

Thursday, June 17, 2010

Biographical Sketch for Dr. Bryan Stewart:

Dr. G. Bryan Stewart earned his Bachelor of Science in Mathematics from Tarleton State University in 1983, his Master of Science in Mathematics from the University of North Texas in 1986, and his Ph. D. in Higher Education/ Mathematics from the University of North Texas in 1991.

Dr. Stewart currently serves as Vice President for Teaching and Learning Services at Tarrant County College, Trinity River Campus, previously having served as TCC-Southeast Campus as the founding Division Dean and Chair of Mathematics, Science and Technology. Dr. Stewart has broad, diverse experience in teaching and administration at TCCD, the University of North Texas, and Tarleton State University. He has numerous publications and professional activities to his credit, as well as extensive program development experience and community involvement.

Tarrant County College District
Testimony to the Senate Higher Education Committee
June 24, 2010 – 9:00 AM

Dr. Bryan Stewart
Vice President for Teaching and Learning Services
Tarrant County College – Trinity River Campus

Dr. Stewart's Testimony:

Tarrant County College District has been most fortunate to implement and/or design a number of initiatives over the past several years, all aimed at improving student success outcomes in various aspects of developmental education. I am providing here just a brief overview of several of these projects, and I will be pleased to answer your questions about details in which you may be particularly interested. We at Tarrant County College also wish to extend our sincere appreciation to Commissioner Paredes and to our Program Officer Tamara Clunis at the Texas Higher Education Coordinating Board for their leadership, guidance, and encouragement of our continuous improvement and student success endeavors.

On behalf of our committed faculty and administrative leadership of Tarrant County College District, I would certainly recommend the following:

1. that other colleges and universities also engage in thoughtful experimentation and adaptation of best practices, to accelerate and improve the results of developmental education for our State's underprepared postsecondary students; and
2. that the Legislature allocate additional funding for developmental education programs showing accountable results, in order to serve more effectively the often underserved populations of our state – thus preparing Texans for more successful performance in and completion of college-level coursework, as well as preparing them for greater success and productivity as part of a skilled, strong, and adaptable Texas workforce.

The purpose of my testimony is to discuss ways to improve developmental education. At Tarrant County College we have a number of ways that we are

working to improve student success in developmental mathematics. Beginning this fall we will require all students at Tarrant County College to begin developmental classes immediately upon entering. In the past we have allowed students to delay starting these courses. Another important addition will be a College Success Course that all students who fail two or three parts of Accuplacer will be required to take.

The format of this written testimony will address

- I. Current Best Practices
- II. Challenges with Placement of Developmental Education Students
- III. Recommendations to integrate high school students more efficiently into community college courses
- IV. Ways to increase student success for in developmental reading
- V. A list of current grants and proposed initiatives

I. Current Best Practices

One of the major new initiatives we have developed at Tarrant County College is ModMath. We have revised our three 3-hour developmental mathematics courses and divided them into nine 1-hour classes. This project started by examining our learning outcomes for developmental mathematics, which included input from area community colleges and universities. We mapped the learning outcomes to match the three traditional developmental courses and removed repetitive topics, allowing students more time to learn and retain new information.

Several educational advantages are tied to the implementation of ModMath. Students are able to begin at one of nine entry points in ModMath, where the traditional class allows only three entry points. Since students' entry points are more finely attuned to their needs, they have the opportunity to complete the developmental sequence more quickly. They are given an individualized developmental plan to guide them through their math sequence in ModMath.

For example, a ModMath student with a strong grasp of Beginning Algebra is required to take only the mod(s) which address her deficiencies, which would take only five or ten weeks. In contrast, the same student enrolled in a traditional Beginning Algebra course would take the entire fifteen-week course. Similarly, a

student who struggles in a particular mod may need to repeat the five-week course before material is mastered, as opposed to repeating an entire fifteen-week semester. Instances of repeating a course are more cost-efficient in ModMath, saving time and money.

TCC's district completion percentage in our traditional developmental classes for the Fall 2009 semester was 49%, compared to the completion rate for ModMath, which was 72%. That's an improvement of 23%. In Spring 2010 we saw a similar trend: the completion rate for traditional developmental math courses was 45% and the ModMath completion rate was 66%, an improvement of 21%. At the Trinity River Campus, which offers ModMath exclusively, the Spring 2010 ModMath completion rate was 71%.

The most startling difference occurs in Beginning Algebra. In traditional Beginning Algebra courses, the completion rate between Fall 2008 and Spring 2010 semesters was 42%. By comparison, the ModMath completion rate is 72% - an improvement of 30%. We are eager for the time when ModMath is "old enough" to measure the students' success in subsequent transfer courses.

II. Challenges with Placement of Developmental Education Students

A tool that accurately places developmental students is an important issue facing colleges in developmental education. Both reading and math faculty at TCC frequently express frustration. Accuplacer does not adequately place students into our developmental mathematics classes and is particularly insufficient at placing students into our nine ModMath modules. Neither do TAKS, SAT, ACT and other similar tests place students well in developmental classes. To ensure accurate placement, thereby ensuring student success, we have supplemented our placement procedure with My Math Test by Pearson Publishing. This assessment offers students the option of being placed into a higher module, which allows students to enroll in fewer courses and complete the remediation process quicker. I understand that other state officials may be working with Pearson to develop a state placement test that will more accurately and finely place students, and I support this effort.

By accurately placing students in developmental courses, we can save the State money because correct placements move students more efficiently into college level courses.

III. Recommendations to integrate high school students more efficiently into community college courses

My experience in mathematics and dual credit education has helped me identify possible solutions to the cost of college-level developmental education by making changes in high school mathematics. I have two proposals for the committee to consider. One is a change in course sequence, and the other a possible early intervention plan.

First, a disconnect in mathematics originates in the transition from high school to college. High school students typically take Algebra I, then geometry, and then Algebra II. The year between Algebra I and II can be devastating to high school students who then make a transition to college. Requiring students to take four years of math and science was an excellent change by the state; however I would recommend changing the sequence to geometry, Algebra I, Algebra II, and then a dual credit College Algebra course. I understand a potential objection to this change is that some material in geometry must be preceded by Algebra I. I believe that the amount of this material is no more than 20% of the course, and I propose that teachers cover the 80% of material in geometry that is not algebra-based and delay the 20% of geometry that is algebra-based until Algebra I. This would provide a more seamless process and enable students to solidify their algebra skills.

My ninth grade son, who just finished Algebra II, spent more than the first month of the class reviewing Algebra I while students after one year off were being reviewed. Imagine the deeper learning that could occur if the Algebra courses were taught consecutively. Changing the sequence and eliminating such a lengthy review could allow students to refine their skills and cover more material deeper into Algebra, thus preparing them better for college mathematics, specifically College Algebra, the gateway course most college students must take.

My proposal of changing the sequence of math courses in high school includes the need to offer a dual credit College Algebra course that students would take their senior year, a course taught by a community college or 4-year institution. TCC

and many other schools have had significant success in English, economics, government, history and many other courses offered through dual credit. Our district-wide completion rate in all of these courses is well over 90%. Dual credit is not only successful but well-respected by both the public and higher education community.

Moving College Algebra to Dual Credit would allow students to graduate from high school with a college-level math course already completed that would serve most non-science degree students and therefore bypass entirely the need for developmental math, saving the State of Texas significant dollars in developmental education.

The other suggestion I have concerns the group of high school students who impact our developmental classes the most: the students who struggle in high school math courses. My experience has shown that if students struggle in high school mathematics, they will continue to struggle in college mathematics. If we identify these students while still in high school and apply our ModMath modules, we could increase their chances of success in college math. In my experience, students are often so discouraged by their Accuplacer results that the failed test can potentially delay their educational goals and graduation plans. By identifying these students earlier in their education and addressing developmental math issues during high school, we could potentially eliminate that roadblock.

IV. Ways to increase student success in developmental reading

Like our reading faculty at the Trinity River Campus, I propose that developmental reading be restructured just as we restructured developmental mathematics. Extreme deficiencies in reading are so difficult to remediate, however, that the restructuring involved would require one extra step: If students read at a 4th grade level or lower, they need courses specifically designed to increase basic reading fluency and overall decoding skills, perhaps offered via Continuing Education. Once the CE students read on at least the 8th grade level, they would be ready to take Reading Techniques I.

For students whose initial reading scores show that they are only points away from passing Accuplacer, they (like mathematics students) would profit from the

availability of three one-hour lab courses that could each be taken up to three times.

The recommended strategy for comprehensive remediation is to pair ALL reading classes with either a Writing Techniques I or a Composition I. If the writing classes were paired with reading, then successful students would be better prepared in both disciplines.

V. TCC Grants and Initiatives

Highlights of Selected Tarrant County College District

Developmental Education Reform and Related Student Success Initiatives

1. **THECB-Funded *ModMath Expanded Pilot Project*** **(\$75,000 – August 2009-August 2010)**

Fall 2009 – Spring 2010 – Summer 2010 Expanded Pilot:

Tarrant County College District opened its newest campus, Trinity River Campus, in Fall 2009. Trinity River Campus offered only the *ModMath* curriculum (accelerated modular developmental mathematics) for its developmental mathematics students, which allowed for a true pilot of the *ModMath* program. Other TCCD campuses offered *ModMath* as one option, along with traditional developmental math formats, for their developmental mathematics students. Wherever offered, the *ModMath* curriculum was consistent throughout the District. Preliminary results of student performance are most promising compared with traditional developmental math instructional approaches. The final project results will be reported in August 2010.

The funding from the THECB allowed TCCD's *ModMath* project to have heightened visibility among students and faculty; provided additional leadership and coordination for the district-wide project; provided assessments at no cost to the students in the expanded pilot; provided advanced math students an opportunity to serve as Supplemental Instruction (SI) coaches/tutors; provided additional staffing for tracking of student instructional progress and outcomes; provided important faculty development opportunities both for TCCD faculty and for their counterparts throughout the state; provided opportunities for faculty to create

additional *ModMath* curriculum podcasts; provided opportunities for wider dissemination of the project's promising practices and outcomes.

2. THECB/El Paso Community College-Funded *Community College Developmental Initiative Program Grant* (\$100,000 – January 2010-August 2011)

Tarrant County College District Developmental Education Initiative

Beginning in January 2010, collaboration between Tarrant County College District's South Campus and Trinity River Campus began to demonstrate two developmental education interventions designed to enhance and accelerate student success for different student populations. TCC-South Campus is implementing a 4-week, 120-hour, intensive *TCC-South Campus Summer Bridge Program* designed to increase the college readiness of targeted recent high school graduates in the areas of personal growth, academic strategies and critical thinking proficiency, as well as competency in reading and writing sufficient to demonstrate college readiness on *Accuplacer*. TCC-Trinity River Campus is implementing a 15-week *Weekend College Mod Math Learning Community* designed to increase the college readiness and confidence in Hispanic adult learners who have been out of school for at least 5 years and are deficient in math skills, by promoting strategies and practices helping these students succeed in math and in gaining college and career information. These interventions will serve 110 students during the project period: 60 in the *Summer Bridge Program* and 50 in the *Weekend College Mod Math Learning Community*. These models reflect research and practice in learning communities, cohort groups, intensive scheduling, accelerated format, immersion, supplemental instruction, supportive environments, Generation NeXt studies, and state-of-the-art instructional technology. Preliminary results from the Trinity River Campus *Weekend College Mod Math Learning Community* are promising, and the outcomes of all the project components will be reported as they become available.

**3. THECB-Funded *Developmental Education Demonstration Project/*
Adult Basic Education Innovation Grant
(\$1, 500,000 – June 2010 – May 2012)**

***PAVE and ACCESS Models*
for Developmental Education Reform and Results**

In this newly awarded grant project, TCCD's South Campus and Northeast Campus will collaborate with TCCD's Office of Workforce Services in a case management approach to test two learning communities models aimed at improving student success in developmental reading, writing, and mathematics, as well as in college-level coursework. TCC-South Campus will implement and test the ***PAVE Model (Pathways And Voyages in Education)***, while TCC-Northeast Campus will implement and test the ***ACCESS Model (Access to College Courses for Every Student's Success)***. Eligible student populations include the following:

1. "***PAVE***" – at least 200 first-time-in-college students per long semester deficient in all three TSI skill areas – math, writing, and reading – based on Accuplacer scores, enrolling as full-time students or as part-time students taking at least 6 credit hours;
2. "***ACCESS***" – at least 80 first-time-in-college students per long semester (at least 240 during the project) deficient in two or three of the three TSI skill areas, based on Accuplacer scores, enrolling as full-time students or as part-time students taking at least 7 credit hours.

Interventions are designed to recruit and serve recent GED-completers, high-level ESOL students, and students of Hispanic origin. Through the proposed ***Developmental Education Demonstration Project***, learning communities will accelerate students' progress into successful college-level achievement.

TCCD's Adult Basic Education Innovation Grant (ABE-IG)

Tarrant County College District's Office of Workforce Services – the community college partner to the area adult education consortium – proposes this collaborative ***Adult Basic Education Innovation Grant (ABE-IG)*** project to (1) establish a district-wide program for adult education students transitioning through multiple entry points into postsecondary education and training; (2) support the ***PAVE*** and ***ACCESS*** developmental education learning community models on

TCC-South and TCC-Northeast Campuses, respectively; and (3) broker appropriate wrap-around services to include advising and connectivity to community-based services for day-care, transportation vouchers, housing assistance, and other services that address barriers for students in developmental and adult education programs. Additionally, as TCCD's adult education affiliate for county-wide services, Workforce Services proposes to increase participation and success of adult basic education students in workforce training programs at TCCD. Using a co-requisite model, basic skills and English language instruction will be integrated into a fluid workforce training curriculum for several demand occupational training programs offered by the College and based on demand occupations data from the local workforce development board. At least **510** ABE, ASE, and ESL students will be served annually through the three main components of advising, concurrent ABE/training, and the "Transition to College Success" course.

**4. Meadows Foundation-Subsidized *Achieving The Dream* Initiative
(\$80,000 – May 2010 – May 2012)**

Tarrant County College Joins

Achieving the Dream: Community Colleges Count

With student success as a centerpiece of its new *Vision 2015 Strategic Plan*, Tarrant County College has taken an important step forward by joining *Achieving the Dream: Community Colleges Count*. With support from The Meadows Foundation, TCC thus joins 26 other community colleges as new members dedicated to identifying strategies to improve student success, closing achievement gaps, and increasing retention, persistence, and completion rates.

Conceived in 2004 by the Lumina Foundation for Education and seven national partner organizations, *Achieving the Dream* is focused on creating a culture of evidence in which data collection and analysis drive efforts to identify problems that prevent students from succeeding-particularly low-income students and students of color-and develop programs to help them stay in school and graduate. With TCC and the other new members, *Achieving the Dream's*

network now includes more than 130 institutions in 24 states and the District of Columbia, reaching more than one million students.

"Student success is at the heart of everything we do," notes TCC Chancellor Erma Johnson Hadley, "and participation in *Achieving the Dream* underscores our commitment. This program will provide us the tools necessary to lower and perhaps even eliminate many of the barriers facing our students."

TCC's primary focus through the program will be to gain resources to aid the College in identifying strategies for improving the success of first-time-in-college students (FTICs) and students requiring developmental education.

"TCC has many excellent programs designed to foster student success, but they have tended to be scattered," Hadley said. "*Achieving the Dream* will help us weave these programs, and new ones, into a seamless garment to fit the students of today."

Certainly, TCCD's *Achieving the Dream* participation will also help to leverage and sustain the lessons learned and the positive outcomes of TCCD's other developmental education reform initiatives noted earlier.

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