



Fall 2003, Vol. II

Tech Prep: Connecting Students To College

Graduation often marks a first step toward adulthood for high school students. However, many have given little thought to their next step, "What to do after graduation." These students may find themselves floundering in search of a direction for their futures. Increasingly, more and more students have aspirations for higher education, but all too often, they are not prepared for college, sometimes not even knowing where to begin.

Tech Prep works to smooth this rocky transition from high school to college, giving students a clearly marked path to their future. Tech Prep students benefit from streamlined, articulated 2+2 programs. As participants, they have experience doing rigorous college-level



"The academic rigor of students' high school curriculum was strongly associated with their postsecondary GPA, the amount of remedial coursework they took, and with their rates of persistence and attainment."

—*"Bridging the Gap: Academic Preparation and Postsecondary Success of First-Generation Students."* NCES, May 2001

coursework. They have also gained increased communication, teamwork, and leadership skills through hands-on projects, work-based experiences, and extra-curricular activities.

Time, costs, and frustration are reduced for Tech Prep students because duplication of coursework has been eliminated. In fact, many Tech Prep students have already earned college credits towards graduation in their course of study before they ever graduate from high school. Tech Prep gives students the academic and technical preparation necessary to succeed in higher education — leading ultimately to successful and satisfying careers.

Changing the Face of Education: The Value of Associate Degrees

Dan Crow, Eastern Arizona Tech Prep Consortium

What has increased in value over the past several years, yet is not generally highly prized? **An Associate Degree.**

In July 2002, the US Department of Labor established an interesting fact that supports the value of Associate Degree Programs. During 2000 and 2001, those with at least one Associate Degree were

much less likely to be unemployed. We say "much" because in the tracking of unemployment figures a difference of 1% or more is significant!

Contact your local Tech Prep Director for more good reasons to pursue one or more degrees with Arizona's Community Colleges.

Unemployment rates of persons 16 years old and over by educational attainment.

Percent unemployed in US during	1999	2000	2001
All persons listed as unemployed and seeking work	9.9	9.3	10.6
Percent of unemployed by educational attainment	1999	2000	2001
Less than a high school completion	16.0	15.3	16.8
High school completer, no college	9.7	9.3	10.7
Some college, no degree	5.9	5.5	6.4
Associate degree	4.7	3.2	4.6
Bachelor's degree or higher	4.7	4.2	5.7

For the complete table visit: <http://nces.ed.gov/pubs2003/digest02/tables/dt380.asp>

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Office of Employment and Unemployment Statistics, unpublished tabulations of annual averages from the Current Population Survey. (This table was prepared July 2002.)

A Letter From the Director:



In this issue of "Tech Prep Connections," our focus is on transitioning students to college. The first step in

this process is providing a seamless program articulation with curricular flow that allows students to maximize their high school programs.

Through articulation, Tech Prep not only acknowledges students' proficiency in career and technical skills with advanced placement and perhaps credit, but also ensures that high school students are challenged with college-level work that prepares them for future success. Tech Prep incorporates proven strategies, such as curriculum restructuring, and support activities, such as college orientations, to improve student transition success.

Tech Prep is also committed to supporting community colleges in this transition effort. The Arizona Department of Education has recently hired two additional Tech Prep team members, Mary Jondrow and Maureen Laupp, to work directly with Tech Prep post-secondary institutions.

This edition provides you with strategies to improve math and writing skills in the classroom, better preparing students for academic success in college. You will find information and resources about financial aid that will open doors to post-secondary education. And you will see Tech Prep's commitment to Arizona students as they connect to their futures. We hope you enjoy this issue of "Tech Prep Connections."

Sincerely,

Dennis Fiscus
State Tech Prep Director
Arizona Department of Education

For more information visit us on the web at www.aztechprep.org.

Funding 101: Money for College

Daniel Barajas,
Yuma/La Paz Tech Prep Consortium



The dream of a college education is within reach of every student. However, realizing that dream requires planning, preparation, and

for most families, a basic knowledge of financial aid.

So, what is Financial Aid? Financial aid refers to the wide variety of programs that help students and families pay for college or graduate school.

What are the basic types of Financial Aid? Financial aid is available in three forms: grants and scholarships, which do not have to be repaid; loans, which have to be repaid; and work-study, which provides aid in exchange for work, usually in the form of campus-based employment.

Where does Financial Aid come from? Three major sources provide the bulk of student financial aid: the federal government, state governments, and colleges and universities. The federal government is the largest single provider, underwriting 69 percent of all financial aid available, mostly through loans. Private sources of aid, such as scholarships from companies and loans from nongovernmental organizations, also are available.

How is Financial Aid awarded? Most student aid — almost all of which is provided by the federal government — is awarded to students based on their or their family's ability to pay. Other aid is merit-based; students receive it on the basis of their individual achievement and not entirely according to family need. Remember *timing is everything, so get the applications in on time!*

See the *On-Line Financial Aid Resources* box, right, for helpful links to assist you in answering your students' questions about financial aid. Remember, when in doubt about financial aid, call or visit your local community college or university for assistance. Don't be shy — it's your student's future!

Professional Development: Writing for the Future

Anne Marie Peters, Pima/Santa Cruz Tech Prep Consortium

From *"Integrating Academic Standards into CTE: Six Traits of Writing,"* a professional development training presented by Susie Heintz and other staff of Flowing Wells High School in Tucson, Arizona.

Teachers and students have found that they share many values about writing. Students are often surprised to learn that teachers are interested in more than just good conventions, however important spelling, punctuation, and grammar might be. Ideas, humor, creative thinking, organization, word choice, logic, and knowing your audience are all important, too. Writing is complex, and many qualities contribute to its success.

It is important for students to understand that the six traits are a reflection of what we, as an interpretive community, value in good writing. Teachers should begin by asking questions, getting students to talk about what they value in writing, then expanding their thinking by sharing samples of writing, and helping them to make connections between what they think and what teachers think. The four key steps for a good introduction to the six traits are:

1) Brainstorm the qualities of good writing. In the beginning, students often respond in ways that are reflective of what has been emphasized or assessed up to that point, or what students think teachers are looking for in their writing.

2) Expand students' thinking, using examples. While we want students to maintain and value grammatically-correct copy, we would also like to expand their thinking about good writing by sharing

Seven Successful Strategies for Teaching the "Six Traits of Writing"

- Share many sample papers from student writers who are NOT in your class.
- Share print materials to illustrate strong and weak examples of each trait.
- Ask students to help you revise your own writing.
- Have students work in pairs to revise a piece of writing that is not their own, and then to revise their own writing.
- Provide opportunities for students to share what they know, reinforcing their thinking on the traits.
- Link the traits to effective strategies and lessons you already use to teach writing.
- Use mini-lessons to build skills in each of the six traits.

writing samples. Share pieces that have some complexity — and some obvious strengths and weaknesses: perhaps problems with conventions, but also lively voice, flow and rhythm, exuberance, imagination, or humor.

3) Share what teachers look for and let students know how the six traits came about: that teachers brainstormed what they valued in good writing, and then grouped those key qualities by trait.

4) Help make the link between the students' ideas about writing to what you expect as a teacher by pointing that there are certain key qualities on which most writers and writing teachers agree: development of **Ideas and Content** that make sense; **Organization** of those ideas; personal **Voice** to give flavor to the piece; **Word Choice** that makes the message clear and interesting; **Fluency**, or how it sounds; and correctness, or **Conventions**.

On-Line Financial Aid Resources

Department of Education Home Page
<http://www.ed.gov> or call 1-800-433-3243

Offers a wide range of links to frequently requested information.

Free Application for Federal Student Aid (FAFSA) on the Web: <http://www.fafsa.ed.gov>

On-line application for federal student financial aid. Note that students must complete a Free Application for Federal Student Aid (FAFSA) in order to apply for many state student aid programs as well.

Arizona Mentor: <http://www.arizonamentor.com>

Free Guide to Federal Student Aid Programs: <http://www.fedmone.org>

Smart Student Guide to Financial Aid: <http://www.finaid.org>

College Is Possible: <http://www.collegeispossible.org>



Paving the Way to Post-Secondary Success

Student success is the keystone of education. Unfortunately, too many of today's students have a high risk of failure — often due to factors beyond the student's control. Tech Prep programs incorporate proven practices that offset these risk factors and increase opportunities for a successful transition to higher education.

A recent study commissioned by the National Postsecondary Education Cooperative entitled, "Paving the Way to Post-Secondary Education" (NPEC, 2001), outlines six K-12 practices that lead to increased educational attainment: faculty mentors, quality instruction, long-term programs, diversity awareness, peer support, and financial assistance. Even before this study, Arizona's Tech Prep programs incorporated these proven activities to prepare students to successfully transition from high school to college.

1. Having a "mentor," such as a faculty member or a guidance counselor, to direct



and guide the student over an extended period of time. Students enrolled in Tech Prep programs build strong relationships with faculty in their programs and benefit from their expertise and experience. These instructors care about their students and help guide them to take positive steps towards their future education and career.

2. Providing high quality instruction, including access to challenging coursework, specialty classes that support the regular curriculum, and revamping curriculum to better address the learning needs of the students. Tech Prep articulation restructures the curriculum to infuse rigorous academics in an applied context for students. In the career and technical courses, students apply the math, English, and science skills learned in academic courses to solve workplace problems and complete industry projects, linking learning to real-life.

3. Making long-term investments in students. The longer students are in a program, the more likely they are to benefit from it. Tech Prep programs are comprised of a coherent sequence of courses, often beginning as early as 9th grade and continuing through high school graduation. Students also have the benefit of continuing the same program at the community college as they complete a degree or certificate in a specific career field.

4. Paying attention to diversity. Tech Prep programs are for ALL students. Tech Prep also offers professional development to increase faculty awareness and sensitivity to issues among special populations.



5. Providing a peer group that supports students' academic aspirations as well as providing social and emotional support. In addition to group work during class time, many students are active participants in service organizations as part of the overall Tech Prep program. In these organizations, students gain leadership and communication skills and receive peer support in achieving their educational goals.

6. Providing financial assistance and incentives. By streamlining career programs from high school to college, Tech Prep saves students time and money. Tech Prep articulations reduce the duplication of coursework, and often offer college credit at little or no cost to the student.

Contact Tech Prep to learn more about efforts to transition students in your area.

Community College Corner: Post-Secondary Strategies for Transitioning Students

Daniel Barajas, Yuma/La Paz Tech Prep

Community colleges can play an integral role in helping students successfully transition from high school by creating a connection to their campus. Arizona Western College, for example, holds an annual Tech Prep Senior Day orientation program. It is designed to both acclimate high school seniors to the college environment and help them make a smooth transition into their post-secondary education. The event has traditionally included a greeting from the college president, tours of the campus, and time with academic advisors/counselors, members of the Enrollment Services staff, and lead faculty members.

Senior Day begins with a general session during which the college president greets all participating students. Students, who have been pre-identified as to their specific program interest, are

then assigned to teams with a session leader who facilitates campus tours and break-out sessions.

Break-out sessions include a general tour of the college campus and campus facilities specific to the student's program of interest. Students also have the opportunity to meet with one or more faculty members in their area of academic, career, or vocational interest. They also meet with Enrollment Services staff who represent the areas of Advising and Counseling, Registration, Financial



Aid, and Career Development.

The event concludes with the teams congregating for lunch. At this time, college administrators, staff, and faculty are seated among the students to answer questions and/or describe the college experience to students.

Students attending the orientations reported that, as a result of the activity, they had a better understanding of the degree or certificate program they were interested in, knew what would be expected of them in college classes, and felt more prepared to become successful college students.

Senior Day is made possible through collaborative efforts of the local high school districts, Arizona Western College faculty and staff, Upward Bound & Talent Search, Student Success Center, Student Support Services, and the Yuma/La Paz Tech Prep Consortium.

Best Practices From Around The State



Nurses Needed!

Geri Finch, Coconino County Tech Prep

According to a recent survey, Flagstaff Medical Center expects to have a shortage in excess of 125 nurses by 2007. This shortage is not just isolated to Flagstaff. The state of Arizona has one of the highest shortages of nurses in the nation. Coconino Community College, Tech Prep, and local high schools are working together to help fill this area's crucial need.

Coconino Community College is now offering a 2-year degree program in Nursing. Through the Tech Prep program, students interested in applying for the CCC nursing program may receive their Certified Nursing Assistant (CNA) certification while still in high school. The CNA certification is a pre-requisite for the CCC Nursing program.

"This not only allows high school students the opportunity for employment in the medical field, but it also gives them a head start on their college degree in nursing", said Ann Black, Director of Tech Prep in Coconino County.

She added that Tech Prep classes through the high schools save the students the cost of college tuition, registration fees and books.

"Occupations requiring a postsecondary vocational award or an academic degree, which accounted for 29 percent of all jobs in 2000, will account for 42 percent of total job growth from 2000 to 2010."

—Daniel Hecker, "Employment Outlook: 2000-10," Bureau of Labor Statistics.

Helping Teachers Make Math More Meaningful

Rose See, East Valley Tech Prep Consortium

Math is everywhere. Career and Technical Education students especially feel the impact of math on their studies and on their future careers. Chefs cannot create their culinary masterpieces without understanding measurements, proportions, and costs of ingredients per plate. Industrial Technology professionals heavily rely on accurate measurements to create the world's future. Business people deal with discounts, graphs and charts, and with industry standard ratios and formulas. To that end, Tech Prep has sponsored several initiatives to strengthen teacher performance and assist with meaningful lesson plans.

East Valley Tech Prep Consortium (EVTPC) hosts workshops throughout the school year to demonstrate the connections between the vocational curriculum and the Mathematics Standards. Teachers come away with ideas they can use in career and technical education classes that support the teaching of mathematics in the subject matter context.

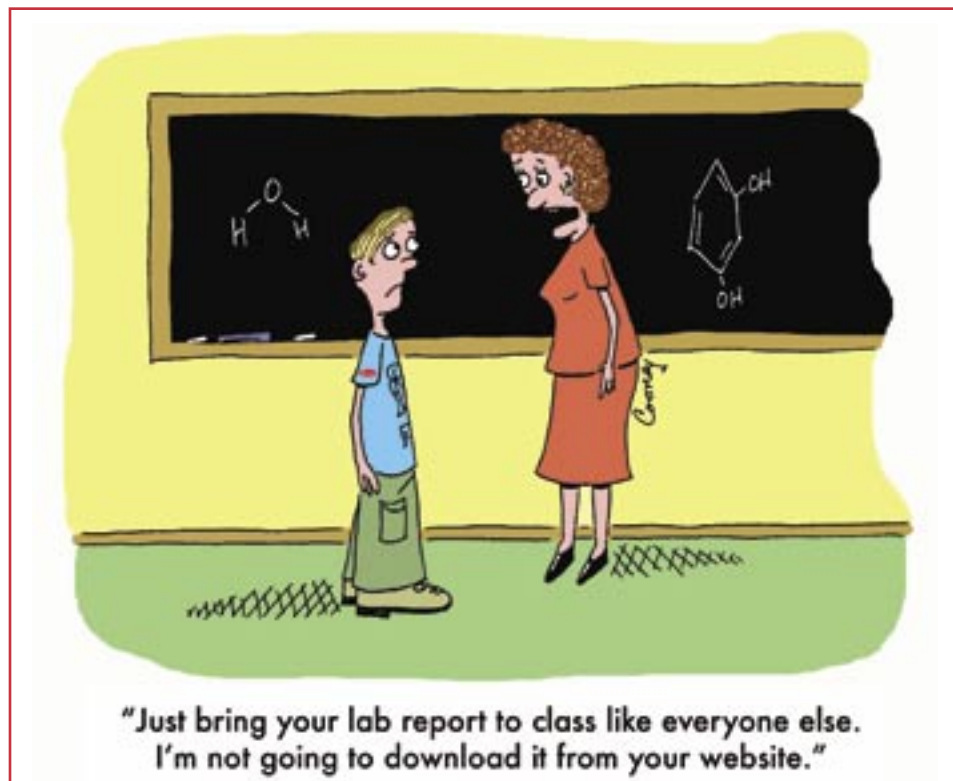
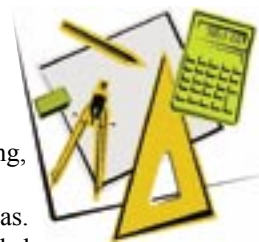
For example, the Agriculture Sciences workshop takes examples from agribusiness, commodity marketing, ecology, landscaping and a variety of other agriculture areas. The Industrial Technology workshop draws on math

connections/ applications from the various construction, auto technology, drafting, and computer manufacturing areas.

The Business Workshop allows teachers to revisit marketing lessons using applied graphs and charts.

Another half-day workshop, "Overcoming Math Anxiety," was presented to high school and community college math teachers, as well as counselors and career and technical education teachers. This workshop visited math, the psychological barriers that non-math people seem to erect, and how to instill confidence in students. Attendees were given lessons to help students reduce their stress and anxious feelings about taking math tests, attacking difficult math problems, and thinking through math exercises without losing their cool.

With math performance being a national concern, Tech Prep has made math proficiency a top priority. Visit the East Valley Tech Prep Consortium website at [http:// www.evtpc.org/tutor](http://www.evtpc.org/tutor) to find sample lesson plans and learn more about the math integration projects.



For more information visit us on the web at www.aztechprep.org.