

OVERVIEW

The Criterion Three Team has conducted a thorough analysis of the Estrella Mountain educational and other goals, and has evaluated the extent to which the institution is accomplishing them. This review involved faculty, staff, and students from all levels and all academic and administrative areas in examining the Estrella Mountain institutional goals.

Academic assessment in General Education, Developmental Education and Workforce Development at Estrella Mountain is dependent upon data from both the Student Academic Assessment Plan and the Plan for Institutional Effectiveness. In contrast, the data gathered in support of the assessment of Transfer Education, Student Support Services and Community Education is almost exclusively reliant upon data from the Plan for Institutional Effectiveness. The College conducts annual stakeholders meetings for each mission goal to review and discuss the data gathered.

Based on its analysis and evaluation, the Criterion Three Team concludes that Estrella Mountain is succeeding at accomplishing its educational and related goals in that:

- ◆ Estrella Mountain mission goals reflect a shared commitment to the NCA values of higher education and its educational programs provide strong evidence of this commitment in general education, transfer education, developmental education, workforce development, and community education.
- ◆ The Estrella Mountain educational programs are appropriate to an institution of higher education and reflect depth and breadth of learning.
- ◆ The Student Academic Achievement Plan provides a means for documenting and assessing student learning outcomes in general education, developmental education, and workforce development with the goal of assuring the continuous improvement of teaching and learning.

- ◆ The Estrella Mountain assessment strategy for institutional effectiveness is effective in evaluating and improving the institutional goals of the College and it involves a variety of appropriate Estrella Mountain constituencies.
- ◆ Student services and related initiatives strongly support the mission goals of the institution and are appropriate to an institution of higher learning.

INSTRUCTIONAL DIVISIONS

FINDING: Instructional Divisions at Estrella Mountain are organized to stimulate the examination of personal, social and civic values.

Liberal Arts

The Division of Liberal Arts comprises a diverse range of disciplines. The faculty within the division work closely with other divisions, colleges, universities, and community groups to provide quality academic experiences within the core of the associate's degree program, transfer courses articulating to regional and national institutions of higher education, and personal interest experiences for students at Estrella Mountain Community College.

Courses within the division offer a range of awareness areas integral to the college experience including:

- cultural diversity in the United States,
- first-year composition,
- global awareness,
- historical awareness,
- literacy and critical inquiry,
- humanities and fine arts,
- social and behavioral sciences.

Curricular disciplines within the division include art humanities, art, anthropology, communications, cultural geography, economics, English, English humanities, food and nutrition, foreign languages, history, humanities, journalism, music history/literature, music performance, philosophy, political science, psychology, religion, sign lan-

guage, sociology, social work, theatre humanities, theatre performance/production and women's studies.

Science and Mathematics

The faculty and staff of the Science and Mathematics Division provide learning opportunities to enable and encourage students to:

- develop scientific and mathematical skills and knowledge
- solve problems
- think critically
- work within the framework of the nature of science to investigate the natural world
- communicate mathematically and scientifically.

The Science and Math Division offers courses in Biology, Chemistry, Geology, Mathematics, and Physics.

Counseling Services

Counseling services faculty strive to support an environment that encourages developmental growth for Estrella Mountain students and communities through counseling services and instruction to support educational and personal goals. The division's vision is committed to assisting students to "**P.A.V.E. Their Paths to Success.**"

- Personal Growth through Counseling
- Academic & Educational Planning
- Vocational Assessment & Development
- Excellence in Life Management

The divisions' mission and vision is achieved by providing services through: CPD (Counseling & Personal Development) courses, counseling and educational planning, partnership programs (Genesis West, AMAS), career assessment & development, New Student Orientations, Disabilities Services & Support, workshops for student development and supporting the college's retention and student success initiatives.

Occupational Education

The Occupational Education Division offers a community-driven variety of courses that expand workforce skills and knowledge.

The Division of Occupational Education offers a variety of courses and programs focused on workforce skills and knowledge, including accounting, general business, management, marketing, small business management and total quality management for business students.

The division also offers a complete program of study in Hospitality Management that leads to certificate and degree programs. Emerging programs are under development with course offerings in Administration of Justice, Building Codes, Child/Family Studies, Education, Health Care, and Public Administration.

Developmental Education

The Division of Developmental Education provides students with academic, technological and workforce skills in a supportive learning environment, utilizing a variety of instructional delivery systems and formats to enhance student learning and success.

The division of Developmental Education offers programs that enhance student skills in English, English as a Second Language, Mathematics and Reading. Strong emphasis is placed on instruction with individual support, small classes, caring faculty and creative learning experiences. Instruction is enriched through technology, interaction with other learners and opportunities to conduct volunteer work in the community. Four full-time instructors and one program advisor advise and instruct students in this program. Additional instructional support is provided by the Learning Enhancement Center, Information Resources and the Mathematics and Writing Center.

Student participation in the program is based upon assessment scores and advisor referral. Students enrolled in one or more developmental courses are considered participants in the developmental program.

The Faculty and Staff in the Developmental Education Division offer courses and services that build confidence and contribute to student academic success. Developmental Education courses are designed to

maximize a student's ability to pursue additional education and training. In addition, Developmental Education courses also offer students the opportunity to build an educational foundation for transfer programs, degree programs and training/career programs.

Information Resources

The Mission of the Information Resources Division is to promote dynamic lifelong learning experiences through the teaching of information and computer literacy skills and providing instructional support for student success.

The Information Resources Division is located in the Information Commons of Estrella Hall. The Information Commons offers an information-rich environment, which supports the entire campus community – students, faculty, staff, and community users. Students at Estrella Mountain have full access to this remarkable facility and the support services it provides to facilitate and enrich their college experience.

The Information Resources Division consists of the Library and Computing areas. The Library provides access to and instruction in the retrieval of electronic, audio visual and print-based resources. Instruction is provided to classes, small groups, and one-on-one. All instruction is integrated and coordinated with the teaching and learning programs across the campus. Information Resources services are designed to increase students' academic success.

Instructional Computing

The Division of Instructional Computing offers courses leading to the following degree and certificate programs: Computer Applications and Technology, Computer Hardware and Desktop Support, Microsoft Networking Technology, Microsoft Solutions Development, Cisco Networking Technology, and Programming and System Analysis. In addition, our courses support the Associate in Business (ABus) degree, Associate in Transfer Partnership (ATP) degree, and Associate in General Studies (AGS) degrees.

The division handles the following course prefixes: BPC, CIS, OAS, CNT, MST.

Number and Types of Degrees and Certificates

FINDING: Estrella Mountain offers degrees and certificates that allow students to achieve success in educational and personal goals.

Estrella Mountain Community College is accredited through The Higher Learning Commission: NCA. Estrella Mountain Community College is authorized to confer the following degrees:

Associate in Arts Degree (General Requirements and Special Requirements)

Associate in Science Degree (General Requirements and Special Requirements)

Associate in Business (General Requirements and Special Requirements)

Associate in Transfer Partnership Degree (ASU Main and ASU West)

Associate in General Studies Degree (General Requirements)

Associate in Applied Science Degree (specifying the student's career program)

- ◆ Computer Applications Technology
- ◆ Hospitality/Hotel Management
- ◆ Microsoft Networking Technology
- ◆ Microsoft Solutions Development
- ◆ Networking Technology: CISCO
- ◆ Organizational Leadership
- ◆ Programming and Systems Analysis

Certificates of Completion

- ◆ Computer Applications Technology
- ◆ Computer Hardware and Desktop Support
- ◆ Hospitality/Hotel Management
- ◆ Microsoft Product Specialist
- ◆ Microsoft Systems Engineer
- ◆ Microsoft Networking Technology
- ◆ Microsoft Solutions Development
- ◆ Networking Administration: CISCO
- ◆ Networking Technology: CISCO
- ◆ Organizational Leadership
- ◆ Programming and Systems Analysis

- ◆ Small Business Management
- ◆ Total Quality Management
- ◆ Oracle Applications Developer
- ◆ Oracle Database Administration
- ◆ Desktop Publishing
- ◆ Web Developer

In order to assist students who transfer to Arizona public community colleges or universities, the Arizona General Education Curriculum (AGEC) was developed. AGEC is a 35-semester-credit general education program of study that fulfills lower-division general education requirements and transfers as a block without loss of credit. It also constitutes the general education requirement for the Associate in Science (AS), Associate in Business (ABus) and Associate of Arts (AA) degrees.

Please see the 2001-2002 Estrella Mountain College Catalog (Pages 23-117) for detailed descriptions of all degrees and certificates offered.

ASSESSMENT OF COLLEGE MISSION AND MISSION GOALS

FINDING Estrella Mountain has implemented effective assessment processes and is committed to continuous improvement of teaching and learning.

Overview

Estrella Mountain's Student Academic Achievement Plan (SAAP) and the Plan for Institutional Effectiveness (PIE) constitute the institution's formal assessment processes. These two processes of assessment have been separated to clearly distinguish between student and institutional outcomes. Both plans are linked to the College's mission and goals. Both plans will be briefly described here, and the depth and continuous implementation of these plans will be detailed in Criterion Four.

The primary difference between the two processes can be understood as follows:

Student Academic Achievement Plan (SAAP)

Faculty owned and driven process to address the question:
“Are students learning?”

Plan for Institutional Effectiveness (PIE)

A stakeholder driven process that address the question:
“Are students and the community getting what they want from the College?”

Direct and Indirect Measures of Assessment

Through the academic assessment and institutional effectiveness efforts, Estrella Mountain has clearly distinguished between direct and indirect measures of assessment of student learning and mission and mission goals as recommended by the 1996 NCA publication, *“Opportunities for Improvement: Advice from Consultant-Evaluators on Programs to Assess Student Learning”*.

The student academic achievement process exclusively includes direct measures of student learning. These measures are intended to demonstrate what students know and are able to do as a result of the teaching and learning process.

Direct measures of student learning include:

- ◆ standardized assessment tools
- ◆ performance on national licensure
- ◆ certification
- ◆ professional exams
- ◆ locally developed assessment tools

The institutional effectiveness process includes indirect measures of student learning and direct measures of satisfaction. The information gleaned from this process provides valuable information about factors that contribute to or detract from the student experience.

Indirect measures of student learning include:

- ◆ alumni, employer, and student surveys
- ◆ exit interviews of graduates and focus groups
- ◆ graduate follow-up studies
- ◆ retention and transfer studies
- ◆ length of time to degree

- ◆ graduation rates
- ◆ transfer rates
- ◆ job placement data

The data from Estrella Mountain's direct and indirect measures of educational goal achievement are combined, reviewed, and analyzed by faculty and staff to produce a holistic picture of the effectiveness of the teaching and learning process. This combination allows the institution to draw reasonable and logical inferences about what and how much students have learned as well as if they are benefiting from the college experience.

Student Academic Achievement Plan

The Student Academic Achievement Plan is faculty owned and driven (See Criterion Four). The Student Academic Achievement Plan has a regular line item budget in the College's annual budget to cover assessment related expenses such as assessment tools, scoring, conferences, etc.

The Plan provides a process for assessing student learning in general/transfer education, developmental education and workforce development. Currently Critical Thinking and Communication abilities are assessed across all three areas and have been identified as learning outcomes by the faculty. In addition, there are program specific competencies within Developmental Education and Workforce Development. Estrella Mountain faculty identified the need to continue to add additional general education abilities in the future.

The purpose of assessing student learning outcomes is to promote continued excellence in teaching and learning by:

- ◆ Improving and enhancing student abilities and success.
- ◆ Determining achievement of student abilities.
- ◆ Measuring the effectiveness of student abilities.
- ◆ Using assessment as a tool for feedback and learning.

Using the Levels of Implementation matrix, the Student Academic Achievement Committee (SAAC) conducted a self-assessment of the Student Academic Achievement process. The results of the analy-

sis indicate that the institution is making level three progress in some areas while the majority fall within level two.

In a related effort, during the fall 2001 semester, a team of campus faculty and staff including, the Dean of Instruction, attended the AAHE/Higher Learning Commission Collaboratively Designed Assessment Workshop, “Changing Institutional Priorities: Developing a Shared Understanding of the Value of Assessing Student Learning.” This workshop provided attendees the opportunity to learn how to strengthen Estrella Mountain’s assessment efforts through promoting a culture that embraces change and the applied scholarship of teaching and learning. The primary finding of the work team was that participation by all faculty and students needed to be enhanced across the academic achievement process. The specific strategies for improvement were adopted by the Student Academic Achievement Committee. Copies of the SAAC Levels of Implementation Worksheet and the AAHE/Higher Learning Commission workshop worksheet are available in the Resource Room.

Plan for Institutional Effectiveness

In the fall of 1995, Estrella Mountain developed an institutional effectiveness process that is based on the *Community Colleges: Core Indicators of Effectiveness* model created by the American Association of Community Colleges (AACC). Over the last several years, Estrella Mountain has continued to adapt the AACC model to meet the unique needs of the College.

The AACC Core Indicators of Effectiveness Model focuses on student progress and six common community college missions. The six mission areas are closely linked to existing Estrella Mountain Mission and Mission Goals. The following table illustrates the relationship between the AACC mission areas and Estrella Mountain’s Mission and Mission Goals.

Table 6.1 Comparison of AACC Mission Areas and Estrella Mountain Mission Goals

AACC Mission Areas	Estrella Mountain Mission and Mission Goals
Student Progress	Mission Statement
Workforce Development	Workforce Development
General Education	General Education
Transfer Preparation	Transfer Education
Developmental Skills	Developmental Education
Outreach	Community Education Student Development Services

Core indicators of effectiveness and corresponding measures are suggested for each of the six mission areas in the AACC model. For example, transfer rate and success after transfer are recommended by AACC as core indicators for the transfer preparation mission category. Definitions of a core indicator and measure can be found in the Plan for Institutional Effectiveness in the Resource Room.

Like the AACC model, Estrella Mountain has Core Indicators and Measures for each Mission Goal. Estrella Mountain has created its own model that includes core indicators recommended by the Community College Roundtable plus unique indicators identified by Estrella Mountain stakeholders.

The Estrella Mountain Plan for Institutional Effectiveness provides for an assessment system that measures the achievement of the college's Mission and Mission Goals. The primary purposes of the plan are accountability and continuous improvement.

Also, like the AACC model, the Estrella Mountain Plan for Institutional Effectiveness relies on widely recognized outcomes of community college missions. The Plan includes AACC Core Indicators of Effectiveness and customized indicators designed to meet the unique aspects of the Estrella Mountain Mission and Mission Goals.

MISSION STATEMENT STUDENT SUCCESS AND PERSISTENCE

As reflected in the college's mission and service strategy, student success is at the heart of everything the college does. During the 1998 – 1999 academic year the college developed a Student Success Plan

that was linked to the Plan for Institutional Effectiveness (PIE) Core Indicators for Student Success. In fact, all of the plan's goals are directly related to all Core Indicators related to student success.

FINDING **Estrella Mountain has developed and implemented a student success plan and is working toward achieving its mission.**

Student Success Plan

One of the major outcomes of the Student Success Initiative was the development of a college wide Student Success Plan. The college's Coordinator of Student Success is responsible for coordination the college-wide implementation of the strategies found in this plan. The Student Success Plan identified the following six core indicators of effectiveness (these are the same as found in the College's Plan for Institutional Effectiveness) to improve student success and retention: (see Resource Room for complete description).

- ◆ **Goal Attainment**
- ◆ **Successful Course Completion Rate**
- ◆ **Student Persistence**
- ◆ **Degree and Program Completion**
- ◆ **Transfer**
- ◆ **Scholastic Achievement**

Goal Attainment

Definition: The percent of all students who report that attending Estrella Mountain has helped them achieve or make progress towards their primary goal for enrolling.

- ◆ This Core Indicator has not been implemented on a Campus Wide basis. Goal attainment data has been piloted for the English as Second Language Program, the Fitness Center, Non-degree seeking occupational students (phone survey data) and for Estrella Mountain graduates and certificate completers. A campus-wide system to track student success will be implemented during the fall 2002 semester.

Successful Course Completion Rates

Definition: The percentage of all Estrella Mountain students that complete credit courses with a “C” or better, measured at the end of each Fall and Spring semester (College wide).

- ◆ Estrella Mountain’s overall completion rates (grades A-F) are higher than the District average for the most recent fall term (Fall 2000 – Estrella Mountain 82.1% vs. Maricopa 80.1%).
- ◆ While Estrella Mountain students are completing a greater percentage of courses, a comparable but slightly lower percentage of courses are being successfully completed (grades C or better). During the fall 2000 semester, the successful completion rate for all courses was 69.7% compared to 72.6% for all Maricopa Community College courses.
- ◆ Estrella Mountain’s spring 2000 successful completion rate (C or better) is the second highest it has been in six years. The spring 2000 rate (68.5%) is significantly higher than the spring 1998 rate (65.1%). However, the Maricopa Community College successful completion rate for the spring 1999 semester is still higher at 72.8%.

Student Persistence

Definition: The percentage of first time students retained from Fall 45th day to Spring 45th day.

- ◆ Fall to spring retention rates have increased for half of the cohorts compared to the previous year.
- ◆ The fall to spring retention rates have increased for the following cohorts:

	Fall 99 to Spring 00	Fall 00 to Spring 01
All new students	42%	49%
New part-time students	38%	46%
New degree seeking	53%	56%

- ◆ The fall to spring retention rates have decreased for the following cohorts:

	Fall 99 to Spring 00	Fall 00 to Spring 01
New financial aid students	69%	65%
Recent high school grads	72%	65%
New full-time students	77%	73%

Definition: The percentage of first time students retained from Fall 45th day to the following Fall 45th day.

- ◆ The majority of the cohorts increased in fall to fall retention over the previous year.
- ◆ The following fall-to-fall retention rates have improved:

	Fall 98 to Fall 99	Fall 99 to Fall 00
New financial aid students	41%	43%
Recent high school grads	50%	58%
New full-time students	45%	49%
New degree seeking	30%	32%

- ◆ The following fall-to-fall retention rates have declined slightly.

	Fall 98 to Fall 99	Fall 99 to Fall 00
All new students	27%	25%
New part-time students	25%	22%

- ◆ When Estrella Mountain student retention is tracked to all Maricopa Colleges (students starting at Estrella Mountain and continuing at any Maricopa college), retention rates are similar to District averages.

Degree and Program Completion

Definition: The percent of degree seeking students who graduate within two, three, and five years after starting the program.

- ◆ The five-year graduation rate for full-time, degree seeking students ranges between 20-23%. If Estrella Mountain students are tracked to other Maricopa Community Colleges the rate increases to 24-30%.

- ◆ The five-year Estrella Mountain graduation rate for part-time, degree-seeking students is 6%. This graduation rate more than doubles to 16% if graduates are tracked to all Maricopa Colleges.

Definition: The percent of certificate seeking students who complete a certificate program one, two, and three years after starting the program.

- ◆ Completion rate data for certificate completers are available, but the cohorts are too small to draw meaningful conclusions. Data for this Core Indicator is currently being tracked for new students enrolled in certificate programs. Because many students will decide to pursue a certificate after enrolling in college, the cohort is decreased.

Transfer

- ◆ More students are transferring to the state universities every year.
- ◆ Estrella Mountain students with at least 12 Estrella Mountain hours appear to perform as well (Grade Point Average) as the general universities population.
- ◆ For more details, see the Transfer Education Goal for definitions and data.

Scholastic Achievement

The percentage of Estrella Mountain graduates who complete a degree program with honors designation.

- ◆ During the 1999-2000 academic year, more than half (57%) of Estrella Mountain graduates completed a degree with Honors Distinction (G.P.A. 3.5 or better). This compares to 38% across the Maricopa District. The rate is also historically higher than the district average.
- ◆ While having a higher percentage of students graduating with honors may be a strength, it may also signal an area of concern. Given that Estrella Mountain's successful completion rates (C or Better) are somewhat lower than the District average, it may indicate that intellectually gifted students are making it to graduation, while many average students are dropping through the cracks.

Student Success and Persistence Strengths

- ◆ The College has developed a Student Success Plan directly, supported by Student Success Coordinator and directly linked to a significant part of the Estrella Mountain's institutional effectiveness process.
- ◆ Fall-to-fall retention has increased for most cohorts.
- ◆ More students are attending the state universities and most perform as well as the general university population.

Student Success and Persistence Challenges

- ◆ Graduation rates for two-year graduates are lower than desired.
- ◆ While many fall-to-spring persistence rates have increased, selected cohorts showed slight declines in the most recent semester measured.
- ◆ There is still room for improvement in the overall successful course completion rate for the college.

Student Success and Persistence Recommendations

- ◆ Estrella Mountain should continue its model program for student success and should integrate the Plan's strategies with the recent Title V Grant (Success in Math and Science) efforts.

MISSION GOAL: GENERAL EDUCATION

FINDING: Estrella Mountain's General Education curriculum enhances student's critical thinking and communication skills.

General Education Within Maricopa

The general education core of the program of study for an associate degree or a certificate helps students develop a greater understanding of themselves, of their relationship with others, and of the richly diverse world in which they live. The general education experience provides students with opportunities to explore broad areas of commonly

held knowledge and prepares them to contribute to society through personal, social, and professional interactions with others. General education fosters students' personal development by opening them to new directions, perspectives, and processes.

The general education experience at Maricopa is composed of specific elements across the curriculum designed to provide the learner with essential knowledge and skills:

- ◆ Communications
- ◆ Arts and Humanities
- ◆ Numeracy
- ◆ Scientific Inquiry in the Natural and Social Sciences
- ◆ Information Literacy
- ◆ Problem-Solving and Critical Thinking
- ◆ Cultural Diversity

The Maricopa Curriculum Committee guides the planning and development of a curriculum process that is responsive to community and students: that assures standards, consistency and quality and promotes learning. In its leadership role, the Committee provides local and statewide direction on issues and processes; acts as an arbiter for divergent opinions and engages in planning for new curricular directions. The Committee's Key Planning Areas, including planning for general education, may be viewed at <http://www.dist.maricopa.edu/eddev/curric/dccmp.html>.

The District General Education and Degrees Subcommittee (GEDS) of the district curriculum committee is comprised of faculty and administrators and supported by resource persons from district support staff and representatives of other district-wide groups as well as representatives from ASU Main and ASU West. The purpose of GEDS is to develop a definition and philosophy statement for Maricopa general education, review and address current issues related to general education, develop new degree and certificate pathways, study patterns of enrollment in general education courses, and review and recommend action on Maricopa general education proposals. Estrella Mountain's general education curriculum benefits and is guided by Maricopa projects and initiatives.

Maricopa General Education Statement

Faculty from across the district, including faculty from Estrella Mountain provided input into the development of the following *General Education Statement*:

Through its general education requirements, the Maricopa County Community College District is committed to helping students develop qualities and skills that will serve them throughout their lives. General education opportunities encourage students to:

- ◆ *Build self-awareness, self-respect, and self-confidence*
- ◆ *Recognize and respect the beliefs, traditions, abilities, and customs of all people and all cultures*
- ◆ *Consider the local, global, and environmental impacts of personal, professional, and social decisions and actions*
- ◆ *Access, evaluate, analyze, synthesize, and use information wisely*
- ◆ *Communicate effectively personally, socially, and professionally*
- ◆ *Think critically, make informed decisions, solve problems, and implement decisions*
- ◆ *Consider the ethical implications of their choices*
- ◆ *Value the learning process throughout their lives*
- ◆ *Integrate and connect ideas and events in a historical perspective, and see relationships among the past, the present, and the future*
- ◆ *Develop a personal sense of aesthetics*
- ◆ *Use technological resources appropriately*
- ◆ *Work cooperatively and respectfully with others to serve their communities*

Estrella Mountain's Philosophy of General Education

Estrella Mountain refined its General Education Statement in light of the new *Maricopa General Education Statement*:

At Estrella Mountain, students experience a collaborative and stimulating environment that stresses a solid foundation of general education. Each facet of the Estrella Mountain experience is designed to provide students with the necessary information, knowledge, abilities, intellectual concepts, and the perspectives they need to achieve their academic and personal goals.

Our curricular patterns enhance critical thinking and communication skills as well as breadth and depth of learning. They reflect an emphasis on the study of composition, literacy and critical inquiry, numeracy, humanities, fine arts, the social and behavioral sciences, the natural sciences, as well as cultural diversity, global and/or historical awareness.

Recognizing the importance of breadth of knowledge, the ability to apply that knowledge, and a view of learning as a lifetime activity, faculty and staff are committed to providing all students with a teaching and learning environment in which everyone experiences growth.

Student Academic Achievement Assessment Instruments for General Education

Two student cohorts were assessed. The inexperienced cohort are students who have taken no more than two college courses anywhere. The experienced cohort are students who have completed 20 or more credit hours in Arizona General Education Curriculum at Estrella Mountain. These cohorts were used for all general education assessments.

The tool first used by General Education to measure students' skill in communication and critical thinking is the *Tasks in Critical Thinking*, which is published by (Educational Testing Services) ETS. The test was chosen because the Estrella Mountain definitions for critical thinking and communication are closely aligned with the ETS descriptions of the components of the *Tasks*. This test was primarily chosen because it measures precisely those abilities the faculty were most interested in for assuring student success. A disclosed copy of this test instrument is available in the Resource Room.

A second tool was piloted during the fall 2001 semester with the support of the Student Academic Achievement Committee (SAAC). This assessment tool is the *California Critical Thinking Skills Test*, a standardized 34-item, multiple choice test that targets those core critical thinking skills regarded to be essential elements in college education.

ETS Results and Use of Results

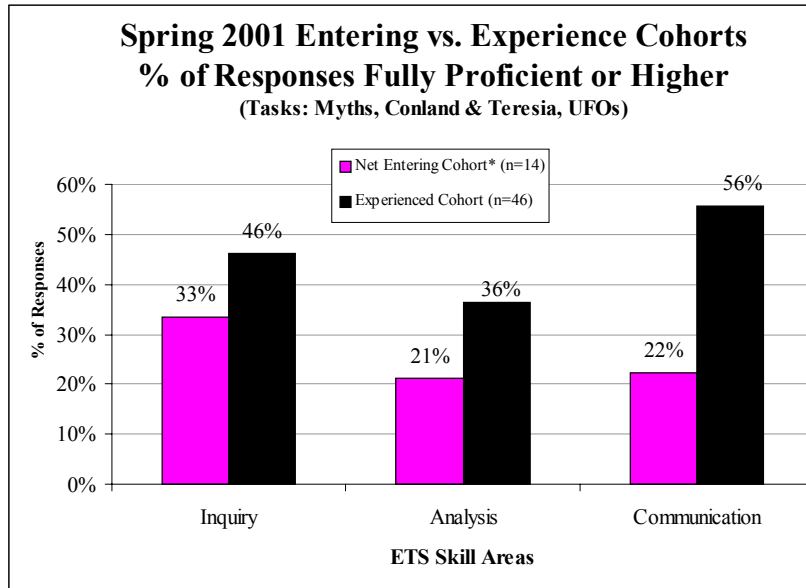
The results of the ETS assessment for Spring 2001 were shared in December 2001 with the SAAC Steering Team and Division Chairs. The results for the California Critical Thinking Skills Test will also be available in January 2002. All academic division chairs were asked to share all the results with their division members and to determine the implications to the division for the continuous improvement of teaching and learning of the Estrella Mountain abilities. The outcomes of those division meetings will be found in the resource room document, “*Findings and Recommendations of Academic Divisions in Response to Spring 2001 ETS Assessment and California Critical Thinking Skills Test.*”

Graphs for the critical thinking scores and the communication scores of both inexperienced and experienced cohorts demonstrated a normal bell-curve distribution of scores, thus confirming for faculty that the assessment tool is a good one for measuring our students’ performance.

A more detailed breakdown and explanation of the ETS Tasks in Critical Thinking and Communication Assessment findings may be found in the support document *Spring 2001 ETS Tasks in Critical Thinking and Communication Assessment Results*. In January 2002, faculty will meet as divisions and programs to discuss the findings and use of findings for the ETS Tasks in Critical Thinking and Communication and the California Critical Thinking Skills Test. This information is available in the resource room as Fall 2001 California Critical Thinking Skills Test Assessment Results.

Results from the College’s general education assessment suggest that Estrella Mountain’s general education curriculum enhances students’ critical thinking (defined by inquiry and analysis in the chart below) and communication skills. Students who have completed 20 or more credit hours in Arizona General Education Curriculum at Estrella Moun-

tain have a much higher percentage of responses rated as fully proficient by Educational Testing Services than students who have taken no more than two college courses anywhere.



While there are some limitations to this study (see *Spring 2001 ETS Tasks in Critical Thinking and Communication Assessment* results) related to sample size and non-response bias as well as issues with the instrument itself, the results do provide insight into the knowledge and abilities of our students. There are also promising numeric differences between the entering and experienced cohorts that may prove to be statistically valid in the future if the sample size of the entering cohort is increased.

- ◆ The experienced cohort has a higher percentage of responses that are fully proficient and higher in the ETS skills areas of inquiry, analysis, and communication than the entering cohort.
- ◆ The entering cohort tends to have higher percentages of “off-task”, “not proficient” and “limited proficiency” responses than the experienced cohorts in most areas.
- ◆ Communication is the only task areas where the experienced cohort has a majority (56%) of fully proficient and higher ratings. Communication also appears to be an area where there is a large difference between the entering and experience cohorts (sample size is too low to confirm this statistically).

- ◆ Frequency distributions appear to be normally distributed meaning that means can be effectively used to describe the study populations.
- ◆ When responses are converted to mean scores on a scale of 1 to 6 (1= not proficient, 4 = fully proficient, 6 =superior), the means are higher in almost every area for the experienced cohort compared the entering cohort. These means are not statistically different due to the limited sample size for entering students.
- ◆ While most mean scores are higher for the experienced cohort than the entering cohort, none of the cohorts had mean scores higher than a 4.0 for any subtask on any of the three assessment forms analyzed in this study.
- ◆ The experienced cohort has a 13% to 34% higher percentage of responses that are fully proficient or higher in critical thinking (inquiry and analysis) and communications skills.
- ◆ Analysis appears to be the weakest area for both the entering and experienced cohorts. Just 36% of the responses for the experienced cohort and 21% of the responses for the entering cohort are rated as fully proficient or higher.

General Education Institutional Effectiveness Measures

General Education Course Completion Rates

FINDING: **General Education at Estrella Mountain provides students the necessary information, knowledge and abilities, intellectual concepts, and the perspectives they need to achieve their academic and personal goals.**

Successful completion (C or better) and standard completion (grades A-F) rates were calculated for general education prefixes that meet the AA/AS/ABus transfer degree or the General Arizona Education Curriculum (AGEC) requirements. Within each prefix, only courses that can be applied to AGEC or the additional Maricopa requirements for associate degrees were included.

Successful completion and standard completion rates were aggregated by prefix, not by individual courses (“ENG” not “ENG101”). Also, course prefixes with less than 30 Estrella Mountain students were excluded from the analysis.

The analysis was conducted for all students. A separate analysis was also conducted that excluded high school dual enrollment students. Overall, successful completion and standard completion rates are higher at Estrella Mountain than the District average. The following data are from the Spring 2001 Continuous Improvement Interview on General Education. See the resource room for complete documentation.

- ◆ Approximately 2 out of 3 general education prefixes have higher successful and standard completion rates than the District average. This is valid for both the cohort that included all students and the cohort that excluded dual enrollment.
- ◆ General education prefixes in Critical Reading, Economics, General Business, and History had successful completion rates that were at least 10 percentage points higher than the District average.
- ◆ Chemistry, Math, and Philosophy courses have lower successful completion and standard completion rates than the District average. Spanish also has lower completion rates when dual enrollment students are removed. Successful completion rates in all four of these prefixes tended to be lower for the non-dual enrollment cohort as well.
- ◆ Low successful completion rates are caused more by students who “withdraw” (grade = W) versus students who receive grades of Ds, Fs and Ys. Note “Roster Drops” (grade = R) are excluded from the analysis.

FINDING: Estrella Mountain is expanding the breadth and depth of its general education curriculum to its students.

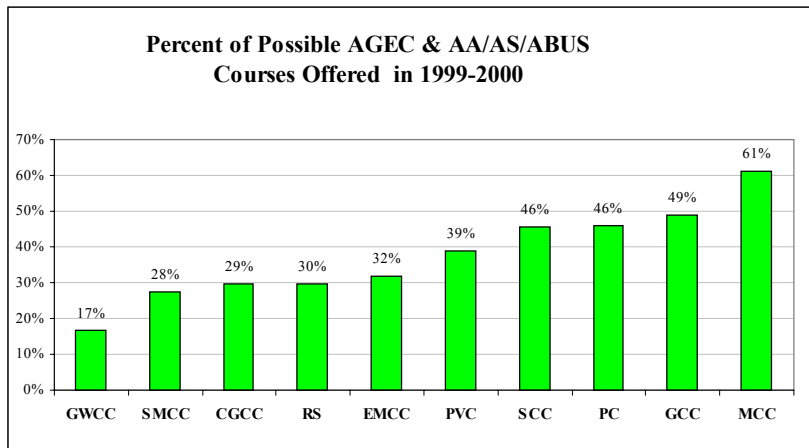
Given its smaller size, Estrella Mountain is faced with a significant challenge in offering a wide variety and depth of general education courses. Less than 15% of Estrella Mountain’s annual FTSE is generated by 200

level courses (many of these are general education prefixes). Only one other college in the system generates a smaller percentage of 200 level FTSE in the Maricopa Community College District.

While Estrella Mountain has not achieved true comprehensiveness course offerings, it is making progress. The college continues to expand the variety and depth of General Education offerings. Estrella Mountain has increased the percentage of AGEC and AA courses that it offers. Currently the college is still below the District-wide average in the percentage of AGEC and AA courses offered; however, it still offers a greater percentage of these courses than four other Maricopa Colleges (Note: this relates to the number of different courses offered and not to the total number of sections offered to students). For a more in depth report of the results, please see the *Spring 2001 General Education Stakeholder Executive Summary and Minutes* in the Resource Room.

Estrella Mountain continues to increase course offerings and fill a greater number of general education courses that satisfy two-year associate degrees and AGEC requirements.

Estrella Mountain offered 32% of the total general education courses that can satisfy AGEC and AA transfer degree requirements during the 1999-2000 school year (up from 30% in 1998-1999). This percentage is higher than four other Maricopa Colleges (South Mountain 28%, Chandler Gilbert 29% and Rio Salado 30%) but lower than the District wide average of 38%. Mesa Community College (the largest in the system) offers 61% of total possible AA and AGEC courses. Note: This only represents the variety of general education courses offered. Students at all college's can complete AA, AS, ABus and the AGEC block with a subset of the total courses available.



While Estrella Mountain has not recently completed a course variety survey for general education courses, Estrella Mountain has distributed the Noel Levitz Student Satisfaction Inventory three times, most recently in Spring 2001. Estrella Mountain has scored slightly below the national average on the Noel Levitz question related to overall course variety. Estrella Mountain's satisfaction scores related to course variety have improved slightly over the last five years. In the first two surveys, the college scored slightly below the national average for the question "There is a good variety of courses provided on the campus." In the most recent Spring 2001 survey, the mean for Estrella Mountain students was exactly equal to the national mean for two-year colleges.

GENERAL EDUCATION STRENGTHS AND CHALLENGES

General Education Strengths

- ◆ The General Education program at Estrella Mountain helps students develop effective critical thinking and communication abilities.
- ◆ The Student Academic Achievement Plan has been implemented, and it is faculty owned and faculty driven and is supported by the College's annual budget.
- ◆ Assessment of general education uses both direct and indirect measures for the purpose of continuous improvement.

- ◆ The results of academic assessment in general education/transfer are shared with academic division chairs and division members who determine the implications of assessment results for the continuous improvement of teaching and learning.

General Education Challenges

- ◆ Faculty and student participation rates in assessment activities are less than desired.
- ◆ Limited sample sizes and validity issues with the general education assessments have made it difficult to utilize the data to make significant curricular changes.
- ◆ Course completion rates in several key general education prefixes are less than the district average.
- ◆ Only two measures of academic assessment have been implemented for general education.

GENERAL EDUCATION RECOMMENDATIONS

- ◆ Faculty must implement strategies to increase student and faculty participation in the assessment process.
- ◆ Additional student feedback regarding academic assessment needs to be obtained.
- ◆ Additional general education abilities need to be identified and assessment implemented.
- ◆ Faculty need to identify appropriate and significant ways to use the assessment results to improve teaching and learning.
- ◆ The college needs to increase its 200 level course offerings.

MISSION GOAL: TRANSFER EDUCATION

FINDING: The number of Estrella Mountain transfer students continues to increase at the state universities and these students generally perform as well as the university population. Obtaining more recent transfer data and a greater quantity of data continues to challenge the college.

Estrella Mountain offers students a selection of Transfer Program opportunities such as the Arizona General Education Curriculum (AGEC), Associate in Arts (AA), Associate in Science (AS), Associate in Business (ABUS), Associate in Applied Science (AAS), Associate in Transfer Partnership (ATP) degree program, and the Associate in General Studies (AGS).

Course Offerings:

Estrella Mountain offers transfer general educational courses that are required for AA, ABUS, AS degrees (GR/SR), ATP, and AGECA, B, or S. Recent statistics show that Estrella Mountain offers approximately 32% of the possible transfer/general education courses available from the district's pool of such courses. While no Maricopa College offers 100% of these courses, there is enough course variety to complete all university transfer degrees.

Articulation Agreements:

Estrella Mountain, as part of the Maricopa District, articulates with private, public, and international baccalaureate and associate degree-granting institutions that have achieved full accreditation or candidacy status with a regional accreditation commission such as NCA. Estrella Mountain has implemented several articulation program agreements with institutions of higher learning and within the community. Such programs are as follows.

University Transfer Pathways:

- ◆ Estrella Mountain offers three transfer associate degrees: (1) Associate in Arts (AA), (2) Associate in Business (ABus), and (3) Associate in Science (AS). Each degree includes two pathways

and the potential for the transfer of groups of courses, the Arizona General Education Curriculum (AGEC), Common Lower Division Courses and/or the degree pathway itself. The transfer of this group of courses is also referred to as a block transfer. Each degree/pathway articulates with specific majors offered by Arizona's three public universities.

- ◆ Associate in Transfer Partnership (ATP) – This degree is an articulated academic program of study established among the student, the accredited baccalaureate degree-granting institution selected by the student and the Maricopa college the student attends (Estrella Mountain). At the present, ATP's are available with ASU Main, East and West for the following disciplines: Elementary Education, Accounting, Psychology, Social Work, Global Business (ASUW only), Computer Information Systems (ASUM only) and General Business – with majors in Economics, Finance, Management, Marketing, Real Estate and Supply Chain Management (ASUM only).
- ◆ Associate in Applied Sciences (AAS) - These degrees are for students who wish to gain a depth of technical expertise by completing an occupational program as presented in the Estrella Mountain college catalog. A student who completes an AAS degree may choose to transfer to a university and pursue a Bachelor of Applied Science, in which the AAS degree transfers as a block. This option is available at ASU East and West, NAU, and several private institutions such as University of Phoenix.
- ◆ Associate in General Studies (AGS) - Estrella Mountain also offers the AGS degree program for students whose educational goals require flexibility. The AGS degree allows students to choose elective courses numbered 100 and above to complete the degree.

High School Transfer Pathways

- ◆ Genesis West – This program offers students an alternative to the traditional high school program. Students can complete their high school diplomas and earn college credit at the same time. The Genesis West program is made possible through a partnership with Agua Fria, Buckeye, Dysart, and Tolleson High School Districts and Estrella Mountain.

- ◆ High School Dual Enrollment and Co-Enrollment - Dual enrollment is a collaborative effort between the high school and Estrella Mountain, in which high school students have the opportunity to get a head start on their college education. Courses are taught at the high school as part of the high school curriculum (usually as honors or AP courses) by community college certified instructors, and students pay for and receive college credit. Courses that students take will become part of their official college transcript. Co-enrollment allows students to be enrolled at Estrella Mountain while attending high school (typically after the end of their high school day), and so obtain college credit prior to high school graduation.
- ◆ Inspire.Teach Program - This program was created by Estrella Mountain in partnership with West Valley high school districts and ASU West to draw future education majors. The program exists to increase the number of diverse professionals within Arizona's teaching forces. It reflects a commitment among secondary, community college, and university partners to inspire students from underrepresented groups to explore, pursue, and excel in a teaching career. This program ensures a smooth transition from high school to the community college, and from the community college to the university. This program also guarantees the student automatic acceptance into the ASU West College of Education if they have a G.P.A. of 2.5 or higher, and completion of the appropriate transfer course work.

Transfer Education Institutional Effectiveness Measures

The following key results related to university transfer emerged from the spring 2001 Continuous Improvement Stakeholder meeting on Transfer Education. Data, particularly, grade point averages, are available for historical years but not for the most recent years due to lag time between posting of information combined with delays in sharing data between the Maricopa Community Colleges and universities using the Arizona State System for Information on Student Transfer Database (ASSIST). Also, data for private colleges and the Northern Arizona University are not yet available. Tracking transfer students continues to be a challenge for Estrella Mountain as well as colleges across the nation.

- ◆ The overall number of Estrella Mountain transfer students (new and continuing) attending Arizona State University (Main, West, and East) University of Arizona continues to increase. See Table 6.2.
- ◆ The number of new Estrella Mountain transfer students with 12 or more Estrella Mountain transfer hours attending ASU and U of A has also increased every year over the last five years.

**Table 6.2 Estrella Mountain Transfer Students at
ASU and U of A**

	95-96	96-97	97-98	98-99	99-00
All Students with EMCC Transfer Credits					
ASU	151	223	322	451	578
U of A	10	27	58	82	105
Total	161	250	380	533	683
EMCC Students with 12 or More Transfer Credits					
ASU	73	102	154	241	348
U of A	N/a	9	20	37	63
Total	73	111	174	278	411
	73	111	174	278	
Newly Enrolled EMCC Transfer Students attending Arizona State University and the University of Arizona					
NEW EMCC Transfers					
ASU	86	80	126	193	233
U of A	5	14	18	28	43
Total	91	94	144	221	276
New Transfer Students with 12 or More EMCC Transfer Credits					
ASU	52	37	67	129	165
U of A	N/a	3	12	16	34
Total	52	40	79	145	199

- ◆ The vast majority (81%) of Estrella Mountain transfer graduates who subsequently attend Universities report that they believe they were prepared well or very well for University course work.
- ◆ Close to 40% of Estrella Mountain transfer students attending ASU have transferred just 1-12 credit hours from Estrella Mountain. Of those students who transfer 1-12 Estrella Mountain credit hours,

approximately 2 out of 3 have more than 12 total transfer hours when Estrella Mountain is combined with other transfer institutions. This reflects the “swirling” phenomena of students transferring credits from multiple colleges.

- ◆ The majority (55-81%) of Estrella Mountain Associate Degree graduates transfer within one year of graduating from Estrella Mountain. Graduate follow-up data indicate that approximately 57% of Associate Degree Graduates enroll in a four-year institution with one year of graduation. This most recent figure is lower than previous highs.

Table 6.3 Percent of Associate Degree Graduates That Transfer Within One Year*

1994-1995 Graduates	81%
1995-1996 Graduates	68%
1996-1997 Graduates	55%
1997-1998 Graduates	61%
1998-1999 Graduates	57%

* based on annual graduate surveys conducted by the Office of Planning and Institutional Effectiveness.

- ◆ Students who transferred at least 12 Estrella Mountain credit hours have similar Grade Point Averages (GPA) compared to the general population of ASU students. In 1998-1999, the overall GPA of Estrella Mountain transfer students is similar to the GPA in most ASU colleges. There were just two ASU colleges that Estrella Mountain students performed more than a quarter of one grade point lower than the general ASU population. These colleges are the Architectural Design (ASU Main Campus) and the Education College (ASU Main Campus only). It should be noted that only a few Estrella Mountain transfer students are enrolled in the ASU College of Architectural design, so poor performance by just one student impacts the overall GPA for this cohort.
- ◆ For those students that do transfer, the most recent Estrella Mountain graduate surveys indicate that more than 80% of graduates who transfer to 4-year institutions report that Estrella Mountain has helped them be “fully” or “mostly” prepared for university coursework.

FINDING While Estrella Mountain has degree completion rates that are comparable to the District average, the rates appear to be somewhat low.

Degree and Certificate Completion Institutional Effectiveness Measures

The following key results were identified during the spring 2001 Continuous Improvement Stakeholder meeting on Student Success. These findings are related to a core indicator of effectiveness related to degree program completion.

- ◆ While Estrella Mountain has degree completion rates that are comparable to the District average, the rates appear to be somewhat low. Estrella Mountain's three-year graduation rates range between 14-20% for full-time, degree seeking students. These rates are higher than the district average in most cases, but have significant room for improvement.
- ◆ The five-year graduation rates for full-time, degree seeking students ranges between 20-23%. If Estrella Mountain students are tracked to other Maricopa Colleges the rate increases to 24-30%.
- ◆ The five-year Estrella Mountain graduation rate for part-time degree seeking students is 6%. This graduation rates more than doubles to 16% if graduates are tracked to all Maricopa Colleges.

TRANSFER EDUCATION STRENGTHS AND CHALLENGES

Transfer Education Strengths

- ◆ Estrella Mountain students transferring to other institutions have GPA's that compare to the general population of the institution to which they transfer.
- ◆ The number of students that transfer to the ASU and U of A continue to increase.

- ◆ The majority of students who do transfer from Estrella Mountain indicate that Estrella Mountain has prepared them for university course work.
- ◆ Estrella Mountain continues to develop different pathway programs for student success in transfer education.

Transfer Education Challenges

- ◆ Estrella Mountain staff need to work closely with Maricopa and university articulation task forces to align curriculum pathways with university requirements.
- ◆ While many students transfer, associate degree completion rates are lower than desired.
- ◆ The timeliness and quantity of transfer data is limited due to a lack of data for students who transfer to institutions other than ASU and U of A and the longer than anticipated transition to the state-wide ASSIST database.
- ◆ Review and revision throughout all disciplines (instructional councils) is not done on a regular and consistent basis.
- ◆ It's unclear why recent associate degree completers are transferring at a lower rate than in the past years.

TRANSFER EDUCATION RECOMMENDATIONS

- ◆ The College needs to maximize the use of the new ASSIST database to analyze transfer data and develop ways to collect information on private institutions that are not tracked via a shared database. Additionally, more research needs to be conducted into why some associate degree completers are not transferring to universities.
- ◆ Estrella Mountain should continue the articulation relationship with both state and private universities, including the expansion and development of transfer partnerships with ASU and other colleges.

- ◆ The college must continue to work with instructional councils and articulation committees to develop a process for regular review and revision of curriculum across all disciplines.
- ◆ The college should expand strategies related to helping students complete transfer oriented associate degrees.

MISSION GOAL: DEVELOPMENTAL EDUCATION

FINDING **Estrella Mountain has implemented its Developmental Education Assessment Plan and is using the results towards the goal of the continuous improvement of teaching and learning.**

Student Academic Achievement Assessment Instrument

The assessment tool used by Developmental Education was designed by the Developmental Education Assessment Team with input from all of the divisions on campus. The tool assesses three program outcomes in addition to communication and critical thinking abilities. These outcomes are:

- ◆ to read, interpret and solve problems involving linear equations
- ◆ to write a well-supported multi-paragraph essay using several rhetorical modes
- ◆ to read, compare, and contrast information from several readings

The assessment instrument was first introduced in 1998 and continues to be improved. Most recently, significant revisions were made to the mathematics portion of the test.

During the assessment, students are given a scenario in which they must make a purchase decision between two cars. They must read consumer reviews of the cars, calculate final costs of the cars, and determine which of the two cars is the better choice given the needs established in the scenario. Students must write a five-paragraph essay in which they assume the role of a car buyer and write about one of the car choices.

Cohort

The Developmental Education cohort includes students who are currently enrolled and will have completed the highest-level developmental math (MAT091/092) and English (ENG 071) courses with a C or better by the end of the semester. These students can be simultaneously enrolled in both courses or they must be enrolled in at least one course and have completed the paired math or English course with a C or better during a prior year. Many students will have completed ENG071 in a prior semester and are currently enrolled in MAT 091/092. The small size of the cohort continues to be a challenge.

On September 17, 2001, faculty from the Developmental Education Division met to discuss the data generated from the Spring 2001 assessment and reached the following conclusions:

Communications/Critical Thinking Skills

- ◆ Students' grammar and mechanics skills were appropriate for the students ability.
- ◆ Organization in writing and paragraph division was evident.
- ◆ Students used simple, concise sentences.
- ◆ Academic writing was evident and students attempted to express comparative elements.
- ◆ Overall student weaknesses were seen in writing-on-demand, responding to a prompt, following directions, staying focused on a task, using evidence to support a position, writing clear thesis statements, writing conclusions and using persuasive language. Also, little evidence exists that students use a writing process.
- ◆ The small cohort size does not provide statistically reliable information.
- ◆ Students did not do well in a timed writing situation.

- ◆ Students did not appear to know how to incorporate data from maps, charts, and graphs into a writing task.
- ◆ Students did not fully comprehend how to respond to a writing prompt.

As a result of the assessment, faculty will

- ◆ Include timed, practice exercises in writing on demand in all developmental classes.
- ◆ Teach students how to utilize time management strategies.
- ◆ Teach students how to integrate data from maps, charts, graphs, and tables into essays and rhetorical modes.
- ◆ Have students practice finding thesis statements in class readings.
- ◆ Request that the Center for Teaching and Learning offer Developmental Writing Strategies workshops for faculty.
- ◆ Faculty should have sessions together where students' pre/post writing samples are discussed and where faculty discuss teaching strategies that faculty applied with success to address the pre writing challenges.
- ◆ Have students write/respond to writing prompts similar to the assessment in developmental education, surveying students after the writing experience to determine where students felt most successful and most challenged during the writing process.
- ◆ Continue to utilize the Writing Center and Learning Enhancement Center for tutoring; pay tutors to attend key developmental class sessions to observe teaching techniques for writing used by developmental faculty.
- ◆ Utilize Information Resources for purchasing materials, software, videos, and structured search demonstrations for writing topics in developmental education.
- ◆ Enhance collaboration efforts with Student Services to provide re-

sources for note taking, proctoring, or other resources for disabled students, for early alerts and other counseling related referrals.

- ◆ Seek resources from Director of Information Technologies and Dean of Instruction as needed, including additional instructional budget requests. The cohort needs to be expanded to increase student participation.
- ◆ Faculty need to continue to hold dialogues about what the instrument assesses.
- ◆ Seek to expanded student participation.

Math/Critical Thinking Skills

- ◆ Students were able to extract and organize information to complete a data table.
- ◆ Most students computed computations successfully.
- ◆ Students were able to create an equation using given variables.
- ◆ A few students demonstrated minor computational errors.
- ◆ Students exhibited confusion regarding relationships among various given quantities.
- ◆ Students did not make a connection between the equation they created and the next question which required them to use the equation.
- ◆ Students did not integrate prior knowledge with the assessment “math problem.”

As a result of the assessment, faculty will:

- ◆ Increase instruction in unit analysis and use of analysis to discover relationships is needed.
- ◆ Increase instruction to improve students attention to reasonableness of solution (including resultant unit).

- ◆ Hold dialogues to answer to the question: What types of strategies exist to encourage students to think holistically?
- ◆ Meet further to examine the math assessments and to identify other strengths and weaknesses and to make specific recommendations for how to impact curriculum and teaching and learning.
- ◆ Implement one activity during the semester to address perceived weaknesses inferred from this assessment.

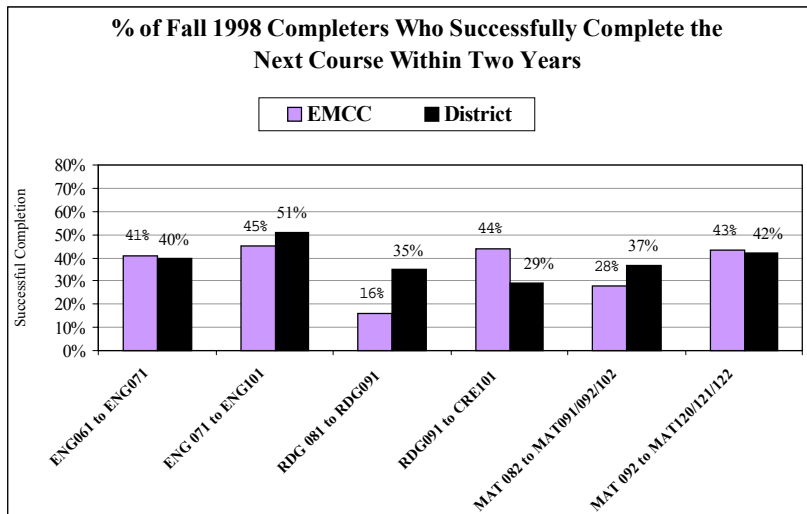
Developmental Education Institutional Effectiveness Measures

FINDING: Developmental Education courses at Estrella Mountain provide students the opportunity to develop the skills and abilities necessary to pursue additional education and training.

- ◆ Estrella Mountain Reading (RDG) ESL Courses tend to have higher successful completion rates than the District average.
- ◆ Estrella Mountain successful completion rates (C or Better) in Developmental English Courses (non-ESL) are higher than the District average in most cases.
- ◆ Successful completion rates in MAT092 tend to be higher than the District average. However, the Estrella Mountain's rates in MAT082 have been lower than the District average for the last nine semesters. Low successful completion rates in developmental math are a District-wide problem. Sometimes successful completion rates dip below 50%.
- ◆ Estrella Mountain successful completion rates (C or Better) in developmental Math have declined over time. However, MAT082 appears to be showing a modest rebound in recent fall semesters.
- ◆ Successful completion rates for English (ENG) ESL vary greatly from District averages depending on the course and semester. Most Estrella Mountain (ENG) ESL courses have similar or higher completion rates than the District. ENG005AB tends to have the highest successful completion rates over time. Conversely, ENG011

has had consistently lower successful completion rates than the District average.

- ◆ While Estrella Mountain’s successful completion rates in ENG009 are similar to the District average in recent semesters, this course tends to have low successful completion rates at both the District and Estrella Mountain. In four out of the last five semesters, this course has had a successful completion rate below 60% at Estrella Mountain. During the same time period the District rate was also below 60% for three out of the last five semesters.
- ◆ Students starting a developmental course in the fall are more likely to successfully complete the developmental sequence than those students who begin a developmental sequence in the spring. For example, district-wide 45% of students who completed ENG071 during the fall of 1998 successfully completed ENG101 within two years, while only 35% of students completing ENG071 in the spring of 1998 successfully completed ENG101 within two years.
- ◆ At Estrella Mountain, students are more likely to complete developmental sequences that include a 100 level course and less likely to complete sequences that include two developmental courses under 100 level. For example, just 16% of Estrella Mountain students who completed ENG081 during the fall of 1998 completed ENG091 within two years. The District rate for this course sequence was 35%. The exception is the ENG061 to ENG071 sequence, where 41% of fall 1998 students completed the se-



quence within two years (compared to the 40% District successful completion rate).

- ◆ The following table demonstrates how Estrella Mountain compares to the District in subsequent enrollment and success in several developmental sequences.
- ◆ Estrella Mountain CRE101 students who successfully complete the developmental education sequence, generally perform as well as students who test into CRE101. In the fall of 1998, 93% of those students who had completed the developmental sequence completed CRE101 with a C or better. This was higher than students who waived, tested in, or were exempt from CRE101. In the fall of 1999, 79% of the developmental sequence students completed CRE101 with a C or better compared to 82% of those who tested into CRE101. Surprisingly, all students who waived their test scores in the fall of 1999 completed CRE101 successfully.
- ◆ Historically, Estrella Mountain ENG101 students who complete the developmental sequence perform better than those students who waive their test scores and similarly to those that test into ENG101. This was true until the Fall 1999 semester. The successful completion rates (C or Better) for students completing the developmental sequence decreased from 65% in the fall of 1998 compared to 63% in the fall of 1999. While this is a moderate decline, the overall completion rate in ENG101 increased from 66% in 1998 to 72% in 1999. Students who tested into ENG101 (74% successful completion rate) or waived (71% successful completion rate) had appreciably higher successful completion rates.
- ◆ Estrella Mountain MAT102 students who complete the developmental education sequence have significantly higher successful completion rates than students who waive. The successful completion rates for MAT102 developmental sequence students were 86% in the fall of 1998 and 82% for the fall of 1999. In both cases these rates exceeded the waiver rates of 40% and 50% respectively.
- ◆ In the fall 1999 semester, students who completed the developmental sequence at Estrella Mountain successfully completed (C or better) MAT 121 at rates higher than the overall completion

rates for the course (76% developmental sequence rate vs. 59% overall successful completion rate). During the same semester, MAT122 developmental sequence students had similar successful completion rates compared to the overall completion rates (71% developmental sequence rate vs. 72% overall successful completion rate).

- ◆ Successful completion rates in most ESL courses are higher for students who receive tutoring than those students who do not receive tutoring. However, overall less than 10% of ESL students take advantage of tutoring services.
- ◆ Approximately 75% of students who received tutoring for ENG071 in the fall of 2000 completed the class. This is somewhat lower, but comparable to the rate for students who did not receive tutoring (77%).
- ◆ Students who received at least three tutoring sessions in developmental math during the fall 2000 did not perform as well as students that did not receive tutoring. These data are opposite the findings for the fall 1999 semester where students with tutoring completed at rates higher than those students who did not receive tutoring.

DEVELOPMENTAL EDUCATION STRENGTHS AND CHALLENGES

Developmental Education Strengths

- ◆ Completion rates are higher than District average for some developmental education courses.
- ◆ Developmental students who complete the program sequence of courses and then take CRE101, perform as well as students who had not taken the same sequence of courses.
- ◆ Developmental students who complete the program sequence of courses and then take MAT 121 complete at rates higher than those students who chose to waive the developmental course sequence.

- ◆ Successful completion rates are higher for ESL students who receive tutoring than those who do not receive tutoring.

Developmental Education Challenges

- ◆ Completion rates in math are generally lower than District averages.
- ◆ Completion rates in math have been declining over time.
- ◆ ENG011 has consistently lower successful completion rates than the District average.
- ◆ The number of ENG071 completers who successfully complete ENG101 within two years is lower than the District average.

DEVELOPMENTAL EDUCATION RECOMMENDATIONS

- ◆ Developmental math and English faculty as well as support staff should discuss the issues related to lower completion rates and devise a plan to improve completion rates.
- ◆ Developmental English and English faculty should discuss the issues related to the low two year completion rates for ENG071 completers and devise a plan to improve completion rates.

MISSION GOAL: WORKFORCE DEVELOPMENT

Workforce Development is a concept that brings employment, education, training, and many other resources together to meet the employment/training needs of business/industry and the community. It spans the college curriculum from Developmental Education courses (English, English as a Second Language, Math) to certificate and degree programs and includes training provided through the Southwest Skill Center. Certificate and degree programs include Total Quality Management, Organizational Leadership, Cisco Networking, Microsoft Systems Product Specialist, and Computer Applications Technology.

Southwest Skill Center

In October 2000, Estrella Mountain was asked by from the Chancel-

lor of the Maricopa County Community College District to assume operational control of the Southwest Skill Center (formerly the Maricopa Skill Center –Southwest Campus). The facility and associated program had been under the direction of the Maricopa Skill Center and GateWay Community College.

The Southwest Skill center received advise and direction from its advisory board whose members represent business and industry, municipal and county government, education, and the community at large.

Current programs include the Medical Assisting, Nursing Assistant, Practical Nursing, Cabling Technology, and Business Technology for the Office. Future programs include Medical Transcription and Medical Translation.

FINDING Estrella Mountain’s Workforce Development has multiple assessment processes in place designed to bring about the continuous improvement of teaching and learning.

Student Academic Achievement Assessment Instrument - Total Quality Management (TQM)

Each student is given a real world case study. For the assessment, participants identify and define the problems in the scenario department; determine what needs to be done to address the problem; determine how to accomplish the resolution of the problem in accordance with the vision, values, and service strategy of the organization.

The teams participating in the assessment are assessed with the use of a check sheet. The check sheet contains criteria for the communication and critical thinking abilities and the program competencies. The participants are assessed during a two hour period as they develop their solution to the problem assessment. They are further assessed during the presentation of their solution. The data on the check sheets is then analyzed to determine whether or not the students have met the criteria.

The Cohort

Students who have completed the requirements for a certificate in Total Quality Management make up this cohort.

Early during the Spring 2002 semester, faculty met to discuss key findings and to determine the use of the findings for its most current assessment of TQM. Please see Fall 2001/Spring 2002 Workforce Development Report of Findings” in the resource room. The results of the data are used to determine which parts of the Total Quality Management program require attention. Course delivery and the assessment process are evaluated and appropriate course delivery, curriculum or assessment changes are made.

Student Academic Achievement Assessment Instrument – Organizational Leadership

The flexible Organizational Leadership (OL) program opened at Estrella in 1994. Students who complete six Management Core Courses receive an Organizational Leadership Certificate. Students who also complete a 21 credit Customized Job Training Plan and 25 Academic credits receive an Associate of Applied Science (AAS) Degree.

There are approximately 150 active majors under advisement. One hundred and ten (110) Organizational Leadership Certificates and 65 Associate of Applied Science Degrees have been presented since 1998.

The Cohort

Graduates who waited until last to take the Administration course (MGT175) are the “Assessment Cohort.”

	Persons Earning a Certificate	Number who Completed the Assessment	Percentage of Graduates in the Cohort
May 2001	26	11	42%
May 2000	37	21	53%
May 1999	25	26	81%
May 1998	22	22	44%

Graduates were asked to read a Case Study and save a once prosperous business from bankruptcy. In their response, students were asked to:

- ◆ Identify the “Root Cause” of the problem.
- ◆ Set an Agenda for a meeting to discuss the problem.
- ◆ Develop an Action Plan.
- ◆ Identify Quantitative Progress Indicators.
- ◆ Identify Qualitative Progress Indicators.

- ◆ Reorganize the Management Team.
- ◆ Delegate job assignments as needed to improve performance.

Responses were compared to those on a matrix of ideal responses. Of all members of the May 2001 cohort...

- ◆ 55% were able to identify the root cause of a problem.
- ◆ 73% were able to set a business meeting agenda.
- ◆ 80% were able to develop an action plan.
- ◆ 80% were able to establish quantitative indicators
- ◆ 80% were able to establish qualitative indicators
- ◆ 80% were able to reorganize the management team.
- ◆ 82% were able to delegate job assignments.
- ◆ 44% of AAS Degree recipients planned to transfer to a University.

Estrella has chosen to assess the extent to which students are able to Think Critically and Communicate. Accordingly the eight assessed abilities were grouped into two categories and average percentage of graduates who met each standard were calculated.

Communication Abilities

- ◆ Set an Agenda
- ◆ Reorganized the Management Team
- ◆ Delegated Job Assignments

When viewed this way 79% of the Cohort demonstrated Communication Competence.

Critical Thinking Abilities

- ◆ Identify the Root Cause
- ◆ Develop an Action Plan
- ◆ Establish Quantitative Measures
- ◆ Establish Qualitative Measures

When viewed this way 74% of the Cohort demonstrated Critical Thinking Competence.

Results of the Organizational Leadership program assessment are posted on-line. Go to <http://www.emc.maricopa.edu/faculty/bradley/>

organizational_leadership for details.

Instructional Computing

Instructional computing is in the early stages of development of assessment tools across its programs. Faculty determined that they wanted to first do a pilot assessment in Microsoft Certification before expanding to other programs.

Student Academic Achievement Assessment Instrument – Microsoft Certification

The tool used by Instructional Computing was developed by the Instructional Computing Division and is used to measure critical thinking and communication skills in the Microsoft Certified Systems Engineering Program (MCSE). In the assessment document, students must answer eleven scenarios in which they are asked to:

- ◆ understand real-world networking problems
- ◆ think about solutions to those problems
- ◆ select appropriate networking solutions to those problems
- ◆ construct written answers utilizing terms that they understand and are understood by others in the areas of networking.

In October 2001, the assessment tool was revised to reflect changes in the MCSE certification requirements. The new assessment will be given in spring 2002.

The Cohort

The cohort consisted of completers of the Microsoft Certified Systems Engineering Program in the fall 2000 semester.

Critical Thinking and Communication Abilities Results:

- ◆ Because of the small numbers assessed, no conclusions regarding the assessment could be drawn.
- ◆ Only seven of a cohort of forty students completed the assessment.

As a result of the assessment, faculty will:

- ◆ Conduct pilot assessments using both the pretest and posttest using the modified Microsoft Systems Engineering Assessment.
- ◆ Faculty will need to identify or develop an additional program assessment tool.

Workforce Development Institutional Effectiveness Measures

FINDING **Estrella Mountain's Workforce Development curriculum is meeting the needs of its students and employers.**

The following key results were identified from the fall 2001 Workforce Development Key Stakeholder Continuous Improvement interview.

Number of Occupational Degree and Certificate Program Completers

- ◆ The number of occupational certificate and degree programs has increased from 7 programs in 1996-1997 to 24 programs in 2001-2002.
- ◆ The number of occupational degrees and certificates issued to students by Estrella Mountain has grown consistently through the 1999-2000 school year. Estrella Mountain issued 184 certificates and occupational degrees to 158 unduplicated students for the 1999-2000 school year. This compares to just 77 certificates and occupational certificates issued to 70 unduplicated students for 1998-1999. Early data for 2000-2001 indicate slowing growth and a possible slight decline. So far 152 certificates and degrees have been issued for the 2000-2001 school year. The 2000-2001 number will increase slightly as former students apply late for certificates and degrees that they earned last year.
- ◆ The most popular occupational certificate areas are Cisco (Network Administration), Organizational Leadership and Total Quality Management. The Microsoft System Engineer and Microsoft NT Product Specialist have fewer completers primarily because these two programs are relatively new and they have also been negatively af-

ected by recent changes in industry certification requirements imposed by Microsoft. The Microsoft Product Specialist Certificate has experienced a decline in the number of community college awards in the 2000-2001 school year (the number of certificates declined from 13 in 1999-2000 to just 4 in 2000-2001). It is important to note here that the MCSE certification requires substantially more courses than does the CISCO certification.

- ◆ The Network Administration Cisco program now generates the largest number of certificate completers. In 1999-2000, 50 students completed the Network Administration certificate.
- ◆ More occupational certificates are issued than two-year degrees. Two-year occupational degrees represent 14% of total occupational awards, while occupational certificates represent 86% of the total awards conferred.
- ◆ While the majority of occupational awards are certificates, there has also been growth in the number of two-year degrees. In 1998-1999 just five students completed an AAS. By 2000-2001 this number increased to 21 students. This growth is directly attributed to the Organizational Leadership Program that accounts for 16 of these 21 degrees. The other 5 degrees are scattered across technology areas.
- ◆ The vast majority (more than 90%) of Estrella Mountain degree program graduates and certificate completers are employed one year after graduation. A large majority of these completers are also employed full-time (86% for certificate completers and 91% for 2-year degree graduates). While it's true that there are high employment rates associated with Estrella Mountain occupational graduates and completers, it needs to be noted that most students were employed prior to completing a program.
- ◆ Currently, Estrella Mountain's credit based certificate programs tend to serve students who are interested in increasing their job skills for their current employment. The most recent follow-up surveys of Estrella Mountain certificate completers indicate that the majority (59%) reports that the training they received in their program of study helped them improve their job skills. However, only a small minority of completers reports that their degree or

certificates helped them obtain a new job.

- ◆ As the number of AAS 2-year degree completers has grown, so has the percentage of these graduates reporting job related benefits. See the table below for more details.

EMCC AAS Degree Completers	1997-1998	1998-1999	2000-2001
Degree helped to obtain employment	0%	0%	27%
Degree helped to get a promotion	20%	25%	27%
Degree helped to obtain better pay	0%	0%	36%
Degree helped to improve job performance	60%	50%	64%

- ◆ While more AAS degree completers are reporting job related benefits, there is a concern with certificate completers. Estrella Mountain continues to have more students complete certificates; however, the percentage of certificate completers reporting job related benefits has not increased. The most recent survey shows that a smaller percentage of certificate completers reported job related benefits between 1998-1999 and 1999-2000. The table below illustrates these differences.

EMCC Occupational Certificates	1997-1998	1998-1999	1999-2000
Certificate helped to obtain employment	14%	19%	2%
Certificate helped to get a promotion	11%	17%	2%
Certificate helped to obtain better pay	22%	31%	14%
Certificate helped to improve job performance	61%	83%	59%

- ◆ Follow-up surveys from the 1999-2000 school year indicated that 36% of AAS degree completers and 21% of Organizational Leadership Certificate completers reported that their degree or certificates helped them obtain better pay. These two areas had the highest percentage of increased pay responses among all occupational program areas.

- ◆ With respect to obtaining new employment, the most recent follow-up surveys conducted during 1999-2000 completers indicate that more than 1 in 4 (27%) AAS degree completers reported that their degree helped them obtain new employment. The Cisco (Network Administration) program was the only certificate program to have completers that reported that the certificate helped them get a new job. It should be noted that most students were already employed prior to completing their programs.
- ◆ The Microsoft and Cisco certificate programs had the highest percentage of employment that was “directly related” to their program of study. However, these areas also had the highest rates of “not related” responses because there were very few students reporting “somewhat related” responses. This indicates that these program areas are very targeted to specific career fields (either they are employed in the field or not). The high percentage of “not related” responses may indicate that many students are not currently placed in employment that takes advantage of the skills they learned in their program of study. Other occupational programs like Total Quality Management and Organizational Leadership received the highest percentage of “somewhat related” responses because these programs can apply to a greater number of career fields than the technology related programs.
- ◆ When asked if students met their objectives related to earning a degree or certificate, the certificate program areas of Organizational Leadership (100%) and Total Quality Management (82%) had the highest percentage of completers reporting that their objectives were met. The program areas with the lowest percentages of students reporting their objectives were met include AAS degree programs (36%), the Microsoft Certificate programs (57%), and Cisco (60%).
- ◆ Mean salary figures aren't yet available that compare salaries at the start of a program compared to one year after. Self-reported salary figures are reported using one-year follow-up surveys. The most recent data available is for the 1999-2000 completers. The mean salary for full-time employed respondents for certificate completers was \$37,245 (up 3%). The mean full-time salary for AAS employed respondents was \$27,383 (down 7%).

- ◆ All respondents to the 2000-2001 Estrella Mountain Workforce Partnership survey reported that the College met or exceeded the anticipated benefits from the partnerships. Estrella Mountain has a long history of meeting expectations of its business partners.

Program Review

In 1998 Estrella Mountain developed guidelines and criteria that established a program review process. The process outlines a cyclical review of programs across the entire college including both instructional and non instructional programs. (Please see document located in resource room.)

WORKFORCE DEVELOPMENT STRENGTHS AND CHALLENGES

Workforce Development Strengths

- ◆ Estrella Mountain continues to expand its occupational certificate and degree programs. The college has increased its offering to 24 certificate and degree programs from 7 in 1996-1997.
- ◆ The number of completers in certificates and occupational degrees has grown significantly in recent years.
- ◆ While the number of two-year occupational degrees issued is still small at 21, the number of degrees has grown significantly in the last two years.
- ◆ The vast majority of completers from the Total Quality Management and Organizational Leadership Programs report that their objectives were met.
- ◆ The results of academic assessment in workforce development are shared with academic division chairs and division members who determine the implications of assessment results for the continuous improvement of teaching and learning.

Workforce Development Challenges

- ◆ Not all occupational programs have formally implemented academic assessment at the program level.
- ◆ Programs in technology such as Cisco Network Administration and Microsoft Product Specialist have high percentages of employment that is not related to their field of study. This may indicate a need for enhanced internships and job placement for these program areas.
- ◆ The growth of degree and certificates in the occupational areas slowed in 2000-2001.
- ◆ Estrella Mountain's program review cycle needs to be realigned.

WORKFORCE DEVELOPMENT RECOMMENDATIONS

- ◆ As the number of occupational programs increases, Estrella Mountain will need to increase the number and effectiveness of its occupational program advisory groups.
- ◆ All occupational programs need to implement formal systems of assessing academic achievement at the program level.
- ◆ Estrella Mountain should strengthen its job placement and internship programs to increase the percentage of students working in fields related to their training.
- ◆ A better system to track the goal attainment of students not seeking degrees or certificates needs to be developed.
- ◆ Estrella Mountain has just recently taken over administrative responsibility for the Southwest Skill Center and is just starting to integrate the Skill Center in its institutional effectiveness and student academic achievement programs.
- ◆ The formal program review cycle should be established including timelines for each program.

MISSION GOAL: STUDENT SUPPORT SERVICES

In the course of evaluating the extent to which Estrella Mountain is accomplishing its educational and other goals, the Criterion Three Team reviewed pertinent support services and program initiatives. The review resulted in the following findings:

- ◆ Providing quality services and resources that meet the needs of students and support learning is one of the six mission goals of the college.
- ◆ Student Services provides a wide array of services that are designed to support student success and learning.
- ◆ Students report on the Noel – Levitz Student Satisfaction Inventory that they are satisfied with the registration effectiveness provided at Estrella Mountain at levels similar to other 2-year colleges.
- ◆ Students report on the Noel – Levitz that they are satisfied with the advisement / counseling services provided at Estrella Mountain and we are exceeding their expectations.

FINDING Students services at Estrella Mountain effectively support the institution’s mission and mission goals.

On April 28, 1998, the Governing Board approved a new Estrella Mountain Statement of Mission and Goals. One of the changes was the Student Support Services Mission Goal that states Estrella Mountain will “Provide quality services and resources that meet the needs of students and support learning.”

A new organizational structure that reflected this commitment to Student Services was also implemented. A senior management position, Dean of Student Services position, which reports directly to the President, was appointed in May of 1998 (See Organizational Chart in the Resource Room). The Dean and the Associate Dean of Student Services provide leadership for the wide array of student services and program initiatives that support student success.

Though most student support services are centered in Komatke Hall, additional student support services are offered through information resources, and student learning centers.

One-Stop Advisement & Enrollment

According to the 1997, *Federal Benchmarking Consortium Study Report on Best Practice in One – Stop Customer Service*, in the new one- stop paradigm, “all of a customer’s business can be completed in a single contact be it face to face or via phone, fax, internet, or other means. One-stop customers do not have to hunt around, call back, or repeatedly explain their situation. One-stop customer service is convenient, accessible, and personalized.” The best one-stop organizations recognize that customers want fast, seamless, convenient, and consistent service. Services from the customer perspective also require cross – functional teamwork thinking together, planning together, and doing together.

Therefore, student services staff initiated a change in the division to look at what the students needed, and what the organization needed in return to prepare the students each semester to enter the classroom. After some evaluation and consultation with other institutions, it was apparent that one way to improve service and avoid wasted time for the student and staff was to focus on providing a cluster of services. This clustering should avoid having students being shuffled from one location to another and meeting with two or three staff members. Many have referred to this concept and design as the “one-stop” model.

To achieve our goal of implementing one-stop student services, Estrella Mountain created three new positions that support the one-stop model. These positions are: Coordinator Student Services, Student Services Specialist, and Student Services Technician. These positions provide the services of the major functions within the student services area: admissions; placement testing; academic advisement; providing initial financial aid and veterans benefit information; registration; and referrals to other required student services.

The implementation of the One – Stop model began during the fall semester of 1999. Examination of the fall 1999 and spring 2000 Advisement Sessions illustrates the impact of the implementation of the One-Stop Model (see Resource Room). Examination of the Spring 2000 semester advisement sessions indicates a definite change in the advisement sessions. The implementation of the initial cadre of one-stop staff results in a dramatic change in their contribution to the ad-

visement function. The One-Stop Advisors handled nearly fifty percent of the advisement sessions. This refocusing of advisement services allowed the managers to focus on the primary areas of their responsibilities. Their involvement went from providing 52% to 16% of advisement sessions.

The implementation of the One-Stop enrollment services has positively impacted the delivery of advisement. During the 2000 – 2001 academic year, over 9,700 students received some form of academic advisement. The Estrella Mountain One – Stop Student Services program has won several awards which can be found in the Resource Room.

Admissions & Records Services

In addition to the enrollment functions performed at the one - stop area, the College's Admission and Record Services provides the following services: student admissions, verification of residency, registration, drop / add and other schedule adjustments, transcript requests and evaluations, enrollment verification, grade roster distribution and posting grades, process student id cards, vehicle registration information, and process and maintain records for all students. Students participate in registration activities in person and they also can register via the Web, fax, and phone.

Course Assessment and Placement Services

The Maricopa Student Assessment and Course Placement policy is shaped by two important concepts. First, academic achievement is directly related to the quality and amount of academic assessment and proper course placement students receive before their enrollment and during their college experience. Second, a commitment to provide opportunities for a successful academic experience for students is essential.

Students are required to complete placement assessments under the following conditions:

- ◆ The student is taking his or her first college credit English, reading and / or math course, or any college course for which English, reading or math is a prerequisite.

- ◆ The student is pursuing a degree and does not have current valid district approved placement assessments on file or does not have previous college credit in English, reading or math.
- ◆ The student does not have a high school diploma or GED, and is applying for federal financial aid.
- ◆ The student for whom English is not the primary language is required to take a test of English proficiency.

During the 2000–2001 academic year, 3035 students took part in ASSET Placement test and 229 students took the CELSA test through the assessment services. Additionally, 231 passed and completed their GED and of these approximately 25% of these enrolled at Estrella Mountain.

Each spring, the Coordinator of Advisement Services meets with the members of the English, Developmental Education, and Science and Math divisions, the Director of Institutional Planning and Effectiveness, and the Associate Dean of Student Services to evaluate the effectiveness of course placement. During the 2000 spring semester, math faculty requested that students requesting a waiver of course placement results be sent to math faculty for the purpose of advisement. During the 2000–2001 academic year, 164 students requested the course placement waiver.

Career Development, Job Posting & Educational Planning

Career Development, Job Posting and Educational Planning activities are facilitated and coordinated through Counseling Services. Counseling Services/Career Center seeks to help students and community members take **AIM** on their futures.

Assess skills, abilities, personal values, and vocational interests
 Investigate college majors, training requirements, occupational industries and job descriptions
 Market skills, abilities and education to help achieve the desired job/career through developing winning resumes, cover letters and interviewing techniques.

Students are offered the following career development and educational planning services at Estrella Mountain:

- ◆ career development activities (career counseling, workshops, courses, career fair), which allow students to identify and explore educational and occupational opportunities, make decisions, and set goals.
- ◆ Career development and life planning services via the on campus Career Services Office or through the interactive online career center (<http://www2.emc.maricopa.edu/kilduff/cr.htm>).
- ◆ assessment services (internet, paper), which allow students to examine interests, abilities, values, and learning styles.
- ◆ courses such as: Career & Personal Development, Leadership Development, Orientation for College Success, and First Year Experience.
- ◆ workshops designed to provide students the information and skills needed to make decisions, explore life options, and academically succeed.
- ◆ career and job fair opportunities with local employers from the greater West Valley area.

The development of the Estrella Mountain' One Stop model has encouraged students to articulate career goals. As a result requests for career counseling increased 100% from 1998 when Student Services operated under another model to 1999 and the implementation of One-Stop. Since that time, requests for career counseling has steadily increased 15-20% each semester.

Estrella Mountain did not score below the national average on any of the Noel Levitz 2001 composite scales; however, Career Services was identified as an opportunity for improvement. The survey identified job placement and the development of internships and practical experience as areas for improvement within the career services area. Stakeholders from the fall 2001 Workforce Development Continuous Improvement Interview also identified the need for expanded career services and internships. The following two initiatives have been implemented that should have an impact on the job placement and the internship opportunities:

- ◆ The ‘Maricopa Recruiter’ (www.maricopa.edu/recruiter) is a job search engine that matches job candidates with employers based on measurable competencies. This is a free system, Internet accessible 24 hours a day. Both students and employers create profiles that include skills and competencies. Maricopa Recruiter then notifies each group of either a job opening or a qualified applicant. The college had over 1,100 hits on the Maricopa Recruiter. Continuing education for students regarding the Maricopa Recruiter should impact the students need for assistance with job placement
- ◆ Development of Career Pathway Programs, which include internship experiences. Career Pathway programs provide students with a clear articulated program leading to a specific career field. The first of these career pathway programs to be developed is the inspire.teach program.

Career Pathway Programs (inspire.teach)

Inspire.teach is a 2+2+2 program that supports and encourages the choice of teaching as a profession. The program exists to increase the number of diverse professionals within Arizona’s teaching force and reflects a commitment among secondary, community college, and university partners to inspire students from underrepresented groups to explore, pursue, and excel in teaching careers.

The program targets high school and community college students. The four West Valley partners currently include: ASU West, Estrella Mountain, Agua Fria Union High School and Tolleson Union School District. Through a network of experiences and support services—field trips, workshops, counseling sessions, and internships—students have the opportunity to explore and evaluate the benefits and challenges of the teaching profession. The program helps clarify the teaching career choice, identifies financial resources for a college education, and provides professional and peer support. Underrepresented, economically disadvantaged, and first generation college students are especially encouraged to participate.

Thirty-six students were accepted into the inspire.teach program during the initial year of the 1998 – 1999. Currently, there are over 150 students participating in the inspire.teach program. The program will graduate its first students from ASU West during the fall 2002 semester. The inspire.teach program was awarded the WESTMARC – Best of the West First place Award – Higher Education for the year

2000.

The inspire.teach program serves as the prototype for several additional variations. The additional areas currently under development include: administration of justice / law enforcement, business, and science and mathematics. During the 2000 – 2001 academic year, the college hired a Coordinator for Career Pathways to facilitate the introduction of new programs.

Child Care Assistance Program

During the 1998 – 1999, the College created a task force to revisit the need for child care services. The task force studied child care trends, conducted a student survey, identified availability of local child care providers, and examined information on Child Care Services at the other Maricopa Colleges (See Child Care Options '99 – Document no. 21, July 1999 in the Resource Room).

Using the information gleaned from the child care research and survey, the task force identified and evaluated multiple short and long – range options. The options included both traditional and nontraditional responses to the issue. Some examples of the options were: offering a child care voucher program with local providers, building a college-based center in Phase III, increasing distance learning options and contracting with 3rd party vendors.

The Child Care Assistance Program provides a subsidy to students who are using licensed child care providers and have a demonstrated financial need. The Program awards the funds based on the number of credits for which a student is enrolled and the number of children in the household. The Program has been in operation since the 1999 – 2000 academic year. Approximately 55 students participate in the program each semester. Evaluations of the program indicate that students are satisfied with the program.

The advantages of the Child Care Assistance Program is that it provides students the ability to choose their own provider at a similar or lower cost than on-campus child care centers. While child care facilities are not available on campus, this does not appear to be significant issue for students. Because Estrella Mountain does not offer on-campus facilities, it was expected that the Noel Levitz question related to

on-campus child care programs received low satisfaction ratings for the survey. However, this item also receives low importance ratings. The Noel Levitz survey did not address the issue of child care assistance outside of offering a child care center on campus.

Counseling Services

Counseling services faculty strive to support an environment that encourages developmental growth for Estrella Mountain students and communities through counseling services and instruction to support educational and personal goals. The division's vision is committed to assisting students to "P.A.V.E. Their Paths to Success."

Personal Growth through Counseling
Academic & Educational Planning
Vocational Assessment & Development
Excellence in Life Management

The division's mission and vision is achieved by providing services through: CPD (Counseling & Personal Development) courses, counseling and educational planning, partnership programs (Genesis West, Achievement in Math and Science (AMAS)), career assessment & development, New Student Orientations, Disabilities Services & Support, workshops for student development and supporting the college's retention and student success initiatives. A more detailed division description is available at the beginning of this chapter.

Financial Aid and Veterans Services

The Financial Aid staff processes and awards financial aid to students and monitor the academic progress of students who receive financial aid and / or Veterans benefits. Staff members help financial aid students complete applications, answer questions about the processing and awarding of their financial aid packages, and offer workshops and seminars to help students apply for grants (Federal Pell Grant, Federal Supplemental Opportunity Grant, State Student Incentive Grant), loans, scholarships, and work study opportunities.

Workshops and seminars are not only held on campus, but they are also offered at high schools, community libraries, and for special populations as requested. An example of these workshops is the College Goal Sunday, which

is held following Super Bowl Sunday; at this workshop prospective students and parents are provided with a line-by-line assistance with the Free Application for Federal Student Financial Aid (FAFSA).

Estrella Mountain students and potential students are also able to utilize the Web to receive information about financial aid and veteran's benefits and to conduct scholarship searches. The Financial Aid and Veteran's Services web site is located at http://www2.emc.maricopa.edu/FA/Home_page-main.html.

Veteran students and / or their dependents are provided with enrollment certification requests, tuition deferments, and monitoring of academic progress services.

These services are provided for Veterans who are eligible for the following programs:

- ◆ Montgomery GI Bill
- ◆ Montgomery GI Bill-Selective Reserve
- ◆ Veterans Educational Assistance Program (VEAP)
- ◆ Survivors and Dependents Educational Assistance Program
- ◆ Veterans Vocational Rehabilitation

Semester	Total Student Headcount	Financial Aid Headcount	% Of Headcount
Spring 1996	2140	422	19.7
Fall 1996	2677	602	22.5
Spring 1997	2668	602	22.6
Fall 1997	3007	686	22.8
Spring 1998	3164	686	21.7
Fall 1998	4222	687	16.3
Spring 1999	3694	691	18.7
Fall 1999	4400	886	20.1
Spring 2000	4144	975	23.6
Fall 2000	4300	990	23.0
Spring 2001	4406	953	21.6
Fall 2001	4958	1057	21.3

The growth in student headcount has been accompanied by even greater growth in the numbers and percentages of students participating in financial aid programs.

As a result of our initial accreditation, the College has been able to participate in the Federal Financial Aid programs. Estrella Mountain's students have received \$2,207,491 in grant, loans, and work-study funding.

In addition to Federal Financial aid, the college has been very active in developing scholarship opportunities. The Maricopa District and Estrella Mountain College have also committed to assisting students that have a financial need and do not qualify for Federal Financial Aid. Approximately \$300,000 additional funds are awarded each year through these scholarships.

Genesis West

Student Services staff provide leadership and support for Genesis West, a program designed to meet the needs of the West Valley communities and the youth who have dropped out or are at risk of dropping out of high school. The goal of the program is to provide these youth with the opportunity to complete their high school diploma and pursue their goal of post secondary education. A program for new beginnings, Genesis West is a partnership between Agua Fria, Buckeye, Dysart, and Tolleson High School Districts.

The Genesis West partnership allows students to earn both high school and college credit to complete their high school diploma while attending full time at Estrella Mountain. The program covers the full cost of the college tuition and books. The program is cost effective because the high school districts and the college district have shared the costs.

Students must be referred to the program from their high school program liaison. They are accepted to the program through an application process and an interview. Students applying to the program must be motivated and willing to commit to their future success, attend all classes and program activities, maintain good academic standing and contribute positively to their community. The students are mainstreamed into the Estrella Mountain campus and take an average

of 12 college credit hours each semester.

Enrollment has grown significantly since the program began in the fall of 1994 with 19 students and peaked with 90 students in 1998. To date the program has had 113 students who have completed their high school diploma. Nineteen of these students have completed an Associate Degree from Estrella Mountain and 1 has completed a university degree. Of the 34 completing their high school requirements in spring 2001, 51% of them remain at Estrella Mountain working towards their Associate Degree.

New Student Orientation

New Student Orientation is a retention tool designed to connect students to college services and staff that can help them be successful. The program follows practices which are consistent with those outlined by the National Orientation Directors Association (NODA) and the Council for the Advancement (CAS): Standards and Guidelines for Student Orientation Programs. The program has evolved over the years based upon student feedback. Currently, new students are advised and registered for a non-credit (free) section of the Estrella Mountain 101, New Student Orientation, which takes place the week before classes start. The program is approximately four hours in length. During that time, students are given valuable information about college resources and success skills. Presentations and topics include academic advising, financial aid, student success skills and resources (college study centers), instructor's expectations, information resources (computer accounts) and campus tours.

Recruitment

Student recruitment is achieved through the involvement of many areas of the college. Faculty, student service, advancement/marketing and research staff all contribute to recruiting targeted groups of students to the college. (www.emc.maricopa.edu/ie/resources/emc_scan2001.pdf) (environmental scan and fact book 2001)

A primary focus for Student Service Staff is high school recruitment. Ten high schools serve as the major feeder schools in western Maricopa County. Liaisons are assigned to each high school and staff participates in over 150 individual visits to high schools during the academic year.

Free summer classes for recent high school graduates, student support programs like inspire.teach and AMAS provide summer bridge programs and activities for youth to make the transition to higher education more comfortable and convenient.

Student Success/Retention Initiative

As reflected in the college's mission and service strategy, student success is at the heart of everything the college does. Promoting student success and retention are the primary goal of the Student Services Staff. During the 1997 – 1998 academic year, the college created a Coordinator of Student Success position. This position was not only new for the college it was also new for the Maricopa Community College District.

The position was created to provide college – wide leadership for Student Success and Retention Efforts. This position coordinates the implementation of the Estrella Mountain Student Success Plan. The position is responsible for designing a comprehensive student success program; facilitating the development of success and retention plans with faculty and other college divisions; and to provide retention services to 'at – risk financial aid recipients' that have a history of academic difficulty.

The Early – Alert program provides faculty the opportunity to refer students who are potentially at – risk academically to the Student Success Coordinator. Faculty are encouraged to refer students who are not performing successfully in class. The student services staff then contacts the student. Students may be referred because of attendance issues, classroom behavior, and / or performance. The referrals do not have to be formal; many of the referrals are received via electronic mail, telephone calls, or as a result of a conversation.

Student Life

The student life programs complement Estrella Mountain academic programs and enhance students' overall educational experience by development of, exposure to, and participation in social, cultural, intellectual, recreational, and governance programs. The activities co-

ordinated by the Office of Student Life are: student governance, clubs and organizations; service learning; America Reads, and general student life activities such as Cultural Awareness / Diversity Celebrations, Women's Month Activities, Holiday Celebrations, Spring Fling, and Assessment Day.

The Interclub provides the students the opportunity to participate in the college's governance. The Interclub focuses on the development of leadership values and skills. The participants are selected from the membership of the following campus clubs and organizations: Black Student Union, Christian Student Association, Future Teachers Association, Leo Club, Masque and Gavel Club, M.E.Ch.A club, and Phi Theta Kappa as well as from students-at-large.

Service Learning opportunities are offered in conjunction with classroom, campus wide, and student service components. Over 600 students were involved in service learning projects via their classrooms. Activities range from serving at senior citizen centers, volunteering at food shelters, participating in story telling at elementary schools, and participating at social agencies as volunteers. Students also support the greater community by participating in campus wide activities such as: United Way Day of Caring, Tolleson Pride Day, Adopt a Family, and Canned Food Drives.

Approximately 30 students eligible for Federal Work Study participate in the America Reads Program. The students provided over 1000 hours of free tutoring to elementary school students. In addition to providing tutoring to local elementary schools, the program provides students interested in teaching the opportunity to intern in a school setting.

The Office of Student Life also coordinates with clubs, organizations, and campus wide leadership to promote the college's value of diversity. Activities and celebrations are held to celebrate Black History Week, Cinco de Mayo, Women's Week, and International Student Week. Estrella Mountain students and members from the West Valley communities are invited to attend these celebrations.

Transfer Services

Helping students prepare to transfer to other two-year or four-year

colleges or universities is the major goal of the Estrella Mountain Transfer Center. The transfer center provides students with access to catalogs, schedule of classes, and information on the major in-state colleges and universities. The transfer center computer websites have been bookmarked to directories of colleges and universities, educational planning guides, and scholarship information for students to use. All of Arizona's in-state universities visit the Estrella Mountain campus at least once per semester. Several of the major feeder universities have assigned staff to weekly visits. Currently, university visitors set up tables in the campus mall or in the student services visitors area, however, in the new Komatke expansion there will be space specifically identified for the transfer universities. In addition to the general university representatives, career pathway representatives from the ASU West College of Education also provide targeted services. Services include student and parent orientation workshops, campus tours, visitation by faculty, transcript evaluations, and opportunities to participate in appropriate conferences.

Title V – Strengthening Hispanic Serving Institutions

As a result of the college's NSF Science and Math grant Estrella Mountain was recently awarded a Title V – Developing Hispanic Serving Institutions Department of Education grant. The five-year grant funds of \$2,241,606 are for the period of 10/1/2001 to 9/30/2006.

The Developing Hispanic-Serving Institutions (HSI) Program assists eligible institutions of higher education in improving and expanding their capacity to serve Hispanic and low-income individuals. Activities proposed in the Estrella Mountain Title V project will help the college to implement strategies that help Hispanic and other students overcome barriers that impede their access and successful participation in higher education. The Estrella Mountain Student Success Plan was integrated into the Title V Grant and a successful implementation of the Grant will positively impact the goals found in that plan.

The initiatives and activities that the grant is planning to implement are the Best Practices identified at the 'National Symposium on Best Practices for Student Achievement in Science, Mathematics, Engineering, and Technology in Two-Year Hispanic-Serving Institutions'. This symposium was supported by the National Science Foundation and hosted by Estrella Mountain on April 27-28, 2001.

The grant recognizes that many Hispanic students in Estrella Mountain's geographic area are struggling academically and dropping out of K-12 schools. The 2+2+2 programs reach out to students while they are still in high school. The programs will use a model that has proven to be very successful in helping participating students in high school, graduate and progress to higher education at a much higher rate than their nonparticipating peers. The proposed Summer Bridge Program will provide college readiness support to participating students, increasing the likelihood of a successful transition to postsecondary education.

Failure to succeed in Math, English, and Science "gate keeping" courses denies educational advancement and career opportunities to many students. Curriculum/delivery restructure and recitation sections for supplemental instruction, use of NovaNet and similar learning systems software will help students to overcome learning difficulties and master competencies needed to progress. In addition, the library collection will be enhanced through the purchase of books and media with Hispanic and African American focus.

Lack of access to technology is another barrier faced by many Hispanic students. The laptop computers earmarked for the use of the college students participating in inspire.teach will be critical in giving these future teachers enough "time on task" with the software programs to become proficient in the use of common software applications as they complete their class assignments and work on education-related projects with their peers and classroom teachers.

To increase access to low-income students, Estrella Mountain has been raising funds for scholarships. The Endowment to be created in this project provides a more long-range mechanism for the College to improve access and participation of Hispanic and other low-income students.

Finally a large proportion of Estrella Mountain's faculty is part-time. Increasing the technology skills of all of the faculty is very important for improving and enhancing the quality of instruction that all students are receiving.

Student Support Services Institutional Effectiveness Measures

Student participation and use of services is only one measure of effectiveness of service. Therefore, the college has identified Core Indicators of Effectiveness measures to evaluate the overall effectiveness of the Student Support Services Goal. The Noel – Levitz Student Satisfaction Inventory was selected as the instrument to gather satisfaction data. The inventory allows the students to respond to importance of the category and satisfaction with Estrella Mountain’s delivery of the service. In addition to evaluating the importance and satisfaction, national average scores are provided so that the college can compare their results with other 2-year public community colleges.

Importance score ratings reflect how strongly students feel about the expectation (the higher the score the more important it is to a student). Satisfaction ratings show how satisfied students are with the college meeting their expectations (the higher the score, the more satisfied the student).

Performance gap scores (importance rating minus satisfaction rating) show how well the college is meeting expectations overall. A large performance gap score (1.5) indicates that the college is not meeting student’s expectations, whereas a small or zero gap score (.50) indicates that the college is meeting the student’s expectations, and a negative gap (-.25) indicates that the college is exceeding student’s expectations. (Excerpt from Noel- Levitz Student Satisfaction Inventory, Copyright 1996)

Satisfaction with Student Support Services and Resources

FINDING: Estrella Mountain students scores for student satisfaction were higher than the national average for all Noel-Levitz survey categories.

Estrella Mountain identified the following core indicators of effectiveness for student support services. Estrella Mountain’s mean student satisfaction scores on the Noel-Levitz Student Satisfaction Inventory as compared to the national average scores related to:

- ◆ Academic Advising/Counseling Career Services
- ◆ Academic Support Services Registration Services
- ◆ Veterans Services Safety and Security
- ◆ Re-Entry Services Orientations
- ◆ Admission and Financial Aid
- ◆ Academic Advising/Counseling Career Services
- ◆ Academic Support Services Registration Services
- ◆ Veterans Services Student Life
- ◆ Safety and Security Re-Entry Services
- ◆ Admission and Financial Aid Orientations

Noel – Levitz Student Satisfaction Results

The 1999 Noel – Levitz Student Satisfaction Inventory demonstrated how satisfied our students are compared to other community, junior, and technical colleges in relation to the following student service categories:

- ◆ Academic Advising/Counseling Career Services
- ◆ Academic Support Services Registration Services
- ◆ Veterans Services Student Life
- ◆ Safety and Security Re-Entry Services

Estrella Mountain students demonstrated higher satisfaction levels than the national group for all of the following areas:

- ◆ Safety and Security
- ◆ Student Centeredness
- ◆ Campus Climate
- ◆ Concern for the Individual
- ◆ Service Excellence
- ◆ Instructional Effectiveness
- ◆ Registration Effectiveness
- ◆ Admissions and Financial Aid
- ◆ Responsiveness to Diverse Populations
- ◆ Academic Services
- ◆ Academic Advising / Counseling

Results from 1999 indicated that Academic Advisement / Counseling had the highest performance gap at 0.93. However, this performance

gap is still within the standard established for this core indicator, and the gap decreased to 0.88 in the Spring 2001. The national group mean performance gap was 1.29. Additionally, composite satisfaction scores for academic counseling and advising were higher during spring 2001 than the national average for other two-year colleges. This difference is statistically significant at the .01 error level.

Estrella Mountain's Spring 2001 composite scale scores were higher than the national average in all Noel Levitz categories. Eleven of the twelve differences were also statistically significant. The scale areas that exceeded the national average the most include Safety and Security, Academic Services, Student Centeredness, and Campus Climate.

The following tables illustrates that Estrella Mountain students are more likely to have their expectations met, have higher satisfaction levels, and are more likely to re-enroll than students at other 2-year institutions across the nation.

Noel-Levitz Student Satisfaction Inventory Summary Results

Summary Questions	Estrella Mountain Mean	National Comparison Mean	Mean Difference
So far, how has your college experience met your expectations? 1 Much worse than expected 7= much better than expected	5.10	4.64	0.46***
Rate your overall satisfaction with your experience thus far. 1=Not Satisfied at all 7 = Very Satisfied	5.84	5.34	0.50***
All in all, if you had to do it over again, would you enroll here? 1= Definitely Not 7= Definitely Yes	6.35	5.57	0.78***
*** Significant at the .001 level			

**Student Satisfaction Inventory Importance and Satisfaction
Means by Noel Levitz Scale Category**

Scale	EMCC Means			National Group Mean			Mean Difference
	4/2001			Community, Jr. & Tech. Colleges			(Satis.)
	Import.	Sat./SD	Perf. Gap	Import.	Sat./SD	Perf. Gap	Our Inst - Nat'l Group
Instructional Effectiveness	6.28	5.55/1.02	0.73	6.16	5.26/1.05	0.90	0.29 ***
Registration Effectiveness	6.26	5.57/0.96	0.69	6.12	5.25/1.04	0.87	0.32 ***
Academic Advising/ Counseling	6.22	5.34/1.25	0.88	6.10	5.06/1.29	1.04	0.28 ***
Academic Services	6.19	5.59/0.99	0.60	6.01	5.15/1.10	0.86	0.44 ***
Concern for the Individual	6.19	5.42/1.12	0.77	6.07	5.08/1.20	0.99	0.34 ***
Safety and Security	6.17	5.58/0.96	0.59	5.96	4.79/1.21	1.17	0.79 ***
Student Centeredness	6.10	5.62/1.06	0.48	5.92	5.19/1.13	0.73	0.43 ***
Campus Climate	6.08	5.52/1.00	0.56	5.93	5.12/1.05	0.81	0.40 ***
Service Excellence	6.06	5.44/1.00	0.62	5.91	5.06/1.07	0.85	0.38 ***
Admissions and Financial Aid	6.01	5.22/1.12	0.79	5.96	4.94/1.20	1.02	0.28 ***
Campus Support Services	5.44	4.86/1.17	0.58	5.4	4.79/1.12	0.61	0.07
Responsiveness to Diverse Populations		5.60/1.16			5.31/1.23		0.29 ***

Student Services Facilities Expansion: Komatke Phase II

Expanding enrollment and developing student service programs have resulted in the need for additional student and administrative services facilities. The one story expansion of Komatke Hall will provide approximately 30,000 square feet to satisfy the unique customer service needs of the one-stop enrollment process. The customer-driven model respects the need for multiple transactions to be performed at one point of contact. The new construction will accommodate a flexible environment to implement the need for personalized or self-service. The flexibility of space will also help to achieve maximum efficiency and effectiveness during peak and non-peak enrollment periods. Signage and way finding will be integrated to further assist students with the one-stop enrollment process. Increased student participation and leadership within campus activities have promoted the need for expanding student life areas. An open and inviting dining area and student lounge will provide the campus with a flexible atmosphere for a multitude of campus gatherings. The food service area will also house a culinary arts program. The retail space within the new campus bookstore will increase and provide students with more services. A central courtyard will allow Student Life areas to blend their interior spaces with the exterior environment. This indoor / outdoor relationship will provide an increase in usable space for campus activities, gathering and retail sales.

Student Information System Implementation Moving Toward a new Student Administration System – PeopleSoft

In September 1998, the Maricopa Governing board approved the move to a new student administration system. A student Information Commission (SIC) was charged to evaluate, recommend, implement, and assess a new student administration system.

Student Information Commission. Based upon the Commission's reaffirmation of a learner-centered, single student record system, and after considerable investigation, evaluation, and analysis of functionality and cost, the Commission voted unanimously for the Implement PeopleSoft option.

The new student administration system has many features which will complement Estrella Mountain's one – stop student services. The new system will allow student services to:

- ◆ Improve services so that students are online rather than in line. Students can register, receive financial aid information, and review academic records on line. This service can be provided 24/7.
- ◆ Communicate more effectively with students regarding degree information via a degree audit system.
- ◆ Provide the faculty, staff, and administrators with information so that they can make better enrollment management decisions.
- ◆ Allow greater collaboration through the sharing of information. Implementing a new district wide system involves extensive planning, training, and resources. Firm roll out dates for the implementation process have not been finalized. Information regarding the Student Information Commission will be available in the resource room and on the WEB at <http://www.maricopa.edu/sic/>.

Division of Information Resources

Support of teaching and learning is the primary function of this division. Resources and services provided are highlighted below.

Electronic full-text databases are a major component of the Information Resources collection. These databases consist of general periodical databases, as well as specialized databases in the Sciences, Arts, Computing, and Literature. In addition to subscription databases, a carefully selected and organized collection of Web-based resources can be easily accessed from the Information Resources web site. The print collection includes approximately 12,000 monographs, 75 magazines and journals, and five daily and weekly national and local newspapers. The collection also includes approximately 1200 videos and audio tapes to support instruction. ADA hardware and software is available for accessing all resources.

The Computing area of Information Resources offers personal computing support for the entire campus. The Commons presently houses

over 100-networked workstations, with each workstation providing access to local, regional, national and international instructional and information resources through the campus network and the Internet, on both the Windows and Macintosh platforms. Instructional support for students enrolled in Self-Paced courses is a primary responsibility of this area.

Services Offered:

- ◆ Instruction in accessing and using information resources
- ◆ Instruction in evaluating Web-based resources
- ◆ Assistance in accessing online resources
- ◆ Access to thousands of general academic and special periodicals
- ◆ Access to online library catalogs
- ◆ Access to an organized collection of Web-based resources
- ◆ Access to print, video and audio resources
- ◆ Assistance in the use of academic software
- ◆ Circulation of Reserve materials as requested by instructors
- ◆ Collaborative identification of resources for purchase
- ◆ Interlibrary Loan
- ◆ Photocopying
- ◆ Issuance of library cards to community borrowers
- ◆ One-on-one support in the use of academic and application software
- ◆ Access to computing resources including the Internet
- ◆ Self-Paced Program: orientation, administration, and instructional support
- ◆ Training sessions: software application-training sessions are provided in a variety of formats, individual, small group, workshop, and as scheduled by instructors.
- ◆ Support in accessing and using information resources
- ◆ Assistance in accessing online resources
- ◆ Multimedia support for developing instructional materials
- ◆ Remote access options
- ◆ Color printing

FINDING: Faculty and librarians share in the responsibility of emphasizing information literacy in all programs.

The American Library Association defines information literacy in the following statement.

An information literate person is able to “recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information.”

To help students acquire this ability, librarians provide instruction in the classroom upon request of a faculty member to teach the following skills: defining an information need, building a search strategy, locating information on the Web-based databases, locating books, using search engines effectively, evaluating information, citing information and locating information in specific subject areas.

Librarians assist students with research projects in the library that are assigned by the individual instructors. This is accomplished by providing one on one assistance in the use of online databases, the use of the online catalog, locating magazine and newspaper articles, citing information and in the development of research strategies.

Librarians and faculty have worked to provide access to quality resources on the Web through the library homepage. These pages list Web resources by discipline that are recommended as valid and quality resources for a wide variety of subjects.

Librarians and library staff work together cooperatively to provide access to the quality print and media resources for our students and faculty. In addition, interlibrary loan between the Maricopa Community College district libraries is offered. Reserve materials are selected cooperatively, and circulation policies are determined collaboratively by faculty and the library staff.

FINDING: Faculty and librarians collaborate on course development and in the development and implementation of policies guiding the collection of resources available to the learning community.

Library staff meet individually with faculty every semester to develop and implement policies concerning reserve materials. These policies include: access to reserve materials chosen by faculty for students, check-out or in-house use of materials on reserve, duplication of audio language tapes by students for the language classes and honors audio and video tapes for students in the Honors Program.

Faculty librarians work with classroom faculty to develop curriculum to meet the information literacy needs of students. Librarians provide classroom instruction in information literacy tailored to the needs of the class as identified collaboratively with the faculty member requesting the instruction. Librarians are part of a team that developed and are now implementing a course called 'First Year Experience' designed to assist students with a variety of needs such as career information, student success strategies and information literacy. For example, information resources is developing an information literacy module in collaboration with English as a Second Language faculty on this campus and geology faculty on a sister campus.

Other Student Support Services Initiatives

Estrella Mountain has a number of additional programs designed to help students to succeed.

Honors Program/Phi Theta Kappa

The Program at this date numbers 85 students, 43 of whom are Presidents' Scholars and 42 of whom are fee waiver or honors course only students. Twelve different high schools are represented among our presidents' scholars, demonstrating our wide service area. (Dysart HS, Agua Fria, Millennium HS, Maryvale HS, Trevor Browne HS, Tolleson Union HS, Buckeye Union HS, Westview HS, St. Mary's HS, Independence HS, Peoria HS, and Gila Bend HS) Two of our presidents' scholars are the product of home schooling. Thirteen of the 43 presidents' scholars are Hispanic, which is approximately 32%. That figure is close to the percentage for the college as a whole.

The program involves students in a great number of cultural activities. This past year, Honor's Students attended the Phoenix Symphony on 3 occasions, the Herberger Theater twice, the Forum lecture series for 6 speaker events, and a film night. In addition, students enjoyed a two-day trip to Los Angeles to visit the Museum of Tolerance, the Getty Center, and the Huntington Library and Museum. As well as a two-day trip to the Tucson area to visit the Biosphere and Kartchner Caverns. The Honor's program and Phi Theta Kappa hosted oceanographer Sylvia Earle in the fall 2001 and noted environmentalist Dr. Sandra Steingraber in the spring 2001.

Hispanic Serving Institutions Grant

Estrella Mountain Community College received a \$130,000 National Science Foundation Grant targeted at Hispanic Serving Institutions (HSI) to increase student success in the areas of Science, Math, Engineering, and Technology (SMET).

The Achievement in Math and Science (AMAS) Program began in the Spring of 2001 with the goal of piloting a mathematics recitation course (MAT 108) for Beginning Algebra through Calculus 1 and a Career and Personal Development course (CPD 100). The purpose of this pilot is to enhance student success in mathematics courses. In addition, first year Hispanic students from Estrella Mountain Community College were recruited to be in a Career and Personal Development Class. Eighteen students enrolled for the class and participated in various class exercises such as strategies for college success, career exploration and planning, scholarship and internship searches and many other topics that were of value to their first year experience. At the end of the semester students had developed a strong support system, familiarized themselves with the resources on campus, utilized the services of the Math and Writing Center and were confident in their ability to successfully complete college level course work.

The recitation courses were developed to enhance student learning by providing activities that encourage students to investigate course content more in-depth. Also, the courses were designed to allow participating students time to receive both individualized and peer tutoring. During the Spring 2001 semester, 18 students participated in the MAT 108 Recitation courses. From the original cohort of 18 students, 13 completed their math course and recitation course. 92% (12 out of 13) of the completers received a passing grade in their respective mathematics course. 54% (7 out of 13) of the completers received a grade of B or higher in their respective mathematics course. The data reflects the potential for structured enhancement of mathematics courses.

A Summer Bridge Program was implemented in the Summer of 2001. Graduating Hispanic students from the feeder high schools were immersed in an eight-week college experience. Students attended classes in math-

ematics (MAT 091, MAT 121, MAT 151, MAT 181) or science (GLG 101/103) as well as a Career and Personal Development class (CPD 100). Tuition was free and students received college credit for the courses they completed. The Career and Personal Development class introduced the students to the various resources on campus. Working closely with Estrella Mountain's faculty and staff the recent graduates also explored professional opportunities requiring strong skills in SMET related areas. The Bridge Program sponsored a career luncheon with scientists, engineers, mathematicians and statisticians to discuss how science and math courses applied to their careers. The students also had the opportunity to experience a university setting by touring the University of Arizona, and applications of science and mathematics in a research setting by visiting Biosphere2.

Twenty nine students participated in the program and all are college bound. Twenty six of the students enrolled in Estrella Mountain Community College courses.

Technology innovation in the Classroom

The Center for Teaching and Learning is one of the most innovative technology-based learning environments in the country. The center is a totally adaptable open plan classroom, learning, and multimedia environment. Every component of the center was designed to accommodate the changing needs in education. Its features include:

- ◆ Student Breakout Areas
- ◆ Adaptable Learning Environment
- ◆ State-of-the-Art Skyfold Dividing Wall
- ◆ Four-Oversized Projection Screens
- ◆ Multiple Video and Data Projectors
- ◆ High Fidelity Speaker System
- ◆ Portable Computer Technology

Instructors at Estrella Mountain are provided with technology to enhance classroom learning through the use of Blackboard. This software is accessible from any computer via the internet, allowing for more course flexibility. Blackboard provides a total "e-Education Infrastructure" for the College.

The Learning Support Centers of Estrella Mountain Community College

The Learning Enhancement Center (LEC), the Math and Writing Center (MWC), and the Science Support Center (SSC) at Estrella Mountain provide supportive, collaborative, and knowledgeable academic assistance to students, faculty and staff. The LEC is our oldest branch and has been in existence since the opening of Estrella Mountain in 1992. The SSC opened in September of 1999, when the Montezuma building expansion was completed. The MWC, our newest support center addition, opened in March of 2000. The MWC has now become the center of operations for Estrella Mountains' Learning Support Centers.

With regard to the use of the Learning Support Centers.

- ◆ Last year's service visitations were 6,938
- ◆ Peak days and times were Mondays, Wednesdays, and Fridays from 8:00 am until noon and 4:00 pm until 6:00 pm
- ◆ Average student visit lasted between 60 to 90 minutes
- ◆ Fall 2000 student satisfaction survey indicated that 95% of the respondents were satisfied with operational hours, availability of resources, and responsiveness of staff and tutors

Learning Communities

During Fall 2001, three teams of faculty began Learning Communities. The "Success Community" integrated Developmental reading and writing courses with a counseling course on study skills. The "Identity Community" integrated English composition, communication, and psychology courses. The "Service Community" integrated two communication classes that collaborated in Service Learning projects. These, or similar, learning communities are currently being planned for Spring 2002 and Fall 2002.

Service Learning

The College encourages all students to consider serving the commu-

nity through Estrella Mountain's Service Learning Program. Select individual instructors voluntarily add a service learning component to their courses. The service learning experience allows students to feel rewarded, to gain personal satisfaction, to feel responsible, and to experience growth.

America Reads

Estrella Mountain participates in the America Reads/America Counts Program. This is a Federal Work-Study Program that places college students into elementary schools, social agencies, Boys and Girls Clubs, and YMCA's to provide tutoring in either reading skills or mathematics to children. Tutors are paid completely from Federal Work-Study funds. The program is an opportunity for college students to learn first hand about the teaching profession as well as give back to the community. Since the 1998-99 Academic Year, Estrella Mountain has placed approximately 113 tutors in 15 school districts or agencies.

STUDENT SUPPORT SERVICES STRENGTHS AND CHALLENGES

Student Support Services Strengths

- ◆ Student services staff provides services that meet the needs of Estrella Mountain students as demonstrated by the results of the spring 1999- 2001 Noel – Levitz Student Satisfaction Survey. Estrella Mountain student's are more likely to have their expectations met, have higher satisfaction levels, and are more likely to re-enroll than students at other 2-year institutions across the nation.
- ◆ Student Services has developed a one-stop advisement and enrollment model that streamlines the enrollment process and makes it convenient for students.
- ◆ The new Student Services building, which is currently under construction, will provide the facilities to meet the growing student population; and will also provide expanded space for food and dining services, culinary arts program, book store services, and student life.

- ◆ Collaboration between library and teaching faculty ensures the library collection supports the curriculum and meets the learning needs of students.
- ◆ Library resources provide access to information in a wide variety of formats and media to address instructional needs and diverse learning styles and from remote locations.
- ◆ Students can receive research assistance both on campus and from remote locations.
- ◆ Estrella Mountain supports many diverse opportunities for student to take an active role in their learning experience.

Student Support Services Challenges

- ◆ As the student population grows and becomes more technologically proficient, the demand for remote access to resources will increase.
- ◆ Building collaborative relationships between student support services (advisors, librarians, etc.) and faculty in all disciplines needs to be an ongoing priority.
- ◆ As the college explores e-learning and distance learning delivery systems, the student services area must develop appropriate student services that respond to the needs of these learners.
- ◆ As the demand for services by disabled students increases the college will need to commit resources to hire staff to target this population.
- ◆ As the number of programs continues to increase, Estrella Mountain will need to continue to strengthen its career pathways, career placement and internships opportunities.

STUDENTS SUPPORT SERVICES RECOMMENDATIONS

- ◆ Increase collaborative efforts with faculty in developing instructional units that address information literacy and other student suc-

cess related issues.

- ◆ As the student services move into new facilities, staff training must be provided as new roles and relationships are created.
- ◆ Training opportunities must be provided to students as the automation of enrollment services increases
- ◆ Continue to expand and continuously review the library web site.
- ◆ Expand collaboration with faculty to evaluate student use of information resources.
- ◆ Continue to expand the diversity of learning opportunities for students.

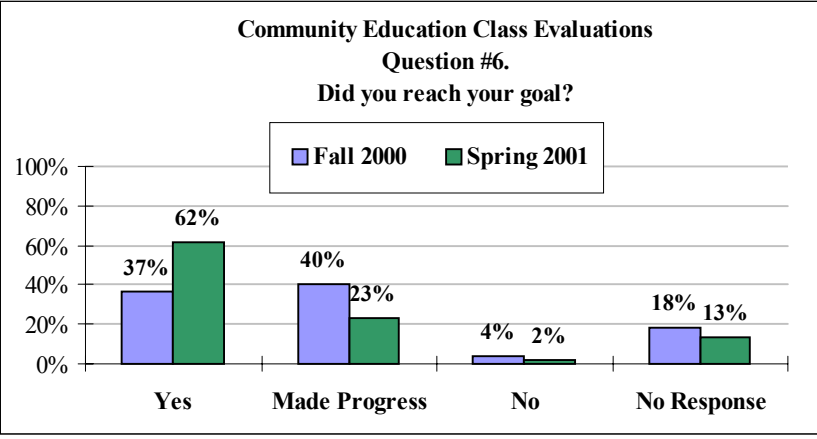
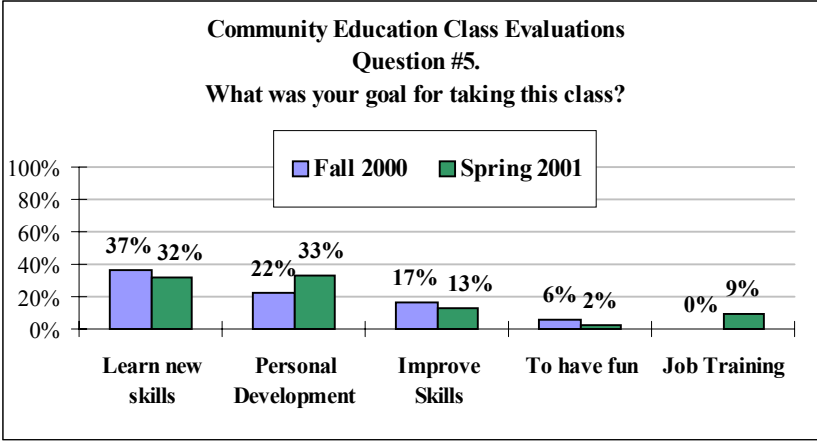
MISSION GOAL: COMMUNITY EDUCATION

Community Education: Learning for Life

Learning for Life Community Education program mission is to provide a wide variety of opportunities to meet the needs of life long learners. The community education program began in the Fall 1990 and was designed for people who may not need nor want credit courses. Learning for Life classes encourages students to continue their education or allows them the opportunity to pursue a personal interest.

The Learning for Life program is a revenue-generating program that is experiencing a period of rapid growth. Since the fall 1999 semester; program revenues have tripled, sections offered as well as instructors hired have doubled. In an effort to keep up with the rapid growth, the Learning for Life program has had to look outside of the campus for space. Currently, Estrella Mountain is offering classes at Dysart High School, Pendergast Elementary School District, Western Sky Middle School, Arizona Traditions senior adult community and Palm Valley Golf Course. In addition, the Learning for Life program is offering several distance education courses.

Surveys, focus groups, course evaluations help insure that the Learn-



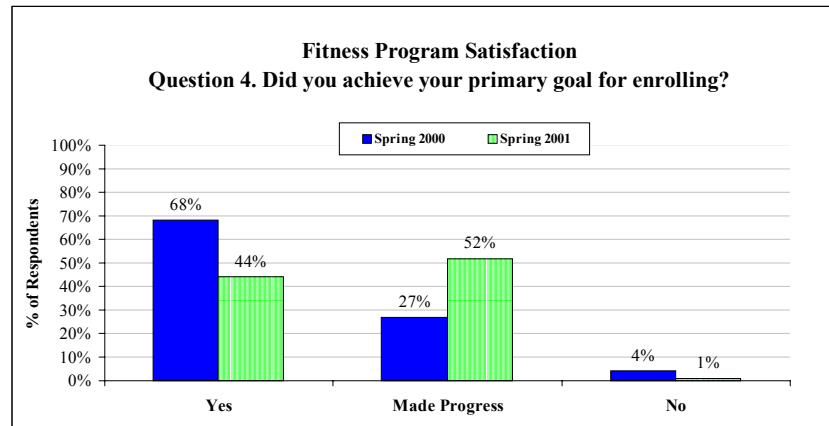
ing for Life program continues to meet community needs. In the spring 2002 semester, over 150 sections of non credit classes are offered.

FINDING Estrella Mountain effectively delivers educational and other services to its community.

Community Education Institutional Effectiveness Measures

The following key results were identified from the 2001 Community Education Key Stakeholder Continuous Improvement Interviews.

- ◆ The vast majority of students enrolled in Learning for Life classes reached their goal or made progress (77-85%).

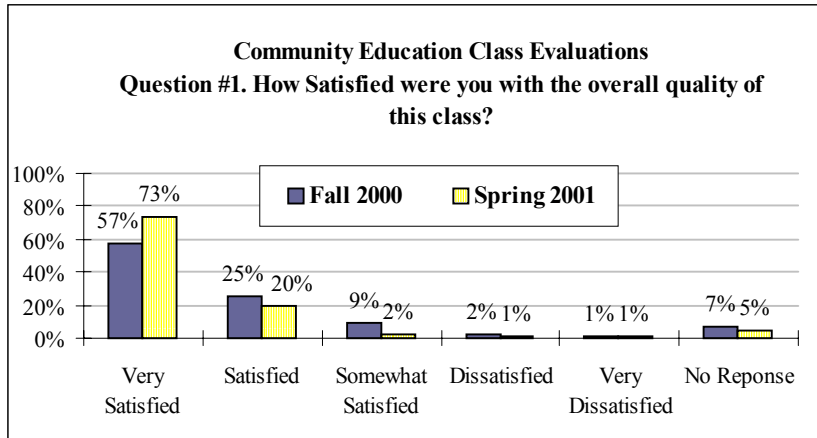


- ◆ A higher percentage of students report that they achieved their goal during the spring 2001 semester (62%) compared to the fall 2001 semester (40%).
- ◆ The only “credit” based data available are from the Fitness Center. The vast majority (95-99%) of students enrolled in the Fitness Center that completed the semester have made progress or reached their goal related to their enrollment. It should be noted that results are only valid for completers, the results might be lower if non-completing Fitness Center students were included in the population.
- ◆ The percentage of completers that reported full achievement of the Fitness Goals declined between the Spring 2000 (68%) and Spring 2001 (44%).

Student Satisfaction with Community Education Courses and Workshops

- ◆ The vast majority of students (Fall 82% vs. Spring 93%) were satisfied or very satisfied with the overall quality of classes according to the Learning for Life evaluations.
- ◆ Students appear to be more satisfied with Learning for Life programs and workshops during the spring versus the fall semesters. For example, 57% of fall 2000 respondents indicated that they were “very satisfied” versus 73% for the Spring 2001.

- ◆ Class format issues (length, timing, level) were identified as the most common improvement suggestions.

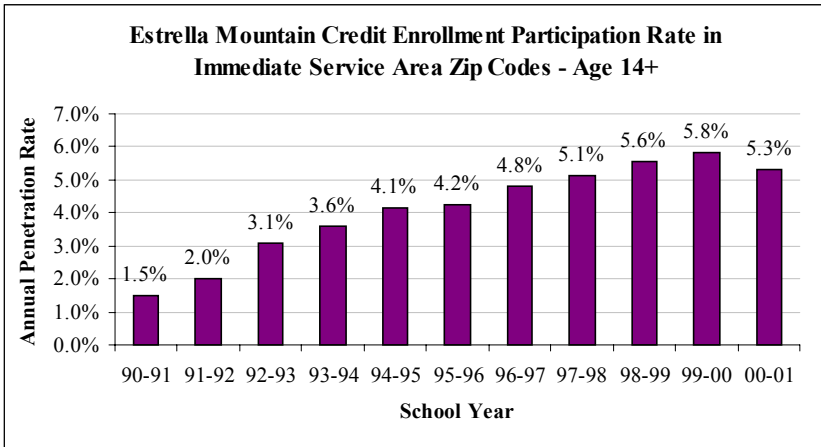


Responsiveness to Requests for Courses and Workshops

- ◆ Estrella Mountain developed a pilot system to track requests for courses and workshops from community organizations and businesses. The system will be piloted during the 2001-2002 school year. Data are currently not available for review.

Participation Rate in the Community

- ◆ Estrella Mountain participation rates continued to improve for credit-based courses through the 1999-2000 school year.
- ◆ There was a very minor decrease in the penetration rate for 2000-2001 school year. During 1999-2000, Estrella Mountain’s credit enrollment grew, but not as fast as the population in the area.
- ◆ Over the last three years the credit student participation rate has ranged between 5% & 6%. The participation rate increased to more than 10% of the population 14+ when you add enrollment in other Maricopa Community Colleges. Other Maricopa Community Colleges have maintained a constant market share of 5-6% of Estrella Mountain’s immediate service area since 1992.
- ◆ Zip code 85353 (Tolleson) continues to have a lower than average penetration rate (less than 3%). This holds true even when other Maricopa Community College enrollment is tabulated.



- ◆ More females than males are served in credit-based courses.
- ◆ The ethnic breakdown of Estrella Mountain students is similar to the ethnic breakdown of the community.
- ◆ There is growing percentage of unknown/other ethnicity students in the Estrella Mountain student population. This may be due to more students not providing ethnicity data or the advent of more multi-racial students.

COMMUNITY EDUCATION STRENGTHS AND CHALLENGES

Community Education Strengths

- ◆ The majority of students enrolled in Learning for Life classes reached their goal or made progress.
- ◆ The Learning for Life program is self supporting, generating sufficient revenues to cover all program costs.

Community Education Challenges

- ◆ The percentage of completers that reported full achievement of the Fitness Goals declined somewhat during the 2000-2001 academic year.
- ◆ Class format issues (length, timing, level) were identified by students as areas needing improvement.

COMMUNITY EDUCATION RECOMMENDATIONS

- ◆ Faculty and staff will need to dialogue the Fitness Center enrollment decline and develop strategies to maintain enrollments at a consistent level.
- ◆ Community Education courses need to be more responsive to the class format issues identified by students.

