work so they can look back at it at the end of the semester. They saw the benefit in assessment, but wondered how much one can do with the time it takes to do the job well.
4. Interviewee knew writing, global issues, world cultures and composition were all part of the general education assessment, but did not know know which learning goals each were tied to.
5. Interviewee is not specifically involved with University assessment; however, they are involved with the program's assessment for learning outcomes.

Interviewee F:
1. Knows that it's tied to the learning goals
2. It isn't helpful at all. It creates an environment where professors are told that they have to teach certain topics and they may do this in a minimalistic way. Telling professors to include more content in the class doesn't necessarily guarantee quality, but instead quantity.
3. Isn't necessarily learning about it. Just being told that it's happening
4. No
5. Says that they don't play a role, only plays a role in ABET

Interviewee G:

1. Knows about the learning goals and knows about levels needed to meet but doesn't totally understand the process
2. Understands that it is necessary, says it's not evil but is time consuming, takes time away from other work
3. Thinks that some goals are defined better than others and feels like the process if ambiguous.
4. Yes.
5. Said they help when creating documents to use for assessment but doesn't have to deal with it directly in their class

Interviewee H:
1. Knows about all three different types of assessment, gen ed. Stem and departmental
2. Thinks it's valuable, but it is unclear for everyone, feels as if it is a 'moving target'
3. Thinks that there needs to be a better way to inform instructors about how things are done, because it changes from year to year. Also, some courses are only offered during specific semesters/years and sometimes those courses meet the goals that are being tested.
4. Kind of, doesn't directly deal with gen ed.
5. Assessment lead for their area

   Additional notes: Thinks that instructors need to have a better understanding of the goals and how they are graded on the levels of proficiency, how to incorporate work that shows the use of the goals.

Interviewee I:
1. Knows that there is a university wide assessment process that is designed to bring course delivery into line with learning goals, but confused about the relationship between the university wide assessment and program assessments.
2. Mixed. Resistant. Thinks the process is too top down driven and makes it difficult to respond "on the ground" to circumstances in individual classrooms and programs. I also think it stifles experimentation and diversity of pedagogical goals. The goals I have to learn to teach with don't match very well what I think I am doing in the classroom. But nobody ever asked, or seems to be interested in, what the person is thinking or doing. Assessment seems to be an administrative imposition rather than a professionally driven project.
3. Although they know that great efforts have been made to communicate the process, they still find it confusing and cumbersome.
4. Yes
5. All my classes are assessed

Interviewee J:
1. Lead for department's assessment

2. Dread it, too much details and stuff going on, Overwhelming
3. The position and info was thrown on to their desk, but knows that it is important
4. Gen ed. Somewhat?? More familiar with their department
5. Assessment lead- thinks that a big picture overview will help teaching faculty

Interviewee K:
1. Faculty meetings talk about assessment a little bit, but communication was mostly on the nuts and bolts and difficulty. Evaluation so far has been pretty consistent.
2. Interviewee hates assessment, and thinks it's difficult to measure a student's success in the class. Very difficult to quantify - bubble tests and exams are useless. Need a well-designed project that is developed simultaneously with a robust rubric, but it's difficult because people don't teach the same classes consistently.
3. Everyone is doing a lot. It's hard for people to spend the amount of time that they need to really delve into. It's very difficult to find the time and do it well.