

The Instructional Program Review Narrative Report

1. College: Merritt

Discipline, Department or Program: Mathematics

Date: February 13, 2010

Members of the Instructional Program Review Team:

- Mathematics Department Chair: Jason Holloway
- Division Dean: Dr. Rebecca Kenney
- Mathematics Faculty: Dr. Tae-Soon Park, Dr. David Strohl, John Siegfried, Suman Shah, Norman Nemzer.

2. Narrative Description of the Discipline, Department or Program:

Please provide a general statement of primary goals and objectives of the discipline, department or program. Include any unique characteristics, degrees and certificates the program or department currently offers, concerns or trends affecting the discipline, department or program, and any significant changes or needs anticipated in the next three years.

The Mathematics department at Merritt College is strong, but its focus has changed dramatically in the past few years. Traditionally, the Mathematics department has been able to offer lower division undergraduate level Mathematics courses needed to attain an Associate's Degree in Mathematics.

Within the past five years, the number of undergraduate level course offerings has decreased, and remedial, non-transfer level mathematics courses have had the highest demand at Merritt College. Currently, most students at Merritt College enroll in their Math courses to gain prerequisite skills needed to be successful in other disciplines around the College. i.e. Biology, Allied Health, Chemistry, Physics, etc.

The Math department has been greatly affected by the dismal state of the US economy. The department currently operates almost entirely using its 5.47 full time faculty positions. Serving on average 1200 students per semester, the department is strained with oversized classes and inadequate facilities in which to teach. A full-time tenured position was not refilled in 2005 and several other full time professors will be retiring in the foreseeable future.

Looking forward, there are several areas the mathematics department would like to address. They are as follows:

- There is a need for an increased focus on basic skills proficiency in mathematics
- Explore the idea of using technology as a medium for instruction and assessment
- Hire 1 – 2 full time faculty to maintain stability in the department
- Develop a tutor training (course, module, etc) to promote consistency in service
- Begin offering lower division undergraduate level Mathematics courses to ensure a healthy math department

3. Curriculum:

- **Is the curriculum current and effective? Have course outlines been updated within the last three years? If not, what plans are in place to remedy this?**

All course outlines for the Merritt college mathematics department are available via the internet and can be reviewed conveniently. Currently there are 25 math sections that are listed as active courses to be offered by the college. 7 sections are listed as historical sections, and there are 2 sections that are pending review. As most mathematics course content does not change significantly over time, many of the course outlines have been reviewed, but not revised in the past 3 years. There are other course outlines which have not been reviewed at all in the past three years. (see attached for complete list of active and inactive math courses offered at Merritt College) The math department is currently prioritizing a list of relevant course outlines to be reviewed and/or revised and which courses to deactivate (if any). After the list has been completed, actions will be taken with the Curriculum Committee to make the said changes to each course outline. Please see the attached matrix detailing course outline completion review dates and work timelines. The Mathematics Department expects to complete this process by May 1, 2010. (see attached course outline/ SLO review matrix)

- **Has your department conducted a curriculum review of course outlines? If not, what are the plans to remedy this?**

The Merritt College Curriculum Review process has recently been placed on a new electronic format called Curricunet. At this time, members of the mathematics department are obtaining login information to access and manipulate data within the system. One member of the committee has successfully placed a distance education addendum on the Curricunet system to be reviewed by the curriculum committee. Due to various factors and hiring procedures, the math department decided to suspend the motion to get the addendum approved and shift the focus to revising course outlines. This course of action is believed to impact a larger number of students. The Math department decided to use the priority list mentioned in the above statement to develop a ranking system in which to review these course outlines. At this time the suggested changes can be brought to the curriculum committee through the Curricunet software system.

- **What are the department's plans for curriculum improvement (i.e., courses to be developed, updated, enhanced, or deactivated)? Have prerequisites, co-**

requisites, and advisories been validated? Is the date of validation on the course outline?

The Basic Mathematics courses (math 250, 253, 201 and 203) are among the most popular math course offerings at Merritt College. Most students assess below math 201 (elementary algebra) level which is a non-transferrable math course that is a prerequisite or co-requisite for most associate degree programs at Merritt College. A great number of students are able to enroll in courses that are above the level in which they assess for both valid and invalid reasons.

Many courses that are considered active have not been taught in some time. The math department may consider deactivating courses that no longer seem relevant in 2010, or modifying course content to mirror situations students may face in a modern society.

- **What steps has the department taken to incorporate student learning outcomes in the curriculum? Are outcomes set for each course? If not, which courses do not have outcomes?**

Student Learning Outcomes have been created for each course offered by the Mathematics Department and are available for review on each student learning outcome addendum. All Instructors in the math department are asked to place the student learning outcomes for each course on their syllabus so that students understand the skills they should possess upon leaving a course.

The math department is currently in the process of reviewing performance on Student Learning Outcomes of the Basic Skills Courses (math 250 and math 253). A committee is being formed to coordinate testing student learning outcomes in their basic skills courses. The information will be reviewed collectively by the department in accordance to a scoring rubric that has been accepted by the Math department. This information can be used to inform the Department regarding aspects of the student learning outcomes that are not addressed adequately, or perhaps not at all. Several instructors have been starting this process for the math 250 course and compiling student responses for review. This information will be placed in a sample packet to assess using the scoring rubric.

A complete review of all student learning outcomes at the course level is not a trivial task, and will take many hours to complete. A matrix will be created detailing which student learning outcomes have been reviewed and which student learning outcomes and which courses are set to be reviewed in coming semesters. The student learning outcome review is intended to be an iterative process in which changes and adaptations to the review process must be periodically made. Please see the attached form for a more detailed look at the Student Learning Outcome review plan for Mathematics courses at Merritt College. (see attached course outline. SLO review matrix)

- **Describe the efforts to develop outcomes at the program level. In which ways do these outcomes align with the institutional outcomes?**

The Mathematics Department has discussed the following program outcomes:

- Increase the number of associate/bachelors degrees in mathematics and related disciplines attained by students in Oakland, CA and its surrounding areas
- Offer each course contained in a full lower division mathematics program at least one time within each two year period
- Observe, discuss and make changes to course content as a Mathematics Department on a periodical basis to better serve the current population
- Increase the number of students who can effectively translate skills learned in math courses in context of other courses.

The institutional outcomes can be found in the appendix of the document. In the diverse world of the East Bay California, it is important that the Mathematics department respond to the needs of all students regardless of their preparation prior to coming to Merritt College. Mathematics is a discipline to which many students have an aversion. The Mathematics Department at Merritt College by and large fosters a spirit of caring and many students are inspired to persist.

- **Recommendations and priorities.**

The Math Department at Merritt College realizes that many of the challenges which it faces are not unique to the College. It is now the primary objective of the college to provide a broad range of carefully presented math courses which help serve the population of Oakland. With the new prerequisite for graduation with an Associate's of Arts degree changed to math 203 (Intermediate Algebra), students will find it increasingly more difficult to make their way through the process. The Math department is experimenting with support measures, such as learning communities and embedded tutors in basic skills courses, which are aimed at increasing student retention and success rates in pre-transfer level courses. The Math department will continue to monitor student success in basic skills courses and try interventions aimed at improving student success in math courses in general.

4. Instruction:

- **Describe effective and innovative strategies used by faculty to involve students in the learning process. How has new technology been used by the department to improve student learning?**

Each instructor in the Math Department has a unique way of engaging students. All methods are relatively effective and help students learn. One of the most effective

strategies was the development of the Math Workshop. The Math Workshops are 1 unit, credit/no credit courses designed to supplement the lecture(s) for the week. Each instructor designs his/her workshop differently, but some use these workshops to expose students to help students who are having trouble while others use the time to enhance the lecture material.

Supplemental Instruction is another innovation that has been tried by a math instructor at Merritt College. An embedded tutor is placed in the classroom and required to hold several study sessions between lectures. Students who attended would be required to actively work on material in the session to gain more understanding. On average, it has been found that students who attend the SI sessions regularly perform better than students who did not.

Many students who attend Merritt College have financial problems and find purchasing the textbook very costly. One instructor is experimenting with using a licensed online version of the textbook to supplement the text. ALEKS (Assessment and LEarning in Knowledge Spaces) is an online supplement which assigns students homework at the level in which they are currently prepared. The entire textbook can be viewed online and the student's objective is to complete the entire 'homework pie' and take all of the exams. The book license is much cheaper than the used textbook found at the college bookstore.

The Bill Gates Foundation is allocating several grants to community college math programs who desire to revamp their basic skills math programs. Since basic skills has been called an institutional priority for Merritt College, a Mathematics instructor and a college administrator are travelling to Orlando, FL to be considered for the \$40,000 grant. If awarded the grant, Merritt College will adopt the leading practices in basic skills education that are currently being used by exemplary basic skills mathematics programs.

Math instructors at Merritt College are creative and want to engage their students by using technology. Calculators have existed for most instructors teaching careers but the availability of the calculator has grown over time. Many students use smart phones with full scientific calculator functionality. There are others who report wanting to use the Nomad projector system to transmit three dimensional objects on a screen in addition to power point presentations and videos. There are still others who have wanted to use a response clicker device in the classroom to monitor student responses during lecture. These devices have been used a teaching tools at training conferences and could prove useful in the community college classroom. They let the student respond with anonymity and are non-invasive in the lecture process.

- **How does the department maintain the integrity and consistency of academic standards within the discipline?**

Academic Freedom is a right that all Math instructors at Merritt College enjoy. Each instructor has the right to teach the course in whatever way they see fit, as long as the Course outline is adhered to. The integrity of the Math Instructors at Merritt College has never been in question. All full-time instructors who are currently working at Merritt

College have been evaluated recently and appear committed to the success of the students at Merritt. This is evident by full-time department member participation in the Department meetings.

Consistency is an issue that the mathematics department is trying to address. In an ideal situation, the intent of maintaining consistency is to ensure that a student will receive the same amount of rigor across multiple sections of each course. While two sections of the same course may address student learning outcomes and the course outlines, expectations and/or grading standards may vary (for both valid and invalid reasons). Success in some math courses does not necessarily translate to success at the next level with the same amount of work. There are many reasons this may occur that may be out of the instructors control. (some students may wait several semesters before taking the subsequent course, and therefore have not retained the knowledge they are required to recall.) Others are unable to exert the same level of effort or have different commitments than they did when they achieved success.

Despite all of the factors that it cannot control, the Mathematics Department at Merritt College is committed to providing all of its students the best product that it can give its students by becoming more consistent as a department. Two major components of this consistency are communication and reaction as a department. The Mathematics department is devising a plan to assess student learning outcomes in its basic skills courses and then eventually to the other courses within the department (see matrix for courses that are to be reviewed). The intent of the assessment is to allow other instructors to develop a collective baseline regarding what they consider good and what is considered unacceptable. Even if there is discord in the discussion, the conversation should help to further the Mathematics Departments understanding of how it operates. If this process is repeated periodically, other factors may arise they may help to further inform the department.

- **Discuss the enrollment trends of your department. What is the student demand for specific courses? How do you know? What do you think are the salient trends affecting enrollments?**

Enrollment trends suggest that students will continue to enroll in basic skills courses. Most students are assessing at the basic skills level and will need to take a level of math 203 or below. This is in part due to the failing public school system that feeds into the community college system of Oakland and surrounding areas.

As the UC system and the California State colleges are becoming stressed with high enrollments, there are more students that are turning to community colleges for their undergraduate coursework. For the first time in many semesters, Merritt College was able to sustain a math 1 course with enrollment of over 30 students. This suggests that a math 3A class should be offered in the fall 2010 to retain the enrollment of these students. In the past, transferrable undergraduate courses have been cancelled prematurely due to low enrollment. In the future, Merritt College should be able to fill at least one section of Math 1, Math 2, Math 202, Math 50, Math 3A, Math 3B Math 3C and Math 3D. This

way, in the event that a student wishes to begin their undergraduate studies in mathematics, Merritt College could facilitate this desire.

Are courses scheduled in a manner that meets student needs and demand? How do you know?

In general, courses continue to be offered at the times in which they have traditionally been offered. Traditionally, courses are most popular in the two day per week format, and most students do not enroll in classes which are offered on Fridays. Saturday enrollment is limited, but could be an area which more students could be captured.

Many afternoon math courses have enrollments which are over 50 students. When enrollment caps are reached, the instructor must either enroll more students or turn them away. There is usually not another section of the same course that will fit the student's schedule. More sections of each course should be offered and more faculty are needed for this.

Lower division mathematics courses have not been offered in high frequency due to low enrollment. This may be in part due to competition with enrollment with its sister college's in the Peralta Colleges. With enrollment in community colleges increasing, there may be a need to staff more lower division math courses at Merritt Colleges.

Recommendations and priorities.

- To increase the retention and success rates in Math courses, particularly basic skills courses, there is a need to reduce the class enrollment caps and increase the number of basic skills sections offered by the college.
- Hire part-time faculty who specializes in teaching basic skills courses at a high level.
- Offer each course contained in a full lower division mathematics program at least one time within each two year period.

5. Student Success:

- **Describe student retention and program completion (degrees, certificates, persistence rates) trends in the department. What initiatives can the department take to improve retention and completion rates?**

Retention and persistence in basic skills math courses remains a major concern for the math department at Merritt. Many factors affecting the success of the students who are served at the college are beyond the reach of the abilities of the instructors at the college. Several grants have been dedicated funds initiatives geared towards the success of this population of students. The MAP (Maximum Achievement Project) grant was obtained to help disadvantaged African American Male students persist through the academic experience at Merritt College. Many of these students enroll in basic skills courses and have difficulties. Through the MAP grant, programs were instituted to enlist students to serve as tutor mentors who help them persist through their math courses, sometimes ranging from math 250 all the way through math 13. The Title III grant also dedicated monies to fund innovative programs to help students maintain transfer degrees. The grant funded Supplemental Instruction for the math department. The Supplemental Instruction Model requires that the student mentor/tutor has previously taken the course, attends all class sessions, and holds workgroup study sessions at various times outside of class throughout the week. One instructor has used this program in several sections of Math 203, and on average students who utilize the program perform at a higher level than students who do not use the program.

- **What are the key needs of students that affect their learning? What services are needed for these students to improve their learning? Describe the department's efforts to access these services. What are your department's instructional support needs?**

Students must have the will to succeed in college. Many incoming students at Merritt College do not understand the large commitment they will have to make in order to succeed. In spring 2010, the "Stepping Up" learning community was a partnership formed with math 250 and counseling 24? to help students begin planning effectively from the outset, and reinforcing both disciplines in each other's classes on occasion. Unfortunately, due to budget constraints the learning community was disbanded before it could be tested.

Secondly, students must have access to materials and facilities, (i.e. textbooks, tutors) in order to be effective. Even though the financial aid process is improving, it is not efficient enough. Students are waiting to purchase their books after the 3rd week in the semester. This is either a fundamental error in planning on the student's part or on the part of the institution. There are other students who have trouble finding adequate tutoring services when they come to the learning center for help.

The mathematics department is dedicated to student success for all students. All of the full time faculty regularly teach at the basic skills level and share challenges and success stories about teaching effectively. Some instructors hold their office hours in the learning center and help students in their free time. Other instructors have used grants (MAP and title III) to enable students to borrow textbooks over the course of the semester.

Despite all the efforts the mathematics department makes in trying to help students, the net effect seems minimal. Programs must be institutionalized that make basic skills courses and pre-transfer level education a priority at Merritt College. It is a moral imperative that the college educate the community which it serves, regardless of their former preparation.

- **Describe the department's effort to assess student learning at the course level. Describe the efforts to assess student learning at the program level. In which ways has the department used student learning assessment results for improvement?**

It was decided that each math 250 instructor would give their own assessment to their students that addresses that course SLO's for math 250. A sample collection of this work from each math 250 would be brought to the March Department Meeting for review by the math department.

At the February, 2010 department meeting, the scoring rubric for the March assessment would be developed and refined. Please see the appendix for the scoring rubric used for basic skills assessment.

When the data is collectively reviewed, the math department can assess if changes in presentation or the assessment tool are necessary. The department can also determine how to make the assessment more informative. The math department intends to use the information gathered from the assessment to make instructors aware of behaviors that we are looking for in student work. Instructors and students alike will inform the department of ways to make these behaviors be more apparent in their work.

When this process is completed for math 250, the process can be initiated again with math 253 and subsequent courses until the desired courses have all be assessed.

Recommendations and priorities.

- Continue assessment for basic skills courses. Retention rates at the math 250 and math 253 levels are low and should be addressed.
- Develop matrix detailing Student Learning Outcome information.
- Consider offering modularized, self paced math 250, math 253 courses.

6. Human and Physical Resources (including equipment and facilities)

- **Describe your current level of staff, including full-time and part-time faculty, classified staff, and other categories of employment.**

Currently the Mathematics Department operates almost primarily on contract faculty (5.47 full time equivalent) and is supplemented by two or more part-time math faculty. Both the part time and full time faculty numbers have fallen within the past three years. One tenured position was not replenished when the math instructor retired, and several part-time instructors have been laid off and have not been offered classes in the past two to three years.

- **Describe your current utilization of facilities and equipment. Projects, laptops, computer labs, etc.**

Most instructors in the math department use chalkboards as the primary means of instruction. Some instructors supplement their lecture with the use of overhead projectors, computers and LCD projectors, graphing calculators, and other technology. Other than the chalkboard, most classrooms are not equipped with the other materials and they must be brought in from the outside. Other classrooms are equipped with whiteboards which are not preferred by some math instructors. Although Smart classrooms would be ideal for all math courses, some math teachers prefer to use the board and the projector at the same time, so it is important to have a screen that does not block the board. Computer labs currently are not used by the math department but may come into play as hybrid courses and distance learning becomes more popular.

- **Are the human and physical resources, including equipment and location, adequate for all the courses offered by your department (or program)? What are your key staffing and facilities needs for the next three years? Why?**

In the next three years, both the human and physical resources will be inadequate for all of the courses that are offered by the math department at Merritt College. If there is a true commitment to student success in sequential math courses, the ratio of teacher to student must be reduced. Within the next three years, a tenured instructor will retire, leaving a second full time position unfilled. The math department cannot sustain a loss of 1/5 of its full time staff and expect to operate at the same capacity.

In regards to the facilities and location, most math departments are located near the math lab or learning center. In the near future, the new learning center will be located across campus from the existing math department. Many students may not make the walk across campus to get help. When a new science building is created or when the new learning center is constructed, the math department should have at least one classroom located near the learning center.

If students are to be successful, classes must be smaller, therefore more sections for each course must be offered.

Recommendations and priorities.

- **Two Full-Time Math Faculty / 1 Full-Time math faculty and .5 Math/ .5 Physics.**
The Mathematics department is in desperate need of manpower. In this time of

economic hardship, people are needed who will ignite a fire within the students that will give them the will to succeed. This manpower is also needed to help with the heavy workload of the Math Department. If someone who was qualified to teach Math and Physics for the Merritt College, two objectives would be met.

- **Slate blackboards.** Most Math Instructors prefer the Slate blackboards over the green boards or white boards. If slate chalk boards cannot be adopted in each classroom, the department would like specific rooms to contain both a white board and a slate chalkboard with adequate space for presentations.
- **Adequate space.** Many math classes are taught in rooms that also serve as labs and contain equipment that is not used by the math department. At times some of these materials must be moved or reoriented in order to teach the math class effectively. Often, classrooms do not have the necessary seating to accommodate the class. A lockable storage drawer in each Math classroom is also requested.
- **Portable projector screens.** Most projector screens in math classes are oriented directly over the chalkboard so that both cannot be used simultaneously. If portable projector screens are available, then instructors who use the computer or powerpoint presentations in class will have full access of the board in their lecture.
- **Nomad projection systems/Smart Classroom** – Computer friendly, technology equipped classrooms are the way of the future. The Nomad projection system allows 3 dimensional objects to be projected. With photography technology, this system eliminates the need to create transparencies to display information to an audience on a view screen. This system can also record and transmit video which would allow instructors to record lectures and broadcast them on the web with little difficulty.

7. Community Outreach and Articulation

For vocational programs:

- Describe the department's connection with industry. Is there an Advisory Board or Advisory Committee for the program? If so, how often does it meet? Is the program adequately preparing students for careers in the field? How do you know?
- Have students completing the program attained a foundation of technical and career skills? How do you know? What are the completion rates in your program?
- What are the employment placement rates? Include a description of job titles and salaries. What is the relationship between completion rates and employment rates?
- What industry trends are most critical for the future viability of the program? How do you know? What are the implications of these trends for curriculum development and improvement?

For transfer programs:

- **Describe the department's efforts in meeting with and collaborating with local 4-year institutions. Is the program adequately preparing students for upper division course work? How do you know?**

In fall 2009, the 4 Peralta Colleges, Merritt, Laney, Alameda, and Berkeley City College all were in coordination with UC Berkeley, San Francisco State, and Cal State East Bay to reaffirm that the elementary statistics course taught at the four colleges would remove ANOVA and non-parametric tests from the Peralta course outlines. All of the local 4 – year colleges approved the change, and would still accept math 13 as a transfer level course at their universities.

In general, the student population at Merritt College is not enrolling in lower division coursework. This may in part be due to the fact that the Physics program at Merritt College has lost a key tenured faculty position. Most students who take these courses also enroll in lower division Math courses concurrently with their physics courses. Merritt College is trying to offer more lower division courses but the math education which many entering Merritt College students need is foundational. This knowledge must be built upon for many semesters before the excellence will be seen in lower division transfer level work. Other students at Merritt are in fact prepared to perform at a high level in lower division coursework. Many students who take math 201 and math 203 at Merritt are unable to complete their math requirement at Merritt, but then continue on at one of the Peralta sister colleges. Often my colleagues report that a number of their students come from Merritt and do well in their transfer level courses.

One instructor within the Math department is mentoring a young instructor at the Native American Indian High School (charter school)* In this nontraditional program the mentee is teaching the high school students Math 1 and Math 3A. A large percentage of students who attend this school go on to attend top colleges and universities around the country.

For all instructional programs:

- **Describe the department's effort to ensure that the curriculum responds to the needs of the constituencies that it serves.**

Starting in the fall of 2009, Math 203 had become the minimum requirement for receiving the AA degree among CA community colleges. In light of this, it has been proposed at the district level to split the math 203 course into two parts, each of one semester length.

In the last few years, the Calculus sequence has disappeared from Merritt College. Students who are interested in exploring mathematics as a major or minor cannot find most of their requirements at Merritt because most sections have been cancelled due to low enrollment. With the state of the economy, more university level students are

enrolling in community colleges to save money. An instructor was able to fill a section of Math 1. With 45 students at a time that had not filled in the past. This suggests that this population will remain at the start of the fall semester, and they would enroll in a Math 3A course if it were available. Merritt College has an obligation to the community to make math course available at least 1 time every 4 semesters.

Recommendations and priorities.

- More institutional support for math 203
- Offer each courses in the math sequence at least 1 time every two years
- Recruit qualified tutors to serve students in Math 203 and Math 13
- Pilot Supplemental Instruction for Math 13

APPENDIX

A: MISSION

The institution has a statement of mission that defines the institution's broad educational purpose, it's committed to student success, it's fostering of a caring spirit, it's dedication toward teamwork and inclusion, it's student centered learning environment and it's respect for different background, experiences, languages, values and cultures represented within the institution.

1. *The institution establishes student learning programs and services aligned with its purpose, its character, and its student population.*

2. *The mission statement is approved by the governing board and published.*
3. *Using the institution's governance and decision-making processes, the institution reviews its mission statement on a regular basis and revises it as necessary.*

B. Improving Institutional Effectiveness

The institution demonstrates a conscious effort to produce and support student learning, measures that learning, assesses how well learning is occurring, and makes changes to improve student learning. The institution also organizes its key processes and allocates its resources to effectively support student learning. The institution demonstrates its effectiveness by providing 1) evidence of the achievement of student learning outcomes and 2) evidence of institution and program performance. The institution uses ongoing and systematic evaluation and planning to refine its key processes and improve student learning.

1. *The institution maintains an ongoing, collegial, self-reflective dialogue about the continuous improvement of student learning and institutional processes.*
2. *The Institution sets goals to improve its effectiveness consistent with its stated purpose. The Institution articulates its goals and states the objectives derived from them in measurable terms so that the degree to which they are achieved can be determined and widely discussed. The institutional members understand these goals and work collaboratively toward their achievement.*
3. *The institution assesses progress toward achieving its stated goals and makes decisions regarding the improvement of institutional effectiveness in an ongoing and systematic cycle of evaluation, integrated planning, resource allocation, implementation, and re-evaluation. Evaluation is based on analysis of both quantitative and qualitative data.*
4. *The Institution provides evidence that the planning process is broad-based, offers opportunities for input by appropriate constituencies, allocates necessary resources, and leads to improvement of institutional effectiveness.*
5. *The Institution uses documented assessment results to communicate matters of quality assurance to appropriate constituencies.*
6. *The institution assures the effectiveness of its ongoing planning and resource allocation process by systematically reviewing and modifying, as appropriate, all parts of the cycle, including institutional and other research efforts.*
7. *The institution assesses its evaluation mechanisms through a systematic review of their effectiveness in improving instructional programs and student support services, and library and other learning support services.*