

**8-Step Process Implementation/Improvement Plan (PIIP)**  
Electronic Form

Richland College employees use the **8-Step Process Implementation/Improvement Plan (PIIP)** to document implementation of new processes/programs and improvement of existing processes/programs.

**PLEASE NOTE: Input information in the grey highlighted areas. Boxes will expand as you type.**

PIIP# **51** (to be assigned by IR/E)

PIIP Process Name: Student Success Initiative for Math and Developmental Math

**Responsible Party: Ray Canham, Mary Darin, Celeste Hernandez and Jerry Matlock**

## Part 1

**Step 1. Anticipated Completion Date: August 31, 2006**

**Step 2. State implementation/improvement need and identify its related Strategic Planning Priority:**

Need for improved student success in Developmental Math and Math courses: Enable All Students to Succeed.

Check Status:  In Progress  Complete

**Step 3. List owner(s) of new process/program or improvement:**

Ray Canham, Mary Darin, Celeste Hernandez and Jerry Matlock

Check Status:  In Progress  Complete

**Step 4. Identify root cause leading to this process implementation/improvement:**

The team brainstormed during the first meeting to determine factors that are hindering the success of our students. A list of factors was made and then categorized into four categories:

1. Advising, Assessment, and Placement (Celeste Hernandez, team leader, Ellen Bell, Jerry Matlock, Sam Obeid)
2. Curriculum and Instruction (Sally Jackman, team leader, Eleanor Browne, Ken Lott, Scot McClain, Susan Miller, Ruelona Overby )
3. Student Previous Preparation in Mathematics (Gary Penner, team leader, NeKeith Brown, Ralph Esparza, Jimin Tian)
4. Student Attitudes, Beliefs, and Behaviors (Thales Georgiou, team leader, Jada Hill, Raj Seekri, Sam Tinsley).

Check Status:  In Progress  Complete

**Step 5. Develop proposed solution, including measurement/evaluation plans and budget implications/business plan:**

Recommendations:

1. The SAT should not be used as a placement tool into College Algebra.
2. Students should reassess if their Accuplacer scores are more than two years old.
3. Students should not wait more than one semester between a course and its prerequisite.
4. Instructors should remind students that they need to master the content of their courses so that they can be prepared for the next course.

Next steps:

1. Examine placement scores for developmental math.
2. Examine "stop-out" time for developmental math.
3. Examine developmental courses to ensure that prerequisite knowledge is being covered.
4. Once any changes have been made for placement scores, reevaluate data to see if it has helped.

Final conclusions:

1. The District math curriculum committee will be examining placement scores in the 2007-2008 academic year.

2. The math workgroup and the DMAT workgroup will be evaluating their curricula independently and will come together to share conclusions in the fall semester, 2007.
3. Data will be presented to the advisors prior to summer and fall registration to help them convince students not to put off their math classes.

Check Status:  In Progress  Complete

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**NOTE: After you complete Part 1, e-mail copies of this form to your dean or supervisor and to Gloria Washington, Department of Institutional Research/Effectiveness.**

Date Submitted: Oct 13 2005      Date Updated: Oct 31, 2006      Date Completed: Feb 23, 2007

## Part 2

PIIP# 51 (to be assigned by IR/E)

PIIP Process Name: Student Success Initiative for Math and Developmental Math

### **Step 6. Describe implementation/pilot approach:**

The first committee examined assessment and advisement issues. Data from the past four long semesters were gathered for students who took the assessment and whose first course was College Algebra. It was found that SAT scores are not a good predictor of readiness for College Algebra. It was further found that the scores for the Accuplacer were good for about two years. The results about the SAT will be taken to the District Math curriculum committee next year to attempt to have the SAT removed as a placement tool into college algebra.

The second committee examined curriculum and instruction issues for the courses. They decided to focus on course content at this time. They worked on gathering a list of objectives pertaining to prerequisite knowledge for students to consider when enrolling in a course. This list will be made available to instructors of prerequisite courses, instructors of the second course (in this case College Algebra), and advisors as an aid when advising students. The next step for this group is to examine the developmental math courses to ensure that the prerequisite material is being covered in the courses.

The third committee examined the connection between the length of time between a student taking a course and the next course. In particular, the connection between the number of semesters between DMAT 0099 and College Algebra was considered. It was found that if a student did not skip a semester between the two courses (the student did not "stop out"), then the student was more successful in College Algebra. This will be a recommendation to the advisors to guide students into their math courses sooner. Other issues were considered: the effect of taking DMAT 0099 (Algebra Fundamentals III) prior to Math 1414 and the effect of taking Math 1316 (Trigonometry) prior to Math 2412 (Precalculus).

The fourth committee examined what instructors could do in their classes to help students get over their fear and dislike of math. Several ideas were presented, such as being encouraging to students, promoting active learning, being prepared for class, praising students for a job well done, and learning students' names. These "soft skills" will be encouraged during discussions on the Thursday night Adjunct meetings at the beginning of fall 2006 and spring 2007 semesters.

Check Status:  In Progress  Complete

### **Step 7. Report outcomes related to measures identified in Step 5:**

1. The district curriculum committee will examine placement scores in Fall, 2007.
2. A notation will be made in the Fall 2007 schedule annotations indicating that prerequisites and test scores may not be more than two years old. Advisors will recommend that students retake the prerequisite course or retest. This is current district policy per the Math curriculum committee.
3. The stop-out time between courses will be discouraged by both dmat/math instructors and advisors whenever possible.
4. Instructors are encouraging mastery in their courses.

5. Instructors have used "soft skills" (discussed in the Fall and Spring Adjunct Meetings) in their classes and it appears that this could be affecting drop rates. However, many other factors affect drop rates, so it is difficult to determine whether these are directly correlated.

6. A committee of Dmat and Math faculty is examining the prerequisite knowledge and skills required and expected for success in College Algebra. The Dmat faculty is discussing the Dmat program in its entirety and the Math faculty are discussing the first semester math courses and how those could be redesigned.

Check Status:  In Progress       Complete

**Step 8. Describe hard copy or electronic method(s) for disseminating results:**

Report was sent via email to Mary Darin and Ray Canham from the committee in May, 2006, and December 2007. Final steps were discussed (with Mary present) in February, 2007.

Check Status:  In Progress       Complete

**Step 9. Evaluate and describe success of this process (Steps 1-8):**

This has been a difficult task for this group primarily because it influenced by many other external groups: curriculum committee, advisors, the number of involved adjuncts. This has been good process to use for this because it causes us to reflect on the steps and any progress we have made that is under our direct control and any steps that we need to continue working on.

Check Status:  In Progress       Complete

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