

PROGRAM REVIEW 2008-2011

Division: **Learning Resources: Student Success Center (SSC)**
Department or Program: **S43 Math/Science Tutorial Center**
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I. Description and Mission of the Program

Basic Skills Transfer Career/Technical Other (describe)

A. Brief description of program and mission statement

All Tutorial/Skills Programs:

Mission: De Anza College Tutorial Centers and Academic Skills Center support classroom instruction in basic skills, transfer, and career/technical courses by helping students at all levels become better learners and gain the confidence and skills to achieve their greatest possible academic success.

We do this by providing:

- Free individual, group and online tutoring in a variety of subjects
- Flexible, self-paced skills courses
- Course-specific Adjunct Study Skills courses
- Tutor training courses

The Math/Science Tutorial Center (MSRC) is one of the nine programs integrated within the Student Success Center (SSC). MSRC in S43 provides weekly, drop-in and group tutoring for students in PSME, Bio/Health and CIS courses.

Much of the actual instructional work in the MSRC is performed by Teaching Assistants (hereinafter referred to as TAs). As in other SSC programs, students depend on the work of TAs. These classified hourly employees facilitate learning for students in individual and small group settings and are regular members of the classified bargaining unit at De Anza. Working up to 16 hours weekly, they provide excellent attention to students at a very low cost to the district. Combined, up to 47 TAs have worked in the MSRC and other SSC programs, but their numbers are down to only 33 because of the current hiring freeze.

B. Summary of the program's main strengths

All Tutorial/Skills Programs:

- Exceptional staff: Patrick Dowling, Secretary for both tutorials centers and the Academic Skills Center coordinates all tutor hiring paperwork and extremely complex monthly payroll for student assistants across many campus programs, including the Writing and Reading Center (WRC), Math Lab assistants, and the 200 plus student tutors, paid from at least four separate funding sources.
- Student awareness of and support for programs: 84% of students surveyed said that they were aware of tutoring services (2005 Accreditation Self Study, p. 152); DASB dedicates 10% of its annual budget to support tutoring.
- Tutor training: cross-listed subject-specific courses. All training courses address diversity, learning styles, metacognitive strategies, learning skills.

- LRNA/EWRT 97 (3 units) Introduction to Tutor Training in Writing
- LRNA 98 (1 unit, 2 units effective Fall 2009) Tutor Training for General Subject Tutors
- LRNA/Speech 96 (2 units effective Fall 2009) Tutor Training for Group Tutors
- LRNA/PSME 95 (2 units effective Fall 2009) Tutor Training for Math and Science Tutors
- Comprehensive efforts for tutor recruiting hiring, supervision, program planning and evaluation;
- Technology: Hybrid tutor training courses, online Skills orientations and labs, comprehensive tutor-tutee database in progress.
- Coordination with other programs: (academic departments, Puente, !Lead!, DSS, EDC, MPS)
- Programs serve large numbers of students with physical and learning disabilities.
- Flexibility: despite severe space limitations (both capacity and design) and no stable funding, programs continue to serve large numbers of students.

S43 Math/Science Tutorial Center (MSRC):

- Exemplary staff: Laura Bell (Instructional Associate) works hard to handle the enormous workload involved in hiring, scheduling, and supervising 90 student tutors, over 1500 tutees each quarter, as well as providing coverage for other programs in S43.
- Tutor mentoring and supervision: despite a severe staff shortage (barely enough to cover open hours) tutors report that they feel supported by their senior tutors,
- Scope: Over 90 student tutors, over 1500 tutees each quarter, all math and most science courses;
- Support and coordination for students in DSS, EDC, Athletics, OTI

C. A summary of the program's main areas for improvement

- Understaffing (currently one classified employee without math background) limits coverage, supervision, curricular innovation, outreach, and adoption of new technologies. Hire of new Supervisor (Title III funded, pending board approval 4/6/09) will alleviate this issue.
- Administrative processes need streamlining--online tutor-tutee database set for rollout Fall 2009;
- More coordination needed with student services EOPS, SSRS, Counseling, MPS. Title III efforts to increase coordination are beginning to have impact.
- Program at capacity for space, funding and staffing: impedes efforts to grow and to recruit tutees among targeted populations.

D. Expected outcomes

Tutorial and Academic skills programs provide student-centered instruction and support for developing skills, strategies, and behaviors that increase the efficiency and effectiveness of the processes that improve learning outcomes. By helping students achieve their learning potential and succeed academically, learning assistance programs seek to significantly influence student retention.

Upon completion of tutor training classes, student tutors are expected to be able to practice active listening skills, demonstrate cultural competence as they adapt their tutoring practices to students from diverse backgrounds with diverse learning styles, incorporate metacognitive strategies that focus on helping students learn to learn, as opposed to simply attaining the correct answer, and demonstrate professional and ethical behavior in their role as tutors. Group tutors are expected to analyze group dynamics and use collaborative learning techniques that disrupt negative patterns of participation among targeted groups of students.

In the MSRC, students who work with math or science tutors for a minimum of five hours will demonstrate greater engagement in their own learning, greater connection to De Anza, and development of learning skills that will eventually result in higher retention and success rates than those of corresponding students who do not use the services.

II. Retention and Growth

A. Access, growth, and retention for all students

From 05-06 to 07-08 enrollment in LRNA 100 (Supervised Tutoring) increased **43%**, from 2255 to 3228. Enrollment in tutor training courses (LRNA 97 and 98) has increased 7.2%, from 97 to 104. 08-09 enrollments increased dramatically (in Fall 2008 **88** new tutors enrolled in LRNA 98, 20 enrolled in EWRT/LRNA 97.)

This growth has further positive effects across the college, since tutoring by trained tutors increases retention and success in content courses as evidenced by research (Basic Skills Initiative D.10) and students' self-reported behaviors.

Because of extreme space limitations (as well as budget limitations, see below), **our programs are above capacity** for the number of seats available in the center, especially in L47. The fact that despite these limitations programs have continued to grow comes at the cost of adequate disabled access and tolerable noise levels for learning. Space and noise are the most common student complaints on student satisfaction surveys. On three occasions (3/00, 6/06, 5/08) specific designs for improved space have been requested, developed and approved, then later reneged upon, and the need for improved space is cited in the accreditation elf Study (p. 152) If all of the nine SSC programs were provided contiguous, well-designed space, they could improve their program delivery and student access through:

- Cost savings and greater efficiency through staff job-sharing;
- Shared use of small group rooms, with increased line-of site supervision;
- Extended hours that programs could stay open due to shared staff;
- Improved control of noise and traffic through use of small group rooms;
- Improved access for basic skills students, offering a one stop-shop referral system.

Due to increased outreach and group tutoring efforts in MSRC, the number of students tutored in math and science has increased dramatically over the last three years, with a 36% increase from 839 in Fall 2007 to 1143 in Fall 2008. Students certainly feel that tutoring helps them stay in their courses: in S43 student satisfaction surveys, an average of 73% of students surveyed agreed or strongly agreed that "without tutoring, I would have dropped or failed the course."

B. Access, growth and retention for targeted populations

Enrollment in tutor training classes (LRNA 97 and 98) among targeted groups increased from 4% in 05-06 to 14% in 07-08, due to increased recruiting efforts and partnerships across campus. In 07-08 10% of new tutors were Latino/a. Among tutees (LRNA 100), students from targeted groups represent 18% to 22% of the total. (Specific breakdown of demographic data between L47 and S43 is not available.)

In the MSRC, participation among targeted groups has increased with outreach to Algebra classes, specifically through the Algebra Project.

C. How the program addresses the basic skills needs of De Anza students

Tutorial/Skills programs are on the cutting-edge of research-based practices to support the success of students in basic skills courses. In “Basic Skills as a Foundation for Student Success,” section D10 identifies effective academic support mechanisms, including the use of trained tutors, supplemental instruction, and study skills courses linked to course content.

Research indicates that these programs work best when created not solely to support remediation, but integrated with instruction across the campus. “Tutors participating in a systematic training component are more likely to promote higher pass rates and higher grade point averages.” (p.63)

De Anza’s BSI Self Assessment (A.5, D.10) clearly shows that academic support at De Anza is comprehensive and high quality, coordinated across various programs, with the vast majority of support occurring through the two tutorial centers and the Academic Skills Center.

In the Math/Science Tutorial Center (MSRC), Algebra tutoring comprises about 41% of all math tutoring in S43, 68% of which is for Math 210/212, with over 360 students served in Fall 2008. The Algebra Project (funded by Title III) has increased tutoring for beginning algebra students by carefully structuring support into the curriculum of three sections that share curriculum and exams. Data suggests that this support results in success rates greater than for courses without support. Regardless of course level, tutoring, by its very nature, primarily serves students who are under prepared and struggling to succeed in their courses, regardless of the level of course.

III. Student Equity

A. What progress or achievement has the program made toward decreasing the student equity gap?

Increasing success among underrepresented students is a major goal of all Tutorial and Skills academic support programs.

B. In what ways will the program continue working toward achieving these goals?

Both staff and tutors participate in continuous cultural competency training, and work hard to implement the concepts learned. Cross-cultural communication and diversity training for tutors is intensive: incorporated into each tutor meeting and training session, with over one hundred of tutors participating in a three hour workshop each winter quarter. Prior to 2008, tutors watched and discussed the film *Skin Deep*, which explores the college experiences of Latino, African American, Native American and Asian students. For the past two years, we have collaborated with faculty and students across the Student Success Center and with Puente and !LEAD! students to design and conduct “Tolerance Tags,” which forces students to confront stereotypes based on race, ethnicity, social/economic class, gender and sexual preference, followed by panel discussions exploring the educational experiences of immigrant and undocumented Latina/a students. These efforts have proved life changing for many of our tutors, and have become models for diversity training at other schools.

C. What challenges exist in the program in reaching such goals?

The challenges faced in closing the gap are many. Student surveys suggest that several factors, including demanding work and family obligations, inhibit students from target populations both from becoming tutors and using tutoring services. When tutoring is required or structured into courses, as the Algebra Project and Adjunct Skills courses, participation among targeted populations increases. Aggressive outreach can also make a difference, but with understaffed programs at or above capacity in terms of space and funding, such aggressive efforts to recruit tutees have not been feasible. Due to decreased funding, tutors are not paid to attend training, which has resulted in decreased participation in diversity training activities.

In the Math/Science Tutorial Center (MSRC), the Algebra Project (funded by Title III) has increased diversity among math tutors by using tutors taking intermediate algebra to tutor those taking beginning algebra. Future plans include intensifying tutor recruitment among targeted groups and expanding collaboration with academic departments, Puente, LEAD, SSRS, DSS and the new Sankofa Scholars program to customize academic support for targeted populations.

IV. Budget Limitations

A. Limited Funding and Critical Resources

B-budget is almost non-existent for all Student Success Center (SSC) programs, with a mere \$18K for the entire Student Success Center for 08-09. Student salaries increased by 20% in January 2008. Our programs have become entirely dependent on limited and unstable one-time funds such as DASB, Title III, Basic Skills and Strategic Planning. This budget uncertainty has resulted in a precarious existence, one-time solutions and ongoing crisis management. Painful cuts have already been made: temporary and part-time classified hours, online tutoring, paid training, and budget for water and food have all been eliminated.

B. Describe the consequence to students and the college in general if the program were eliminated or significantly reduced.

Funding is already far below minimum levels. If funding for our programs were reduced further, our programs would be forced to limit tutoring to basic skills only, creating further isolation and reducing success among students at the developmental level, and abandoning students completely as they move into college-level courses. Without funding to pay tutors, we would eliminate student salaries at a time when students most need jobs to support themselves. Volunteers are much less reliable than paid tutors, and much less willing to participate in training courses. Quality, quantity and diversity among tutors would plummet, with only privileged students able to afford to volunteer. Retention and success across PSME, Bio/Health and CIS courses would decrease. Accreditation standards for learning support services of "sufficient quantity, currency, depth and variety" (Library and Learning Support, IIC) would be in jeopardy.

V. Additional Comments

• Strategic Planning Initiatives

The Tutorial Center participated in planning sessions for Individualized Attention for Retention team, and began several projects funded by Strategic Planning, such as support for Puente, !Lead, First Year Experience, and the Social Science Tutoring project. As funding disappeared, many of these efforts stalled.

- **Relationships with Other Programs**

Tutorial and Academic Skills enjoy close collaboration with academic departments, including tutor recruiting and cross-listed courses (LRNA/EWRT 97, LRNA/Speech 96, LRNA/PSME 95.)

Hiring and payroll for student assistants in the Math Lab and the Writing and Reading Center is handled through the Tutorial Center.

Increased cost savings and efficiencies would be possible through sharing improved space with other SSC programs. See IIA above.

- **State and Federal Mandates**

Changes to Skills and LRNA scheduling and curriculum to increase compliance with Learning Assistance and TBA guidelines are in progress.