2018-19 Annual Assessment Report

The 2018-19 Annual Assessment Report was included within the 2020 Mission Fulfillment Workbook. These pages are taken from that document.

2.1.3   Course level assessment

Assessable Outcomes - Assessed outcomes demonstrate student learning and are used for improvement:

- In the History course HIST&215 (Women in US History), a variety of outcomes related to the evaluation of how women fit into the large developments and events of American history were assessed using a weekly discussion board assignment. The goal of the assignment was to show that students understood the relation of the content to the context for a series of weekly topics. The students demonstrated this knowledge using discussion posts with thesis statements that addressed the outcome for that week. Apart from using this to assess the students understanding of the course material, the instructor took this further and noticed that the students seemed to struggle with communicating their ideas in the form of a clear thesis statement. The instructor clarified the rubric she was using to assess the assignment and walked through it in a video that she had her students watch and take a quiz about. Once she assigned the video, she noted that the students' thesis statements improved immensely. The instructor will now be implementing this assignment at the beginning of the quarter to not only increase student understanding and clarity of the expectations of the assignment, but also to help remediate any deficiencies in student ability to write clear and concise thesis statements. This is a good example of how the assessment of course outcomes and the improvement of a course can impact greater departmental and program goals. In this case, the instructor's willingness to change and remediate an issue in the middle of the course not only helped with student learning in the course, but it helped to support student clarity of communication in future courses.

- In ASTR&101, Course Outcome 3 ("Identify lunar phases and, given a lunar phase, predict rising and setting times.") was assessed in a Unit Test. The instructor found that "one fourth of the students [have] difficulty [differentiating between] rising times with when the moon is highest overhead." The instructor goes on to say that they are going to "augment an in-class activity we do before the lab to emphasize when the phases are high overhead THEN looking at when the phase would have risen. That may emphasize to the students that the two times are not the same". This demonstrates course level improvement based on assessment results.

- In BIOL&221, the instructor looked at Outcome 10: "'Explain Hardy-Weinberg equilibrium and use the tools of population genetics to calculate allele frequencies, identify and explain the results of natural selection, and describe and discuss the impacts of other causes of population change" as it relates to Gen Ed 3". The instructor simply "attempted to explain the concept better during lab." While the initial results of this were good ("the average score on the lab improved from 76% (previous year) to 90%"). The "scores on the related exam question dropped from 42% to 19%." The instructor concluded: "I am going to look for an in-class activity on educational websites (such as Merlot and HHMI) and see if I can improve the retention of the Hardy-Weinberg concept by using an in-class activity in addition to lab. I am also going to use the "Connect" resource provided by McGraw- Hill for my textbook to see if I can improve retention by using it to track completion of reading assignments (using Smartbook) and by using a follow-up quiz."

Alignment- Assessment demonstrates that curriculum and grading are aligned with outcomes:

- In the English course ENGL261, the course learning outcome "Classify a variety of human experiences/narratives according to the appropriate cultural and historical contexts with the goal of speaking and writing with a nuanced sensitivity to multiculturalism" was assessed. This is a course that focuses on texts and issues of intersectionality, diversity, and gender in an historical context. The assessment for this particular outcome was a final project where the students had to create an anthology of women's literature and, within it, identify how the selections made represented diversity within the theme the student emphasized and reflect on why this diversity is important. When the instructor assessed this assignment with the course outcome in mind, they found that the majority of the students (11 out of 16) achieved an "Excellent" ranking, a 4 as defined by a set rubric. The instructor noted, though, that even the students who earned a 4 still struggled with the concept of intersectionality and the importance of diversity. For this reason, the instructor decided to change the assignment for future quarters by splitting it into two

parts with two separate foci. The instructor felt that the assessment was not reflective of the outcome that they were anticipating, so they changed the curriculum to better align with the outcome. In the future, the instructor intends to separate out the reflection on why diversity is important in order to better focus on the students' understanding of the topic. They also intend to rework the way intersectionality is presented in the curriculum to make clearer connections between the historically dominant populations and the multiple ways people have been oppressed due to their gender through time. The change in the assignment reflects a change in the way the students are graded on their understanding of this outcome. It will give a clearer picture of the students' understanding of why diversity is important, not just identifying aspects of it, which will show a deeper grasp of the material. The change in the curriculum will help to emphasize the parts of the course that students seemed to struggle with, based on this assessment. These goals also align with the larger general education outcome of better recognizing and understanding other cultures. With this in mind, the instructor also notes that it would be helpful to better fulfill this general education outcome should there be a diversity requirement built into the student degree programs. That would ensure more intentionality in students taking courses with an emphasis in diversity as well as better prepare them in any course where diversity is discussed, since they would be coming to it from a stronger background in discussing such issues.

- In ACCT262, an instructor "Assessed students ability to record financial transactions in a QuickBooks company file using the appropriate user interface functions. Specifically looking at the ability to journalize/post business transactions and print summary data via financial statements, upon entering our class and upon exiting." This was in relation to Course Outcome 2: Record financial information in the company file using the appropriate functions. The instructor found that, at the beginning of the course, only 13% of the students had any experience with QuickBooks. By the end of the course, 100% of the students "were able to correctly journalize/post financial transactions and print financial statements on the end-of-quarter test." This assessment confirmed that the curriculum and grading were aligned with the course outcomes.

Valid Results - The assessment activity connects to the course in large and meaningful ways, which exhibits valid measures:

- In the Aviation course AVF221, the course learning outcome "Locate, memorize, summarize, or explain Federal Aviation regulations as appropriate" was assessed using a comprehensive FAA Commercial Airmen's Knowledge test. The comprehensive test covers all of the outcomes for this course, but the faculty specifically analyzed the student responses to questions that addressed the outcome assessed. Even though there was a 100% pass rate of the exam by the students, for specific questions relating to this outcome, the faculty noted that there were fairly high percentages of students (ranging from 22%-44%) that missed them. Using this information, the Aviation Department came up with a few recommendations for changes to the course, which are set to be implemented the next time it is taught. They are changing parts of the curriculum, ways in which certain topics are assessed, and access to information in the planes that the students fly, as well. In the Aviation program, all of the course and program outcomes lead to FAA-compliant credentials, so the use of a standardized test to assess these outcomes is an incredibly valid measure. The fact that the faculty went a step further to disaggregate the data and look at student performance on specific questions, and then made changes to their curriculum based on that assessment, shows the completion of the assessment cycle and is a model example for the way it is done on our campus.

Reliable Results - Evidence multi-year inter-rater reliability is present (assessment procedure and results are accessed and understood by multiple parties who are able to draw similar conclusions based on the information provided):

- In the Philosophy course PHIL&120, the course learning outcome "Prove validity using predicate logic" was assessed. The purpose of this assessment was to evaluate the utility of new curriculum, which had been implemented by the instructor during the past academic year. The new curriculum included both a new textbook and a series of YouTube videos to supplement the course content. The instructor had assessed this particular outcome in the past year because it is one of the more challenging aspects of the course and helps to show how well the students are grasping and engaging the material. The assessment was a predicate logic quiz at the end of the unit material and was given in both Winter 2018 and Winter 2019. The results from Winter 2018 were compared with the data collected in Winter 2019 (this year's follow up assessment on the same outcome) to determine whether the new curriculum implemented showed a statistically significant change in learning. The average quiz score from one year to the next improved by 6%, but more importantly, the standard deviation shrunk from 55.3 from 2018 to 20.05 in 2019. This indicates that the students, on the whole, did better on this quiz (as seen in the increased average), but also had

better precision, or rather, that their scores were closer to that average than in the past year (as opposed to a more bimodal distribution of students either getting it or not getting it and nothing in the middle). In the analysis of these results, the instructor has expressed a desire to follow up with another assessment on this course outcome after a reorganization of the material into different modules on Canvas. This follow up assessment will give a longitudinal look at this outcome over multiple revisions of the course curriculum.

Results are used - Results are collected, discussed, used, and evidence to confirm that changes led to improved learning:

- In the Medical Simulation course SIM 295, the course learning outcome, "Demonstrate a balance of leadership and follower skills as working as part of a community healthcare team" was assessed. The instructor used both qualitative and quantitative measures to assess this outcome following students engaging in a variety of aspects of a medical scenario. A medical scenario involves not just the treatment of the patient, but also the follow up communication with other health care providers, patient's families, and potentially the public. This is why it was utilized for this course level outcome. Through this assessment of how a medical scenario was handled, a deficiency in the students' ability to debrief after the medical incident was noted. The instructor reported that a change in the way that debriefing will be covered in future sections of this course is going to be implemented and reassessed in a future assessment cycle. This highlights that the results of the assessment in one portion of the course material are going to be utilized in an effort to improve student learning in future sections of this course. Debriefing is an important skill for the students to take away from a practicum course like this and it is a demonstration of the students' ability to work as part of a team.

- MUSC&105 looked at Course Outcome 5: "Explain and interpret various composers, compositions, genres, and styles of each time period through research projects and presentations" and found that 78% of students scored 80% or higher on a composer card project. The instructor plans on revisiting content delivery, specifically in the online modality. The instructor plans on adding accessible videos to "serve as practice for the card project". This illustrates an assessment used to change course structure based on a concern about student performance on an assignment.

Planning & Budgeting – Assessment results are systematically and intentionally used in planning, budget requests, and resource allocation.

- Faculty teaching in the math, English, philosophy & religion, biology, and criminal justice departments used assessment results to support budget requests for specific professional development activities. The requests were funded.

- Faculty teaching biology requested and received funds to pay stipends to associate faculty to participate in department meetings and assessment activities. Similarly, English faculty requested and received funds to pay associate faculty to participate in norming sessions with all department faculty.

2.1.4   Gen Ed assessment

Assessment Planning - Faculty Exhibit a clear multi-year plan with several years of implementation:

- At the departmental level, faculty have created a multi-year schedule workbook which outlines the departmental plan for assessment. Faculty have been maintaining and updating their workbooks for three years, and [during the 2019-2020] year are updating those workbooks to include an eight-year plan. This plan aims to create cohesion between individual course-level assessment, and larger departmental and degree policies, goals, and understandings. The Gen. Ed. outcomes are program outcomes for the DTA degree so the eight-year plan will include a schedule for assessing the Gen. Ed. outcomes. The three Institutional Outcomes are embedded in the program outcomes for each of the workforce programs so their eight-year plan will include an assessment schedule for those three outcomes as well.

Assessable Outcomes - Assessed outcomes demonstrate student learning and are used for improvement:

All courses at Big Bend are required to list Course Outcomes in the Master Course Outline, as well as the syllabus, for the course. These outcomes have a focus on demonstrating student learning (they, in fact, are sometimes referred to as "Student Learning Outcomes"), and hold the faculty and college to standards determined by the respective department and the Instructional Counsel. These outcomes are a mandatory portion of the course-level assessment reports submitted by faculty, and used to compel and drive faculty toward continuous improvement.

- In the History Department, HIST&126 faculty looked at General Ed. Outcome 3: Students will be able to solve problems by gathering, interpreting, combining and/or applying information from multiple sources." One faculty assessed whether students "Demonstrate communication skills, both written and oral, by employing primary evidence in support of carefully formed conclusions regarding the historical record of the ancient world." This course-level student learning outcome was assessed by means of a final project. In order to assess improvement over the quarter, the project was "collected and analyzed at three different checkpoints" and graded according to five criterion. Over the course of the assessment, students improved their scores by a mean of 83% but "Students struggled most with criterion 3 and 4." The faculty concluded that "More time needs to be spent on learning activities that will help students further develop skills in interpretation and thesis development." The instructor also concluded that they will "use these activities, complete the assessment cycle with a different class, then compare the results between the two cycles." This establishes that assessment is being used to demonstrate student learning, as well to improve processes—both at the course-level and the larger, departmental and program level.

- In ENVS&100, the instructor looked at Course Outcome 6: "Explore and evaluate possible solutions to current environmental problems." This outcome was assessed in four different courses, representing three modalities (face-to-face, online, hybrid). The instructor compared the modality by which the "four characteristics of a sustainable ecosystem" were taught. In all of the courses, student learning was demonstrated via a passing average grade on the assignment. However, through this assessment activity, it was found that the greatest learning was not determined by modality of teaching, but through repetition of material. The instructor stated that they "believe the success from the Diamond's activity in the W19 in person class is that they were benefited by the previous day's lecture that helped them to complete their homework assignment more accurately and completely." The instructor concluded that the previous lecture helped to point students in the right direction and that "including more discussion of how to look for specific answers from within the book" would help online students have more clear expectations for engagement with the text—in lieu of a face-to-face lecture. Assessment of a single outcome was used to improve the quality of instruction and student learning in four courses.

Assessment Implementation - Evidence is Collected, criteria determined, and multiple sets of data discussed (and used):

- In the Math Department, multiple faculty, across multiple MATH&142 classrooms, investigated Gen Ed Outcome 1: Students will be able to reason mathematically. This was accomplished via Course Outcome 2: Manipulate trigonometric functions to prove identities and solve equations. Faculty assessed 94 students, by means of exam, to evaluate students' abilities to "use trig identities to solve equations or to prove an identity." Out of these 94 students, 85% "were able to either correctly answer the question, or made very minor errors in their process." Faculty were

"pleased" that a majority of their students were able to "apply trig identities appropriately." While "exam questions [criteria] varied from instructor to instructor" and so "covered different skills in this category," faculty also discussed and concluded that it would be beneficial to "coordinate exam questions to assess specific skills." In PSYC225, Course Outcome 2 is used to help demonstrate Criminal Justice Outcome 8. According to the instructor, "connections are made between groups and specifically how the criminal justice system is impacted by the different theoretical approaches to culture, social and political context." In Spanish 121 and 123, the instructor attempted to look at Course Outcome 2: "Students will identify the general history, geography and culture of Spanish speaking countries through map quizzes, culture quizzes and essays about a Spanish speaking country of their choice." Through these two courses, the instructor found that student interest increased as they learned more about the Spanish culture. These examples demonstrate the way in which faculty are coordinating efforts in order to assess wide-ranging educational effectiveness.

Alignment - Assessment demonstrates that support services, curriculum, and grading are aligned with outcomes:

- Faculty across campus have recently been engaged in discussions about including a multicultural/diversity degree requirement for students. This is explicitly related to Gen Ed Outcome 4: Students will be able to recognize or articulate personal/interpersonal aspects of, or connections between, diverse cultural, social, or political contexts. At the **course** level, one instructor looked into this outcome by means of the final project, which is to "compile an anthology of women's literature" in which the students will be "writing a preface, summaries of the works, a historical timeline, and an introduction explaining their rational for the sections." This project is worth approximately 30% of the **final grade** in the class and aligns the course outcome directly with the grading. Further, this outcome is aligned with larger school policies and **support services**. For example, this faculty is an advisor for the "Sexuality & Gender Acceptance Club (S.A.G.A.)." This club aims to provide opportunity for students to connect their own cultural experiences with the larger cultural experience of their community and society as a whole. This faculty did conclude that "It would definitely help reinforce basic concepts revolving around diversity if students interacted with ideas in multiple courses" and that there is a "need for all students to meet a diversity requirement in their degree maps." Faculty and administration are currently negotiating language for diversity degree requirements which will influence larger curriculum decisions across campus.

- In relation to Gen Ed 3 (Students will be able to solve problems by gathering, interpreting, combining and/or applying information from multiple sources), the chemistry faculty used conversations about their course level assessments to prompt change in support services at the program-level. The faculty looked at Course Outcome 4: Recognize the major functional groups in organic compounds and identify characteristic reactions and physical properties associated with those functional groups. One of the conclusions that was drawn from this assessment was that the department/college attempt to "hire a lab coordinator with a strong chemistry background." Subsequently, the department reworked the job description for that position and hired a lab coordinator with a BS in Chemistry. This coordinator will help "support students and work with instructors to help improve curriculum."

- In ART217, an activity was created where students had to write 300-400 words on an assigned artist every week. The instructor found that this assignment was well received and stated, "I am thinking of adding a portion of it to Art Appreciation class as well." This shows how instructors are using assessment in one course to inform curriculum design decisions in another course with comparable or identical outcomes.

Valid Results – Assessment connects the courses in large and meaningful ways (via multi-year assessment and connecting themes), which exhibits that the measures are valid:

- In relation to Gen Ed Outcome 1 (Students will be able to communicate clearly and effectively), one instructor in the History Department confirmed inferences drawn from the English Department's 2017-2018 assessment when he assessed two courses (HIST136 and HIST137), between multiple modalities (Online, Face-to-face, and hybrid), across the 2017-2018 and 2018-2019 years, in terms of multiple sets of data. One of the history instructor's goals was to look at the efficacy of different modalities but, in the end, the assessment did not provide conclusive data in this regard. However, this assessment did confirm insight provided by the English department, from the previous year. The history instructor noted that "students appeared to truly struggle with the idea that academic work required citation." This conclusion confirms the English department's conclusion that the majority of students know how to cite, but that they struggle with understanding when to cite, or for which courses citation is required. The

English department recommended that all instructors create clear expectations with students in regard to their writing—including citation expectations. This history instructor subsequently changed his policy so that "all student writing must be properly cited or it will be rejected from grading." This demonstrates courses being connected in large meaningful ways, across multiple years, via connecting themes. This showed the way in which larger conversations around Gen Ed 1 were helping instructors to confirm conclusions drawn in earlier assessments.

Reliable Results – Evidence of multi-year inter-rater reliability is present (assessment procedure and results are accessed and understood by multiple parties who are able to draw similar conclusions based on the information provided):

- In the Developmental English program, multiple faculty came to similar conclusions when looking at data related to the assessment procedure and results regarding Gen Ed Outcome 1: "Students will be able to communicate clearly and effectively." In ENGL098 and ENGL099, faculty across the Developmental Education department looked at 91 students, in regard to transitional devices. The faculty originally focused all of their attention on the goal of increasing student competency in this area. They planned to have students revise their first essay to include transitional devices. Because of this, faculty correspondingly found themselves looking at their students' demonstrated ability to revise essays. Though assessments were done independent of each other, faculty looking at the results of each other's assessments were able to come to strikingly similar results. While discussions between faculty revealed that students had, in fact, greatly increased their ability to use transitional devices (as was demonstrated on the students' final essays), and direct instruction in this area "did have a positive effect," "fewer than 10% of the students demonstrated any ability to edit and revise for transitions" on their revision assignment. Although the assignment did not seem to have the intended impact, the faculty in the department were able to see that "direct instruction of transitional devices works well." Faculty will continue to use direct instruction of transitional devices, but will no longer use the revision assignment as their tool for assessment.

Annual Feedback on Assessment Efforts – Assessment leads to annual feedback, departmental use, and institutional support:

- At the 2018 Fall In-Service, the Assessment Committee provided a survey which attempted to clarify general attitudes regarding communication among students (Gen Ed Outcome 1). This feedback led to larger discussions about the way in which assessment occurs. Some of the feedback received from faculty had to do with desiring "shared outcomes/rubrics for communications assessments." In this way, faculty could not only effectively assess at the department/course levels, but could also plan and develop useful assessment at the program/Gen Ed level. Because of this, the assessment team is working to create a general course-level assessment activity, which may be adopted by multiple faculty, for the 2019-2020 school year. This activity would be focused around one of the Gen Eds—this year focusing on communication and rotating from year to year. This activity would allow faculty to receive valuable course-level information and data, while also providing the ability for larger, systemic, understandings to be addressed.

- At the 2018 Fall In-Service, the English department clarified its results of the 2017-2018 assessment with the campus as a whole. The department found that students generally know how to cite by the end of their English 101 course. This seemed to conflict with previously held beliefs that students didn't know how to cite. This led to a larger discussion about the responsibility with each instructor, to clarify expectations for students. Various departments across campus have used this information to change the way in which they see their obligation toward creating expectations in their own classrooms—and this, in turn, is creating larger campus expectations for students.

Results are used – Results are collected, discussed, and used:

- The faculty Assessment Reports for the 2018-2019 year were collected, and discussed from all departments, and nearly all faculty. The narratives and data from these reports were initially reviewed by the Assessment Committee and, later, by the faculty at large. These reports were analyzed for common themes. For example, in examining assessment reports from across campus, the Assessment Committee found that there was a common theme in faculty expressing communication (Gen Ed 1) concerns surrounding their students. With this in mind, the committee created a "Cross Program/Discipline Discussion" worksheet, which was filled out at In-Service (2018). This worksheet asked, among other things, for faculty to "identify any resources needed to support this learning outcome." Many

responses had to do with a desire for campus-wide communications clarity. Faculty seemed to want to know what other people were doing in their classrooms, and expecting from students, regarding communication. Comments included a desire for "shared outcomes/rubrics for communications assessment", for "faculty to collaborate cross disciplinary training and prof. development", and to "create clear expectations for communication". Through this data, the Assessment Committee discussed and determined that faculty might benefit from a cross-disciplinary communications assessment activity. This activity could potentially provide valuable insight that spans across the campus. Subsequently, the Assessment committee surveyed faculty in regard to "holding students accountable for reading." This survey was a first step toward potential avenues in creating a campus-wide communications assessment activity. Should this activity move forward, the committee hopes to find connections, hold discussions, and work to produce mutual solutions to issues that faculty face across campus. The faculty and administration at Big Bend are working to create institutional policies and agendas that continue to push positive change.

- Through multiple discussions, and in working toward improving its own processes, the Assessment Committee has begun a fellowship program, to help support the role of the Assessment Chair. These positions are paid a stipend and take on larger roles than the rest of the Assessment Committee members. Their purpose is also to provide a scaffold toward Assessment Chair position—in order to create an easier transition for new Chairs to come. This institutional support was created in response to feedback given to the administration and has led to a larger understanding of the assessment process across campus.

- The Library was concerned with the question of how to collect data from students who attended information literacy learning sessions. They did an Evaluation Kit Survey after orientation classes. This was done through the Library website. The process of collecting data occurred through "trial and error". After discussion amongst the department, they "finally came up with a good method for gathering the data and now plan to assess several quarters." While the original intent of the assessment may have been focused on discovering the value of their sessions, the outcome of the assessment was more about learning how to better collect data.

- During Spring 2018, the counselors facilitated advising focus groups. After reviewing the results of the focus groups, counselors identified three areas to assist students in achieving academic success: Degree planning, communication, and desire to plan for academic success. This past academic year, Counselors developed and implemented a Degree Completion Campaign. Presentations were delivered to Running Start students who at- tended fall and winter quarter group advising sessions and to students enrolled in on campus College Success Skills courses during spring quarter. The Degree Completion Campaign presentation included information specific to educational planning, degree requirements, campus resources, and timely degree completion. Following each presentation, students were asked to complete a short four-question survey. Over 90% of all students responded correctly to the survey questions, which included topics such as GPA requirements for their program, number of credits to reach a degree, and identification of resources available. These results are used to continue the assessment cycle with the goal of ongoing support for students in their degree pathways.

Planning and Budgeting – The alignment of outcomes and planning is systematic and intentional:

- In the spring of 2019 the college decided to allocate funds to create a full-time Dual Enrollment Coordinator position to support the implementation of three different dual enrollment programs. One rationale for the position was related to assessment of student learning activities. The creation of the position would support communication and collaboration between full-time faculty and high school teachers in the College in the High School Program. Ongoing faculty collaboration is essential to maintain academic quality and implementation of assessment activities.

- In the spring of 2019 the college elected to sustain an Advising Coordinator position that had been funded by a grant. The decision to sustain the position after the conclusion of the grant was informed by the assessment work around academic advising conducted by college counselors.

2.1.5   Program assessment

The following report has been assembled by the assessment committee in an effort to evaluate and support program level assessment in the Big Bend Community College's workforce education programs. This report contains the following nine criteria:

1. Assessment Planning
2. Assessable Outcomes
3. Assessment Implementation
4. Alignment
5. Valid Results
6. Reliable Results
7. Annual Feedback on Assessment Efforts
8. Results are Used
9. Planning and Budgeting

Assessment Planning

Below are examples of implementation for each of the listed criterion from the workforce education assessment reports.

Each of the programs have been tasked with developing a multi-year assessment schedule that contains a scheduled assessment of all program learning outcomes and the related General Education Outcomes that they support. Evidence of the development and implementation of these multi-year schedules could be seen in the following program assessment reports:

Agriculture: "Problem-solving and critical thinking are both skills needed to work in agricultural management situations. This outcome also aligns with GE#3, which we scheduled to assess this year."

Aviation: "The assessment of the aviation program for the 2018-2019 academic year focused on program outcome number 2: The students will be able to interpret regulatory and legal issues which impact the industry at the FAA commercially certificated pilot level. The primary reason for choosing this outcome to assess across the program was based on our assessment schedule of program outcomes."

Conclusion: While not all programs specially referred back to their multi-year cycle of assessment in their program assessment reports, all programs clearly documented which program outcomes and General Education Outcomes they were assessing which indicates a developed and working assessment plan in each of the programs.

Assessable Outcomes

A review of the program assessment reports yielded the following examples of assessable outcomes.

CDL: Program Outcome One "Demonstrate safe defensive driving techniques" was assessed "Through-out CDL course." The instructor "evaluated the students driving abilities and skills both on the shifting/driving range and over the road." In this program, "assessment/evaluations are on-going through-out the length of the course. The loop closes after the CDL students have completed the five week CDL program course".

Computer Science: "CS - 4. Deploy and manage server hardware and software to support organizational operations and goals" was assessable through the use of assignments and labs. The instructor noted that, for CS106, "[W]hile most students did complete the lab, 2/14 did not." They also noted that, for CS 206 "3/18 were late to finishing the lab, but did so the following week." The instructor is considering changing advancement requirements to include completion of the assignments, to ensure 100% submission.

Early Childhood Education: Program outcome five "Establish and maintain an environment that ensures children's safety, health, and nourishment (Health, Safety, Nutrition)" was assessable through the use of a grading rubrics.

Medical Assistant: Program outcome two "Demonstrate cultural competency when caring for patients experiencing selected health deviations" was assessed through surveys to medical assistant training staff as well as graduates of the program working in this field. A program improvement noted as a direct result of assessment was an additional 10 lab hours per quarter for the students which was offered in a more flexible manner, with evening hours outside of the class time being offered.

Nursing: Program outcome five "Assume responsibility and accountability in the practice of registered nursing as defined by the professional standards code of nursing" was assessed during a nursing clinical using a rubric relating to patient care and education. While the results from the assessment indicated no changes were needed, the assessment yielded an improvement of the evaluation tool that would "better align with the outcome."

Conclusion: The reports, as exemplified above, indicate clearly articulated outcomes that demonstrate evidence of student learning. When assessed, each of the outcomes above were effectively used to implement improvements either at course level, program level or both.

Assessment Implementation

Assessment implementation can be seen in the program reports by evidence collection and multiple data sets being referenced, discussed and used. The following program assessment reports highlight this criterion.

Nursing: Program outcome five "Assume responsibility and accountability in the practice of registered nursing as defined by the professional standards code of nursing" was assessed in two classes (NUR 235 and NUR 221). Both classes used a rubric evaluation model with data on the pass/fail rate on the specific clinical skills being gathered. Also noted in the report was the 90% skills pass rate benchmark being exceeded with a 100% skills pass rate.

Program level discussions on the data from these classes yielded the following.
1. The assessment was valuable
2. Evaluation tools need adjusted to better align with the outcomes

BIM: Program Outcome six: "Students will be able to reason mathematically using methods appropriate to the profession" was assessed across multiple classes, "combining [classes in the collection set] for the duration of the year to have significant data to assess students on their ability to reason mathematically using methods appropriate to the profession." Competency level is set at 85% for the Excel Course. While 52% of students passed on their first try, of the remaining students who did not pass, an average score was 73%. However: "When analyzing each student's test, we see that students understood most math concepts while missing the execution of the concept. In the area of calculating a percent increase on a retail item or tax on an item, students could reason mathematically and arrive at the correct number but failed to execute the problem correctly in Excel. To complete these types of math problems to a whole column of numbers, students were tasked to use Absolute Referencing to complete this task. Students would reason mathematically and come to the correct answer but would use Relative Reference. Of the 10 students who missed these questions on the test, half of them could calculate the correct answer using Relative Reference but missed points for not changing the equation to show Absolute Referencing." The instructors have concluded that: "Looking at these courses as a whole, we see that some of our students are missing the link to bridge the gap between using Excel and reasoning mathematically. In the future, we will stress to our students in a review assignment to go back practice using reasoning mathematically to calculate a percent increase on a retail item using Absolute Referencing." Through this assessment, multiple sets of data were used to initiate program-level changes.

Early Childhood Education: Program outcome number eight "Serve children and families in a professional manner and participate in the community as a representative of early care and education (Professional Development and Leadership)" used assessment data from three classes (EDUC 120, EDUC 180, EDUC 190).

Benchmark pass rates where set with a GPA of 2.0 or higher. Discussions were also noted in the report with the following two recommendation:
1. More transparent data
2. Additional full-time faculty member

Aviation: Program outcome number two "The student will be able to interpret regulatory and legal issues which impact the industry at the FAA commercially certificated pilot level" used the assessment data from seven supporting courses (AVF 111, AVF 112, AVF 143, AVF 221, AVF 223, AVF 253, and AVF 261).

Each class contained a comprehensive written exam or a comprehensive flight check/exam to evaluate the desired learning outcome. Exam pass rates as well as specific subject matter deficiency data was collected for each class with specific mention made of classes that had multiple years of data available for comparison. Benchmark first time pass rates on flight exams of 90% and a written exam passing criteria of 70% or better where used in generating the data. Program data was then reviewed by a faculty/program meeting that set forth the following 10 program recommendations.
1. Revise written exams in various classes.
2. Update lecture class PowerPoint presentations and handouts.
3. Revise program text material in the Preflight Handbook.
4. Allocate additional class time to subject matter (specifically Federal Aviation Regulations).
5. Update passenger briefing cards.

6. A continuation of updating material with regards to the use of WAAS equipped GPS receivers as well as G1000 equipped aircraft.
7. Update mandatory instructor/student read files.
8. Update and enhance homework and quizzes to reflect a higher level of learning (specifically instrument approaches).
9. Update instructor orientation training to include several departmental areas of "special emphasis" in flight training.
10. Continued dialogue with college administrative staff on aircraft availability.

Conclusion: As can be seen in the reports, evidence is being collected with multiple sets of data being used and appropriate criteria being referenced or developed. In addition, collaborative program discussion and assessment committee recommendations have yielded limited to extensive use of the data.

Alignment

Alignment is demonstrated in the program reports with direct and indirect reference to curriculum and support services being assessed in their inclusive and supporting roles of program learning outcomes. Examples of this alignment can be noted below.

Automotive Technology: Program outcome number four "By program completion, graduates will pass the ASE student exams including engine repair, automatic transmissions, manual transmissions, steering and suspension, brakes, electrical/electronics, HVAC, and engine performance" was assessed and alignment is demonstrated as follows.

The automotive course AUT 231 curriculum assessed specifically teaches the HVAC skills required to pass one of the eight subject matter exams (as noted above is a program outcome). In addition, the tool used for assessment was the EPA 609 test which is one of the required eight subject matter exams used for ASE certification.

This assessment also demonstrates alignment between support services and desired program outcome with the implementation of lab fees being allocated for the cost of testing. This implementation was noted to "motivate the students to not only take the test, but to work harder to the pass the test." This resulted in all students taking the test and passing the test.

Medical Assistant: Program outcome number four "Demonstrate delegated skills and procedures" was assessed though the use of workforce competency based on employer surveys and employment rates. While this assessment was indirect, it does indicate some level of alignment of curriculum/support services with program outcomes as students are demonstrating employability in their field.

Conclusion: Evidence in the reports above indicate curriculum aligns with outcomes that are assessed. The alignment of grading and support services to program outcomes, however, is limited in all workforce education reports.

Valid Results

The validity of the program assessment is currently demonstrated in three primary ways: competency based skills testing, standardized industry based written testing, and employability of program graduates.

Nursing: Skill based competency testing was cited in the program's assessment report to include nursing skills (i.e. Foley catheter, Primary and Secondary IV Fluid administration, Nasogastric tub placement etc.) being performed and evaluated under licensed instructors and registered nurses.

Aviation: Standardized testing was cited in the program's assessment reports. The validity of the assessment and test is based on a third party (the Federal Aviation Administration). Regular use of data could be seen in the program assessment report with year to year pass rates and testing analysis cited.

Medical Assistant: Employability was cited in the program's assessment reports and validates the program's assessment.

Conclusion: Valid measures are cited in the reports with evidence of recurring use.

Reliable Results

Currently, inter-rater reliability is difficult to establish among workforce education programs, due to the fact that each program is assessing very different outcomes that are individualized to curriculum specific knowledge that doesn't easily lend itself to comparison across disciplines. For this reason, it has been decided that each program will assess one particular general education outcome campus-wide, each year. This coming year (2019-2020) every program will assess general education outcome number one (GE1): Students will be able to communicate clearly and effectively. The Assessment Committee is in the process of developing a communication activity or assignment that can be used in all disciplines for the purpose of assessing communication skills in a standard fashion. This will provide a foundation for a conclusive data set that will allow for good inter-rater reliability, or shed light on the lack thereof.

Annual Feedback on Assessment Efforts

The Assessment Committee regularly updates and restructures assessment activities and guidelines to reflect areas where assessment quality or overall understanding of assessment procedures shows a need for improvement in assessment data collection and/or implementation. Programs are given individualized assistance, feedback, and guidance on how to proceed with assessment of critical curricular components within each department. The committee has also been considerably active during faculty in-service by staging assessment activities, allocating time to plan and report assessment, and providing assistance to those programs that need help improving assessment within their respective departments. The significance of proper assessment, including campus-wide understanding of terms and procedures, is of the highest priority for the administration and the faculty, alike. This is evidenced by the amount of time, energy, funding, training, and support that has been directed to assessment. The result is that most programs are now planning and reporting assessment data in a timely fashion, a general collective understanding of assessment concepts and objectives is being forged, assessment issues and common problems are being addressed by administrators and the Assessment Committee, and assessment results are being used to improve instruction. One example is in Early Childhood Education:

Early Childhood Education: Based on a recommendation from the Assessment Committee a benchmark pass rates were set with a 2.0 or higher to enhance transparency and data collection.

Results Used

Many departments are using assessment results to implement positive changes in assessment procedures, data collection, and student learning. While not all departments have shown adequate progress in using assessment results effectively, most have gleaned valuable information that has been used to improve learning and/or inform budgeting decisions related to increasing the quality of instruction

Aviation: AFV253 course outcome number three, "Evaluate various Go/No Go flight decisions under real or simulated scenarios using effective Aeronautical Decision Making (ADM) skills", which feeds into program outcome number two, was used to facilitate evaluation of students' ability to make critical decisions under certain flight conditions. Based on the results, the Aviation Department has concluded that two items needed to be addressed at the program level:
1. Instructor orientation next year will place a special emphasis on stabilized approaches.
2. A special emphasis during all stage checks will be made to assess a student's ability to correctly identify, and call for, a "go-round".

Early Childhood Education: Program outcome number two, "Establish an environment that provides learning experiences to meet children's needs, abilities, and interests (Curriculum and Learning Environment)", used a rubric and assessment data from ECED&170 to determine whether or not students were able to establish and provide such an environment.

Based on recommendations from the Assessment Committee, discussions and data gathered during assessment, the following program changes are being made:
1. Benchmark pass rates were set with a GPA of 2.0 or higher to enhance transparency for more comprehensive assessment analysis and reporting.
2. Identified the need for an additional full-time faculty member (To be hired for 2019-2020).

Automotive Technology: Program outcome number four "By program completion, graduates will pass the ASE student exams including engine repair, automatic transmissions, manual transmissions, steering and suspension, brakes, electrical/electronics, HVAC, and engine performance" was assessed and results were used as follows:

Historically, many students have either not taken, or not passed, the EPA Section 609 test, which is required by the EPA for handling, recovery, recycling, evacuation, charging, and storage of refrigerants, as well as diagnostics and servicing of automotive air conditioning systems.

The Automotive Technology Department surmised that the most likely cause of perceived student indifference towards the certification test was the fact that scores were not included as part of their final grade in the class, or in overall program completion. Based on the data gathered, the test is now included in the final course grade, and therefore may affect students' ability to graduate, if results are poor. The effect of implementation was that, in 2018-2019, 100% of the students enrolled in AUT231 not only wrote the test, but also passed it.

The Automotive Department is currently using this information to inform decisions about program requirements in general, where to impellent them, and how they might foster student motivation when overall grades will be affected.

Planning and Budgeting

Intentional alignment of outcomes to systematic planning and budgeting procedures has been a major focus of our assessment in recent years. The following examples provide insight into this process:

Agriculture: Assessment results were used to determine that a standard curriculum and text must be adopted by the department to facilitate increased student learning.

Nursing: Assessment results were used to determine that evaluation tools may need adjustment in order to better align with program and course outcomes.

Aviation: Assessment data was used to give evidence of the need to purchase additional and/or updated aircraft to provide better in-flight testing procedures and scheduling.

Automotive: Assessment data was used to justify the use of lab fees as a means of paying for industry required testing that effects overall employability of students completing the program.

Early Childhood Education: Assessment data was used by the ECE director to determine, and provide evidence for, the need for additional personnel. This lead to a decision by administrators and campus leadership to use the funds from a recently dissolved position to pay for a new full time employee for the ECE program.