

DCCCD Retention Best Practice Submission Form

Across the district there are many successful practices that contribute to the retention of students. As the district begins to develop a greater emphasis on its retention strategy, all locations are asked to identify and submit information about successful retention programs and activities. Please complete the following information on selected practices.

College/Location: Richland College

The Retention Best Practice is primarily supported by what college/location area:

Instruction Student Services _____ Administrative _____

Combination of areas: (Please list)

Contact Person: (Include contact information) Gary Penner, M 139, x6049 Richland College

Retention Best Practice Title: Math Success Initiative

Retention Best Practice Area of Focus:

Math STEM _____ Honors College _____ Other _____

Retention Best Practice Executive Summary: approximately 50 words (Please use additional pages for a detailed description)

College algebra was standardized with respect to objectives covered and schedule, and used a mastery approach for the material using technology. An Abstract follows on the second page of this report and includes a more detailed description.

Please describe the evaluation measures utilized to support this initiative as a best practice.

The end of semester grades were used to compare the new delivery method to the old delivery method. Spring 07 grades were compared to Spring 08 grades.

Provide a summary of the results, including data (such as trend lines over time) to show how it impacted retention and is a best practice. See the Abstract on the following page for a summary of results. The percentage of ABC's increased from 49.9% to 57.2%. The retention rate increased by 8.7%.

What would be needed to replicate the practice at other DCCCD colleges?

Department would have to adopt a text that utilizes MyMathLab and set up a master course, calendar, and assignments to be used by all instructors.

Cost to implement this practice (financial and human): Release time for one instructor to set up the master course, calendar, and assignments. Training must be provided to all instructors (full time and adjunct) to use the MyMathLab system effectively.

Please submit this form to Dr. Sharon L. Blackman, DCCCD Educational Affairs by October 24, 2008

ABSTRACT

The following changes were made to the Math 1414, College Algebra program at Richland College for Spring 2008.

1. A template course in MyMathLab was used by all lecture sections resulting in uniform coverage of all topics at an appropriate rate.
2. Course content was adjusted to allow more thorough treatment of topics and "just in time" review material was added.
3. Homework, via MyMathLab, became a required component of the course.
4. Mastery of material was measured for each student before taking high stakes exams with the opportunity for instructor intervention and student remediation prior to exams.
5. A uniform grading rubric was used by all instructors resulting in more uniform grading.
6. Instructors used lists of mastery objectives in writing exams resulting in more uniform exams across all sections of the course.

A comparison of the college algebra courses in Spring 2007 with Spring 2008 shows that an improvement of 7.5% in the success rate occurred. A statistical analysis performed by Professor Jada Hill using a 1-Proportion z Test shows significance at the $\alpha = 0.01$ level. The withdraw rate also improved with 8.7% fewer students withdrawing in the Spring 2008 semester compared to the Spring 2007 semester.

Semester	Sections	A,B,C	D,F,N	W
Spring 2007	All (n = 758)	49.9% (n = 378)	19.1% (n = 145)	31.0% (n = 235)
Spring 2008	All (n = 782)	57.2% (n = 447)	20.1% (n = 157)	22.8% (n = 178)

The performance of selected subgroups is shown in the following table. The effect of being prepared for college algebra by taking DM0099 immediately prior to taking college algebra should be noted. RCHS students had the added benefit of having a tutored laboratory attached to the course.

Subgroup	A,B,C	D,F,N	W
RCHS Students (n = 33)	81.8% (n = 27)	18.2% (n = 6)	none
Students who took DM0099 in any prior semester.	58.2% (n = 328)	20.2% (n = 114)	21.6% (n = 102)
Students who took DM0099 in the immediately prior semester, Fall 2007	64.4% (n = 161)	17.6% (n = 44)	18.0% (n = 45)

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