March 14th, 2011

To: Planning and Resource Allocation Committee
c/o Sara McKinnon, President Academic Senate,
Angelina Duarte, Vice President Student Learning

From: Peggy Dodge, Early Childhood Education
Maula Allen, Mathematics

Re: Request for Planning and Resource Allocation Committee to recommend funding for one section of Math 95A for Fall 2011, and one section of Math 95B for Spring 2012

Dear Members,

We (Peggy Dodge from Early Childhood Education and Maula Allen from Mathematics) are requesting that the Planning and Resource Allocation Committee recommend the funding of one section of Math 95A for the Fall 2011 semester and one section of Math 95B for the Spring 2012 semester, the two-semester version of Math 95. This would be in support of our effort at improving student success and completion through our linked Learning Community of ECE 226 (Exploration and Discovery in Math and Science) with Math 95 (Basic and Intermediate Mathematics), developed as part of the EEIF-Math For Success Grant.

The student success data for fall 2009 from the Office of Planning, Research, and Institutional Effectiveness, reveals that the Success Rate for College of Marin Basic Skills Math students was 36.7%, which was 13.0% lower than the State Success Rate of 49.7%. ECE students, who were concurrently enrolled in Math 95 in fall 2009, had a Success Rate of 30% and a Success Rate of 0.0% for Math 101 (the next class in the sequence of Basic Skills mathematics classes after Math 95.) The average Success Rate over a four year period (fall 2006 through spring 2010) for ECE students concurrently enrolled in a Basic Skills math classes was 41%. The enrollment data from the same four year interval also identified Math 95 as the course in which ECE students had the lowest rate of success among the three Basic Skills mathematics courses (Math 95, Math 101, and Math 103), with an average pass rate of 36%.

There have consistently been two matters needing attention revealed through the ECE Program Review performed in 2008: A need to partner with ESL and Basic Skills (English and Math) classes to increase access and success for ECE students who might want to pursue associate degrees and transfer, and the need for evening and/or weekend classes to meet the needs of the mostly non-traditional ECE workforce preparation students. Currently, there are only two Math 95 sections offered in fall 2011. One is a traditional (as opposed to the self-paced or Distance Ed versions) Math 95 offered during the day, and the other is a Distance Education Math 95. If given the opportunity our Math 95A in fall 2011 and Math 95B in spring 2012 will be offered as evening courses. It is also important to note that a traditional one-semester Math 95 would not provide enough class time to incorporate the active learning components that would promote student success, e.g. experiments and working with manipulatives.
Part of our goal with the ECE-Math Learning Community is to research and report findings of our intervention methods based on their relevance to success rates, student learning outcomes, and effects on retention. The other part of our goal with the ECE-Math Learning Community is to provide the mechanism by which ECE students can experience success in Basic Skills Math content, enabling them to address a serious matter, which is the lack of professional preparation for Early Childhood educators to support and improve early mathematics instruction. Success at the Basic Skills level will promote more positive dispositions with the Early Childhood educators. This in turn will provide the improved mathematics instruction for our early childhood learners to decrease the “readiness gap” for children entering kindergarten, and thus decrease the achievement gap that is well documented in elementary, middle and high school.

Results from our research completed in Fall 2010 indicate that linking ECE 226 (Exploration and Discovery in Math and Science) with Math 95 (Basic and Intermediate Mathematics), and applying effective teaching methodologies, would result in increased retention rates, retention of course content, and increase in success rates. Application of the learning theory and effective teaching methodologies learned from research results contributed to the effect of producing a success rate of 83% in Math 95B in fall 2010. Just as successfully completing Math 95A produces continued success in Math 95B, we expect that success experienced by students in Math 95 will produce continuing success in Math 101 (Introductory Algebra) and Math 103 (Intermediate Algebra). Math 103 is the last prerequisite course prefacing a transferrable mathematics course.

Our Student Learning Outcomes assessment data for ECE/Math 95 has demonstrated that student performance and success rates increase significantly as a result of this intervention. We are asking for the funding of these two courses so that our SLO data and the goals expressed in the ECE program review can inform resource allocation decisions at College of Marin.

Thank you for your consideration of our request.

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Peggy Dodge/ECE                                           Maula Allen/Mathematics