

II. Balancing Access with a Quality Education: The Educational Impact of Mesa State College

As an institution with education as its primary responsibility, it is logical to begin with the impact that Mesa State College has had on postsecondary education participation in Western Colorado. This chapter focuses on the college's educational contributions and is divided into three sections. The first presents an overview of changes in educational attainment that have occurred over the past two decades, both regionally and statewide. Increases in college participation have paralleled an expansion in degree levels and programs offered by Mesa State College. This is followed by a description of the college's efforts to expand educational access to the region's residents, be it into new parts of its region or to different populations of the Western Slope who have not participated in higher education. In each case, the college has sought to do so in a manner that has balanced the commitment to access with that of delivering a quality educational experience to its students. Finally, the third section summarizes some quality indicators of the college, both in the forms of inputs to the educational process and outcomes from student experiences.

An Overview of Western Colorado's Educational Attainment

Colorado consistently ranks as one of the most highly educated populations in the United States as measured by the proportion of persons 25 years of age and older who have completed a baccalaureate degree. In 2000, the Bureau of the Census reported that 32.7% of Coloradoans held a baccalaureate degree or higher. Table 2-1 summarizes how the educational attainment of residents in the 14-county region of Western Colorado compares and contrasts to the state, with the counties ranked according to the percentage of the population completing a bachelor's degree. Half of the counties—Pitkin, San Miguel, Summit, Eagle, Routt, Grand, and Ouray—are dominated by resort communities. Their residents have attained levels of education significantly above the statewide percentage due to the highly educated population that has migrated into these counties.

Table 2-1. DISTRIBUTION OF EDUCATIONAL ATTAINMENT BY BACCALAUREATE DEGREE COMPLETION IN MESA STATE COLLEGE'S 14-COUNTY REGION, 2000

County	Population 25 Year Olds & Over														
	Total	Less than 9th Grade		10 - 12 Grade, No Diploma		High School Graduate (incl)		Some College, No Degree		Associate's Degree		Baccalaureate Degree		Graduate/First Professional Degree	
		#	%	#	%	#	%	#	%	#	%	#	%	#	%
Pitkin	11,322	168	1.5	249	2.2	1,237	10.9	2,610	23.1	592	5.2	4,531	40.0	1,935	17.1
San Miguel	4,762	117	2.5	186	3.9	717	15.1	1,217	25.6	217	4.6	1,741	36.6	567	11.9
Summit	15,795	369	2.3	697	4.4	2,788	17.7	3,176	20.1	1,135	7.2	5,751	36.4	1,879	11.9
Eagle	27,178	1,956	7.2	1,684	6.2	4,490	16.5	5,665	20.8	1,797	6.6	8,887	32.7	2,699	9.9
Routt	13,267	175	1.3	452	3.4	2,347	17.7	3,563	26.9	1,090	8.2	4,121	31.1	1,519	11.4
Grand	8,571	147	1.7	514	6.0	2,060	24.0	2,346	27.4	543	6.3	2,152	25.1	809	9.4
Ouray	2,741	62	2.3	120	4.4	591	21.6	777	28.3	181	6.6	644	23.5	366	13.4
Garfield	27,884	1,633	5.9	2,451	8.8	7,499	26.9	7,502	26.9	2,154	7.7	4,918	17.6	1,727	6.2
Mesa	76,358	3,492	4.6	7,961	10.4	23,154	30.3	19,606	25.7	5,381	7.0	11,174	14.6	5,590	7.3
Montrose	22,089	1,618	7.3	2,656	12.0	7,373	33.4	5,264	23.8	1,057	4.8	2,933	13.3	1,188	5.4
Jackson	1,098	60	5.5	91	8.3	396	36.1	272	24.8	61	5.6	143	13.0	75	6.8
Rio Blanco	3,857	163	4.2	285	7.4	1,234	32.0	1,100	28.5	323	8.4	495	12.8	257	6.7
Delta	19,330	1,335	6.9	2,511	13.0	6,569	34.0	4,581	23.7	934	4.8	2,411	12.5	989	5.1
Moffat	8,404	567	6.7	1,146	13.6	2,812	33.5	2,348	27.9	484	5.8	708	8.4	339	4.0
14-Cnty Region	242,656	11,862	4.9	21,003	8.7	63,267	26.1	60,027	24.7	15,949	6.6	50,609	20.9	19,939	8.2
Colorado	2,776,632	134,348	4.8	228,691	8.2	644,360	23.2	667,610	24.0	193,868	7.0	599,028	21.6	308,727	11.1

Source: Bureau of the Census.

The majority of these individuals likely was educated elsewhere prior to locating in Western Colorado (Table 2-2 and Figures 2-1, 2-2). While the order of the counties varies between tables, data in Table 2-2 document that the greatest gains in baccalaureate degree completion across three census periods occurred in the same counties. The counties in the top half of Table 2-1 also correlate with the seven having the highest per capita income in Table 1-3.

While generally achieving higher educational attainment across the three census periods, the balance of the 14 counties has not reached the state average. Historically these counties—Garfield, Mesa, Montrose, Jackson, Rio Blanco, Delta, and Moffat—have had less mobile populations and/or are generally more rural and physically isolated. These demographic and geographic characteristics make it more likely that these counties’ residents have attended college closer to home, such as at Mesa State, or transferred to Mesa State after attending a local community college or vocational school. Thus it is far more likely that Mesa State College can claim credit for the gains in educational levels by residents in these counties, particularly at the two- and four-year levels.

Expanding Access to Higher Education To College-Level Students

With the authority to offer a full-range of awards—from vocational certificates to master’s degrees—the college’s enrollments are approaching 6,200 students. As

**Table 2-2. EDUCATIONAL ATTAINMENT IN MESA STATE COLLEGE'S
14-COUNTY REGION, 1980 - 2000**

County	Percent Persons 25 Years and Older Who Were Baccalaureate Degree Completers in --			Percentage Point Change 1980 - 2000
	1980	1990	2000	
Pitkin	46.2%	49.8%	57.1%	10.9
San Miguel	35.9%	40.3%	48.5%	12.6
Summit	38.7%	39.7%	48.3%	9.6
Eagle	34.6%	33.0%	42.6%	8.0
Routt	31.7%	34.7%	42.5%	10.8
Ouray	24.6%	27.9%	36.8%	12.2
Grand	21.2%	30.2%	34.5%	13.3
Colorado	23.0%	27.0%	32.7%	9.7
Garfield	20.2%	21.6%	23.8%	3.6
Mesa	16.3%	17.4%	22.0%	5.7
Jackson	13.4%	15.3%	19.9%	6.5
Rio Blanco	18.0%	37.9%	19.5%	1.5
Montrose	13.8%	15.4%	18.7%	4.9
Delta	12.2%	13.6%	17.6%	5.4
Moffat	14.7%	15.4%	12.5%	-2.2

*General Social and Economic Characteristics: Colorado . 1980 Census of Population. PC80-1-C7.

Washington, D.C.: Bureau of the Census, June 1983.

**General Social and Economic Characteristics: Colorado . 1990 Census of Population. CP90-2-7.

Washington, D.C.: Bureau of the Census, June 1993.

***Compiled by Demography Unit of Colorado Department of Local Affairs from U.S. Census Bureau Records.

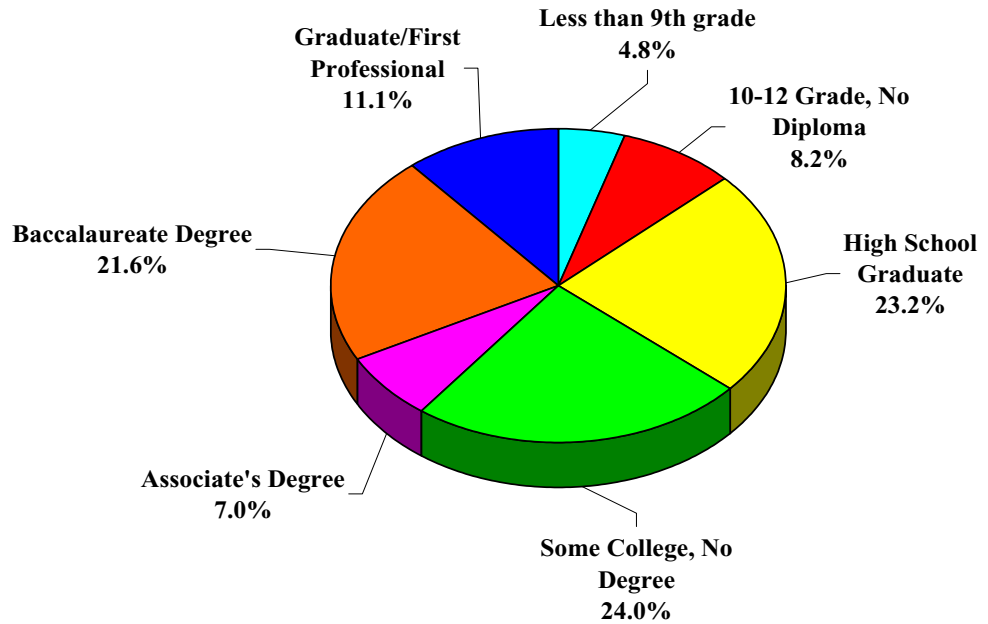
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shown in Table 2-3, the college has experienced an enrollment growth of nearly 18% between fall semesters 1998 and 2003 alone, with the institution now reaching out to populations that have not fully participated in higher education in the past. Of special note in Table 2-3 is the expanded geographic access summarized for undergraduates. The institution draws the largest number of students, not surprisingly, from the three counties in closest proximity to Grand Junction—Mesa, Montrose, and Delta—with these counties representing approximately two-thirds of the college's enrollments in fall 2003. But the college's growing emphasis on the use of a variety of instructional modes to deliver education is broadening its geographic base, as shown in the enrollment growth from the 14-county region. The college has developed a campus in Montrose, and technology is enabling the use of distance learning in various forms to expand program linkages with other institutions such as Colorado Mountain College. The enrollments from the 14-county region that Mesa State College is designated to serve have grown by nearly 26% for the five years prior to the legislative designation in 2003.

Measuring how an institution expands access goes beyond where educational opportunities are made available to populations that now participate in larger numbers. Perhaps the most striking change over the five-year period between

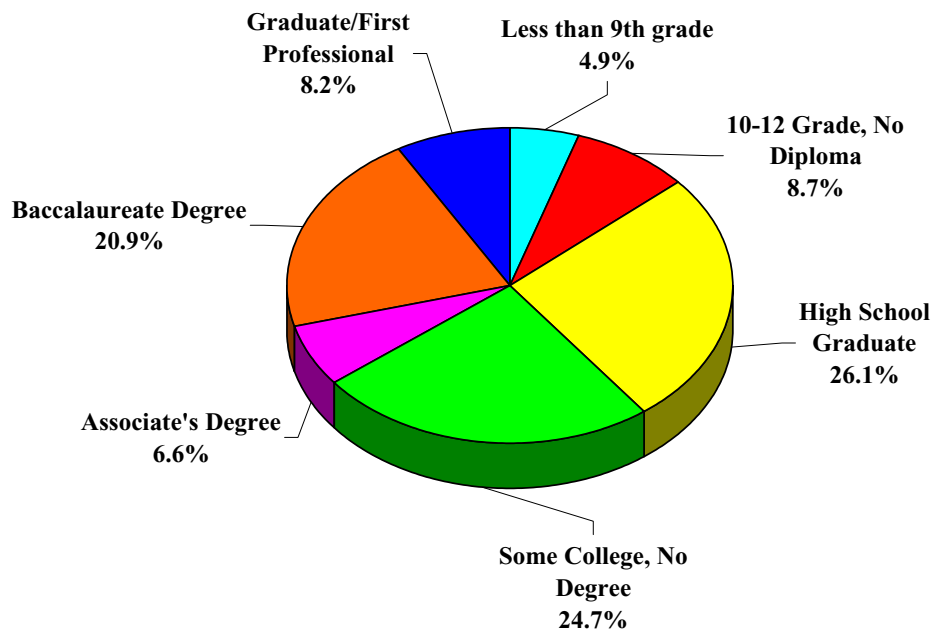


Figure 2-1. EDUCATIONAL ATTAINMENT OF COLORADO RESIDENTS, 2000



*Source: Bureau of the Census, 2000

Figure 2-2. EDUCATIONAL ATTAINMENT OF RESIDENTS IN MESA STATE COLLEGE'S 14-COUNTY REGION, 2000



*Source: Bureau of the Census, 2000

Table 2-3. MESA STATE COLLEGE STUDENT PROFILE, COMPARISON OF FALL 1993, 1998, and 2003*

Demographic/Academic Characteristic	Headcount Enrolled in Fall --						Change 1993 - 2003		Change 1998 - 2003	
	1993		1998		2003		#	%	#	%
	#	% of Total	#	% of Total	#	% of Total				
ALL STUDENTS*										
Student Level										
First-Year	1,828	41.7%	1,793	36.6%	2,272	39.4%	444	24.3%	479	26.7%
Sophomore	1,150	26.2%	1,127	23.0%	1,253	21.7%	103	9.0%	126	11.2%
Junior	479	10.9%	649	13.3%	688	11.9%	209	43.6%	39	6.0%
Senior	834	19.0%	1,124	23.0%	1,044	18.1%	210	25.2%	-80	-7.1%
High School	13	0.3%	44	0.9%	308	5.3%	295	2269.2%	264	600.0%
Non-Degree Seeking	79	1.8%	114	2.3%	134	2.3%	55	69.6%	20	17.5%
Undergraduate Subt	4,383	100.0%	4,851	99.1%	5,699	98.9%	1,316	30.0%	848	17.5%
Graduate	0	0.0%	42	0.9%	65	1.1%	65	--	23	54.8%
Total	4,383	100.0%	4,893	100.0%	5,764	100.0%	1,381	31.5%	871	17.8%
Degree Level										
Certificate	57	1.3%	38	0.8%	67	1.2%	10	17.5%	29	76.3%
Associate--AAS	455	10.4%	327	6.7%	357	6.2%	-98	-21.5%	30	9.2%
Associate--AA/AS	924	21.1%	665	13.6%	952	16.5%	28	3.0%	287	43.2%
Baccalaureate	2,855	65.1%	3,663	74.9%	3,876	67.2%	1,021	35.8%	213	5.8%
Non-Degr--High Sch	13	0.3%	44	0.9%	308	5.3%	295	2269.2%	264	600.0%
Non-Degr--Other UG	79	1.8%	114	2.3%	139	2.4%	60	75.9%	25	21.9%
Undergraduate Subt	4,383	100.0%	4,851	99.1%	5,699	98.9%	1,316	30.0%	848	17.5%
Master's	0	0.0%	42	0.9%	61	1.1%	61	--	19	45.2%
Non-Degr--Other GR	0	0.0%	0	0.0%	4	0.1%	4	--	4	--
Total	4,383	100.0%	4,893	100.0%	5,764	100.0%	1,381	31.5%	871	17.8%
UNDERGRADUATE STUDENTS*										
Credit Hour Load										
Part-time (9 hrs or less)	790	18.0%	860	17.7%	1,260	22.1%	470	59.5%	400	46.5%
Full-time (10 hrs. or more)	3,593	82.0%	3,991	82.3%	4,439	77.9%	846	23.5%	448	11.2%
Total	4,383	100.0%	4,851	100.0%	5,699	100.0%	1,316	30.0%	848	17.5%
Age										
17 years or younger	52	1.2%	71	1.5%	312	5.5%	260	500.0%	241	339.4%
18 - 24 years	2,577	58.8%	3,270	67.4%	3,700	64.9%	1,123	43.6%	430	13.1%
Traditional Age Subt	2,629	60.0%	3,341	68.9%	4,012	70.4%	1,383	52.6%	671	20.1%
25 - 34 years	902	20.6%	798	16.5%	958	16.8%	56	6.2%	160	20.1%
35 - 44 years	650	14.8%	445	9.2%	431	7.6%	-219	-33.7%	-14	-3.1%
44 years and older	202	4.6%	267	5.5%	298	5.2%	96	47.5%	31	11.6%
Non-trad Age Subt	1,754	40.0%	1,510	31.1%	1,687	29.6%	-67	-3.8%	177	11.7%
Total	4,383	100.0%	4,851	100.0%	5,699	100.0%	1,316	30.0%	848	17.5%
Gender										
Male	1,924	43.9%	2,162	44.6%	2,410	42.3%	486	25.3%	248	11.5%
Female	2,459	56.1%	2,689	55.4%	3,289	57.7%	830	33.8%	600	22.3%
Total	4,383	100.0%	4,851	100.0%	5,699	100.0%	1,316	30.0%	848	17.5%
Race/Ethnicity										
Asian/Pacific Islander	43	1.0%	62	1.3%	112	2.0%	69	160.5%	50	80.6%
Black, Non-Hispanic	45	1.0%	64	1.3%	89	1.6%	44	97.8%	25	39.1%
Hispanic	279	6.4%	349	7.2%	433	7.6%	154	55.2%	84	24.1%
Amer Indian/Alaska Native	38	0.9%	60	1.2%	74	1.3%	36	94.7%	14	23.3%
Subtotal	405	9.2%	535	11.0%	708	12.4%	303	74.8%	173	32.3%
White, Non-Hispanic	3,797	86.6%	4,242	87.4%	4,722	82.9%	925	24.4%	480	11.3%
NR Alien	79	1.8%	45	0.9%	39	0.7%	-40	-50.6%	-6	-13.3%
Unknown	102	2.3%	29	0.6%	230	4.0%	128	125.5%	201	693.1%
Total	4,383	100.0%	4,851	100.0%	5,699	100.0%	1,316	30.0%	848	17.5%
Geographic Origin										
Mesa County	2,344	53.5%	2,441	50.3%	2,892	50.7%	548	23.4%	451	18.5%
Delta County	249	5.7%	270	5.6%	479	8.4%	230	92.4%	209	77.4%
Montrose County	236	5.4%	223	4.6%	387	6.8%	151	64.0%	164	73.5%
Garfield County	141	3.2%	144	3.0%	162	2.8%	21	14.9%	18	12.5%
Jefferson County	147	3.4%	163	3.4%	162	2.8%	15	10.2%	-1	-0.6%
Subtotal	3,117	71.1%	3,241	66.8%	4,082	71.6%	965	31.0%	841	25.9%
Other Colorado	879	20.1%	1,074	22.1%	1,058	18.6%	179	20.4%	-16	-1.5%
Other States	314	7.2%	491	10.1%	519	9.1%	205	65.3%	28	5.7%
International	73	1.7%	45	0.9%	40	0.7%	-33	-45.2%	-5	-11.1%
Total	4,383	100.0%	4,851	100.0%	5,699	100.0%	1,316	30.0%	848	17.5%
REP 14-County Total	3,189	72.8%	3,335	68.7%	4,189	73.5%	1,000	31.4%	854	25.6%

*Excludes students enrolled exclusively in the Extended Campus Program.

1998 and 2003 is Mesa State's attraction of more than 300 high school students who are enrolled concurrently in college-level classes and now make up approximately five percent of the college's enrollment (Figures 2-3 and 2-4). In fall 2003, academic courses were most often selected, with 97% of the registrations in the liberal arts and sciences. English composition and college algebra were the most common choices. In addition to serving concurrently enrolled students, nearly 500 area high school students attend classes daily at UTEC. The UTEC classes provide students with skills and knowledge which enable them to go to work at higher wages than a typical high school graduate who has no specialized training.

Access also has been extended to students from underrepresented races or ethnic groups. The number of undergraduates who have identified themselves as Asian/Pacific Islander, Black (non-Hispanic), Hispanic, or American Indian/Alaskan Native origin increased by approximately one-third between 1998 and 2003. The percentage of undergraduates from these groups for fall 2003 was 12.4%, a proportion that is similar to that of the region's population (13.9%, based on adults aged 25 and older). The largest numeric gain among the underrepresented groups for the five-year period was recorded for Hispanic students—an increase of 84 undergraduates—who now account for 7.6% of the headcount. The college must continue to work more aggressively, however, to recruit and retain a more diverse student body.

Part-time undergraduates showed a substantial increase, partly a response to the decline of the state's economy of the late 1990s plus the growth of high school enrollments. Many of these students are non-degree-seeking (7.6%) and are a mix of those seeking to upgrade their job skills, high school students concurrently enrolled in college courses, and those with a previously-earned baccalaureate degree who are pursuing courses for teacher certification. More than three-fourths of the undergraduates are enrolled full-time, even though their share of the total student body has declined over time.

Finally, while not shown in Table 2-3, college records provide some insight into the college's ability to reach first generation college students (defined as a financial aid applicant where neither parent attended college). Based on a count of the recipients between Academic Years 1999 and 2003, the number of first generation undergraduates attending Mesa State increased 22% and represented 37% of all aid recipients. The college's ability to reach these students is one of the ultimate efforts in improving educational attainment. A second is working in precollegiate environments to encourage students to continue their education beyond high school.

To Precollegiate Students

Mesa State extends access by making its resources available to precollegiate students through a variety of projects that are consistent with the college's role as a Regional

Figure 2-3. AGE DISTRIBUTION OF MESA STATE COLLEGE STUDENTS, FALL, 1993

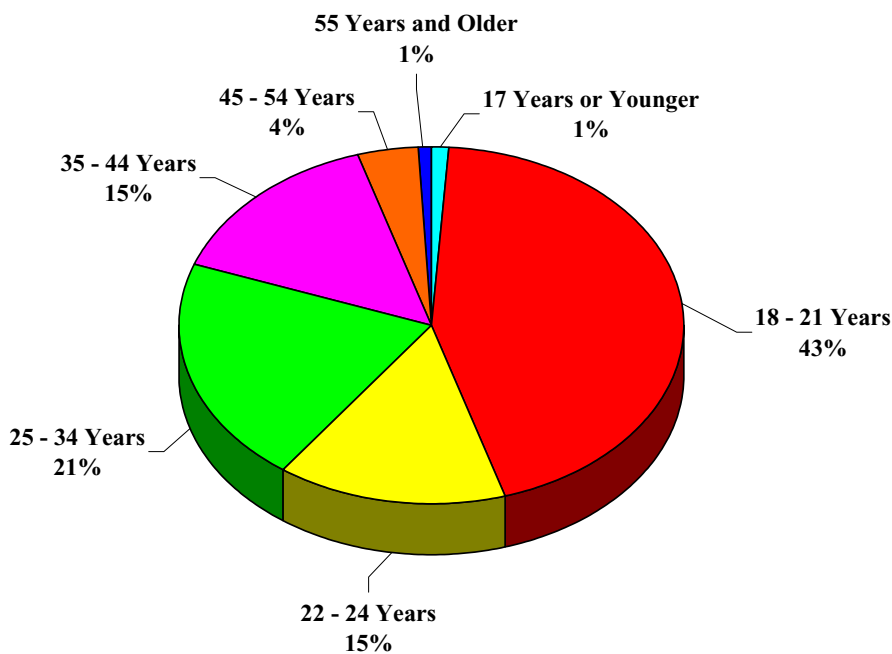
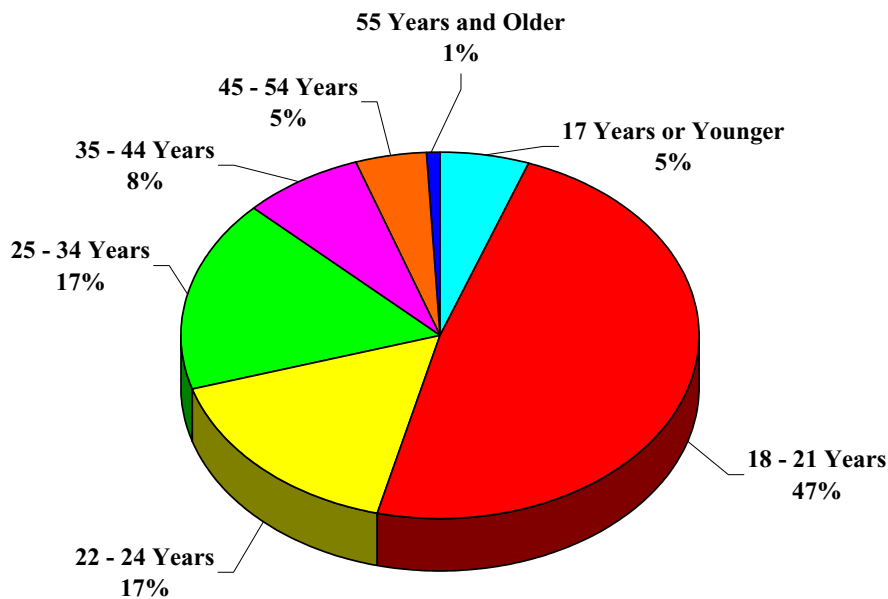


Figure 2-4. AGE DISTRIBUTION OF MESA STATE COLLEGE STUDENTS, FALL, 2003



Education Provider. When a student enrolls in courses that award high school and college credit, it not only reduces the cost of receiving a college education but also gives the student a head start on a college degree. Equally important, Mesa State's concurrent offerings serve as an incentive for students to continue their education beyond high school. The need to improve the college-going rate of high school students is a statewide priority for all of Colorado higher education.

Examples of how Mesa State provides access to precollegiate educational opportunities are found in the following entries as well as those in Chapter III:

- The Century Program (TCP) began in 2003 in collaboration with the Foundation for Excellent Schools. The program partners high school students with college mentors to encourage the students to plan beyond high school and complete a college education. Mesa State's program involved two of the initial five high schools in Colorado—Delta and Montrose—and in 2004, Olathe High School was added as a partner with Mesa State. Each high school's program involves 100 students. In addition to meeting with mentors, TCP students participate in activities promoting early college awareness, learning through community service, and discovering how to set and achieve goals.
- In the areas of mathematics and the sciences, the Shideler Center for Science Learning fosters closer collaborations between the faculty and students of Mesa State College and K-12 teachers and children by providing field science experiences. Funded initially by the Colorado Institute of Technology and more recently by the Shideler family, students and teachers from area school districts participate in field trips with Mesa State faculty and students. The team develops field guides and teaching aids based upon each trip. Each spring, forty MSC students volunteer as part of Math Extravaganza. Other events sponsored by the college include robotics workshops, the Science Fair, Math Counts, Computers for Kids, and Physics Outreach.



- The High School Leadership Conference, Distributive Education Clubs of America (DECA) workshops, and the LaRaza Leadership Conference exemplify efforts to enhance diversity and leadership.
- Sports, health, and wellness are represented through sports camps in baseball, basketball, football, soccer, softball, and volleyball, physical education workshops, and a home school physical fitness education program.

- Media Day annually recognizes the work of approximately 300 Western Slope high school students with newspaper and yearbook awards, and invites working professionals for lectures and workshops.
- The Advanced Learning Center (ALC), a collaborative effort between Mesa State and Mesa County School District 51, enables high school juniors and seniors to earn Advanced Placement and Mesa State College credits. ALC's interdisciplinary and academic content is hands-on, problem-based, and technologically-oriented. Its approach differs from traditional education in that students form theories about how the world works and then revise those theories or adopt new ones when previous ideas no longer fit their observations.

According to the U. S. Census Bureau, the socio-economic status of the residents of Western Colorado ranged from a per capita income of \$40,811 for Pitkin County to \$17,152 for Delta County in 2000. Approximately 9.3% of persons 25 years and older in the 14-county region reported living below the poverty level in 1999, mirroring the proportion for the state. The fact that a considerable share of the region's residents are at these income levels has critical implications for the role of Mesa State College as a Regional Education Provider. Discretionary spending is limited, and only a fixed set of colleges are affordable to the place-bound segment of the region's population. Accessibility and affordability, therefore, become crucial considerations in whether or not these populations will participate in higher education. That Mesa State College is often characterized as both accessible and affordable is a testament to its significance in raising educational attainment of Western Slope residents.

Balancing Access with Quality

As significant as broadening access to educational opportunities is, it must be balanced with the assurance that academic programming is of high quality. Maintaining the balance of access and quality is difficult enough, but for a college to do so in times of severe resource constraints, as Mesa State has experienced recently, makes quality program delivery even more challenging.

What, then, are the indicators that the college is succeeding in achieving a balance? This section documents examples of quality indicators from multiple perspectives. The most powerful assessments come from those served by the college—its students. Institutional surveys of entering undergraduates, as well as program graduates, provide the best measures of satisfaction with the quality of academic programs. Additionally, in April 2004, eight advisory groups of campus and community members met with Mesa State's Board of Trustees, and the perceptions of these groups offer other insights into the college's strengths. Yet other evidence

relates to the learning environment that the college offers its undergraduates. The following section summarizes some findings from each of the above.

Entering Student Perceptions of Academic Program Quality

An initial indication of quality begins with why students choose to attend Mesa State College. Without question, location and affordability are important considerations for why some students select the college. Particularly for those students who largely are place-bound in the region, Mesa State College is the closest geographic option relative to most other higher education campuses. Similarly, as an institution of access, Mesa State College can take pride in the perception held by the region’s residents that it is financially accessible by keeping its tuition affordable.

It would be erroneous, however, to conclude that students attend Mesa State only because of its proximity and/or affordability. First, a number of institutions—both public and private—bring programs into Western Colorado, either by faculty coming to the region in person or via distance education. These programs directly compete for students with Mesa State College, providing students with other postsecondary academic opportunities. The college’s recent enrollment growth indicates that Mesa State is competing successfully with its competitors. Second, but equally significant, evidence exists that a growing share of students are electing to attend Mesa State for academic reasons.

As part of the Entering Student Survey administered in fall semesters 2000 and 2004, incoming undergraduates were asked to rate the college at the time of admission. Comparing the two fall terms, incoming undergraduates were asked to share their impressions of Mesa State College. Their responses are summarized in Tables 2-4 and 2-5.

Table 2-4. COMPARISON OF FACTORS AFFECTING DECISION TO ATTEND MESA STATE COLLEGE BY STUDENTS ENTERING IN FALL 2000 and 2004

College Impressions	Percentage of Respondents Indicating Factor Was Very Important or Moderately Important in --	
	Fall 2000	Fall 2004
How important was each of the following in your decision to attend this college?		
1. Academic Reputation of the College	63.6%	85.4%
2. Availability of a Particular Program	67.9%	85.4%
3. Location of the College	85.7%	73.3%
4. Cost of Attending the College	78.1%	71.3%
5. Availability of Financial Aid/Scholarship	71.4%	70.9%

Source: ACT Entering Student Survey, Section III, A; MSC Entering Class, Fall 2000 and 2004

**Table 2-5. COMPARISON OF PERCEPTIONS OF MESA STATE COLLEGE
BY STUDENTS ENTERING IN FALL 2000 and 2004**

College Impressions	Percentage of Respondents Indicating They Strongly Agree or Agree with Statement --	
	Fall 2000	Fall 2004
Indicate your level of agreement with each statement about this college.		
1. College has high-quality academic programs	65.9%	70.9%
2. College has high-quality program in the subject area I plan to pursue	49.8%	67.4%
3. Cost of attending this college is reasonable	73.2%	75.7%

Source: ACT Entering Student Survey, Section III, B; MSC Entering Class, Fall 2000 and 2004

Table 2-4 reflects the growing importance placed on Mesa State’s academic programs—both in terms of quality and availability—as students make decisions about their college of choice. While location and affordability continue to outrank academic factors, the point is that academic considerations are of increasing significance as students select where they want to go to school. A second indicator is found in Table 2-5, which asked students their level of agreement with the three listed statements. In this case, the statement that experienced the highest increase in agreement—more than 17 percentage points—was that Mesa State College “has [a] high-quality program in the subject area I plan to pursue.” Taking these points collectively, it is clear that the quality of the college’s academic programs is beginning to compete with location and affordability as reasons to attend Mesa State College.

Indicators of Academic Program Quality

Mesa State College values teaching, learning, and student-faculty interaction, and the quality of these activities is fundamental to everything that the college represents. As Mesa State has evolved from a two-year institution to one now offering graduate education, it has carefully expanded a diverse range of programs that encompasses the liberal arts, professional, and vocational areas of study.

Some of what defines quality are indicators considered inputs—resources allocated to support the instructional role of the institution. The college’s values statement clearly articulates the importance the college places on teaching, and the fact that only about four percent of the college’s budget is allocated to central administration underscores this point. Inputs go beyond financial commitments, however, to include other criteria such as the following.

Faculty

One measure is the level of degree attainment of the college's faculty. For AY 2003 - 04, 61% of the full-time academic faculty held a doctorate, first professional, or other terminal degree. At least six faculty have been recognized as Fulbright scholars, enabling them to study, teach, and conduct research in a foreign country as part of a worldwide exchange of ideas. At UTEC, the technical faculty members are licensed experts in their respective fields based on formal education and training. Equally noteworthy, Mesa State's faculty have made a professional commitment to an institution where effective teaching is its highest priority.

The college's ratio of students to faculty for fall 2003 was 18:1. The importance of this measure is that Mesa State is a teaching institution where the faculty is available to students in a more intense manner and provides an important support system. The accessibility of the faculty and the ability for students and faculty to interact were commonly cited strengths by nearly all of the Trustees' advisory groups.

Special Academic Program Offerings

As an approach to learning, a liberal education expects students to wrestle with important issues and grow intellectually. This philosophy of education produces individuals who are informed, active, and responsible citizens. It has its strongest impact when studies extend beyond the classroom, requiring students to apply analytical skills to the world around them.

An element that distinguishes Mesa State College's undergraduate programs from many others in the state is the extent to which students have opportunities to participate in learning activities, typically off-campus, that supplement traditional classroom activities. Each year, an average of 250 students are placed in some form of applied learning that integrates academic study with problem-solving experience. These opportunities take many forms; among them are internships, structured research, clinical assignments, cooperative education placements, and service learning. These

experiences enrich the curricula by providing a structured opportunity to link theory and practice as students apply the knowledge and skills learned in the classroom to real world problems. They strengthen students' educational development, enable participants to assess if an academic major truly matches their career goals, and advance a sense of professionalism in the selected field of study long before students leave the campus. Table 2-6 documents the diversity of the college's applied learning opportunities.



Table 2-6. EXAMPLES OF APPLIED LEARNING EXPERIENCES
FOR MESA STATE COLLEGE UNDERGRADUATES

Academic Program	Student Experiences
Accounting:	<p>Students in the Volunteer Income Tax Assistance (VITA) program, started in 1980, prepare approximately 200 tax returns per year.</p>
Art:	<p>Art students in the foundry classes have been commissioned to design and produce sculptures by businesses and organizations, such as Norwest Banks, Redlands and Mount Garfield Middle Schools, Wingate and Columbus Elementary Schools, the college and its Alumni Association. Additionally, students have been commissioned to design and produce bronze awards for the Grand Junction Arts Council and have been juried into the Grand Junction Art on the Corner Exhibit, the Delta Downtown Permanent Art Exhibit, and the Gunnison Outside Art Exhibit.</p> <p>The foundry program has a liaison program established with School District 51 to produce original artwork for the various campuses, utilizing sculpture students as mentors to the middle and secondary school art students. All processes of the wax, investing and casting are done at the college. The Western Colorado Center for the Arts juried student show is an annual event held during the spring semester. Students submit work from the current school year and a juror (hired from outside the College) selects the work for the show. During the fall semester, ceramic students donate their artwork to the annual Empty Bowls fundraiser event, benefiting the Catholic Outreach, held at The Art Center.</p>
Biological Sciences:	<p>More than 80 biology students earn credit hours for internships or research experience in several specialties. For example, findings have assisted the Redlands Mosquito Control District in that agency's capacity to control mosquitoes, many species of which harbor West Nile Virus. Other students are placed in internships and volunteer to work with the Department of Wildlife, the Bureau of Land Management, the Colorado Bureau of Investigation, and the Colorado Department of Health, especially during the summer.</p>
Business:	<p>The marketing research and advanced marketing classes frequently have real businesses with which they work. Students participated in the development of a "best ad" marketing campaign for the new Honda Element, Mesa State's team placed 4th among the 24 schools participating in the competition. A significant number of business students intern with local and state businesses that include: Western Colorado Center for the Arts, Colorado Division of Wildlife, Walt Disney World, 3D Systems, Hamilton Sunstrand, City of Grand Junction, the Colorado legislature, the Incubator Center, St. Mary's Hospital, Walgreens, A G Edwards, and Wells Fargo Financial.</p>
	(continued)



Table 2-6. EXAMPLES OF APPLIED LEARNING EXPERIENCES FOR MESA STATE COLLEGE UNDERGRADUATES

Academic Program	Student Experiences
Graphic Arts:	<p>An internship is required of all graphic art majors during their senior year. This 135-clock-hour internship provides on-site job experience outside of classroom conditions. These experiences have occurred locally at businesses in Grand Junction and Western Slope communities and throughout Colorado. Additional placements have occurred in California, New York, and most recently, in the United Kingdom.</p>
Human Performance and Wellness:	<p>Between 20 and 30 students annually perform 20 hours each in the school system and community working with disabled individuals for the course Adapted Physical Education. Approximately 10-15 students perform internships each year, and an additional 5-10 students work with home-schooled children for physical education. Numerous students also are involved in health fairs throughout the year.</p>
Mathematics and Computer Science:	<p>The software engineering class has designed software for local businesses and organizations, completing approximately 18 projects to date. The mathematics program sends one or two teams to a modeling competition each year, and approximately 10 of Mesa State's mathematics students participate in the National Putnam Exam, a mathematical competition administered each year by the Mathematical Association of America.</p> <p>For many years, computer science has put together one or two teams that compete in the ACM Regional Scholastic Programming Contest. Over the past two years a pair of students has worked with Pacific Northwest National Laboratory (PNL) to develop and test software that is used by the Department of Defense, Department of Energy, Environmental Protection Agency, and the National Research Council. This affords students the opportunity to get jobs with PNL when they graduate. Another group of computer science students has worked with Colorado West Mental Health to write programs to help process patient survey data.</p>
Mass Communications:	<p>Mass communications majors, numbering approximately 25 – 30 per year, enroll in internships where they work in various TV and radio studios, on newspapers and magazines across the Western Slope, and in various public relations offices and firms across the state.</p> <p>The community-based projects from the Public Relations Campaigns class and the Senior Seminar provide public relations services for area community organizations (e.g., publicity for the Child and Migrant Workers 50th anniversary activities in spring 2004). On-campus opportunities also are afforded through KMSA-FM, the student newspaper, <i>The Criterion</i>, and <i>Horizon</i> magazine. The focus of a recent edition of <i>Horizon</i> magazine was "Diversity: Celebrating Grand Valley Culture." That edition won third place in the nation for best overall Society of Professional Journalists magazine, finishing behind the Columbia University School of Journalism, and the University of Oregon.</p>

(continued)

Table 2-6. EXAMPLES OF APPLIED LEARNING EXPERIENCES
FOR MESA STATE COLLEGE UNDERGRADUATES

Academic Program	Student Experiences
Music:	<p>Students in the music program gain experience working as music aids in school districts and performing with the Grand Junction Symphony, as well as churches in the community. Additionally, music education students assist Mesa County School District 51 with the Colorado West Marching Band Festival, solo and ensemble contests for instrumentalists and vocalists, and the Colorado West Music Festival.</p>
Nursing:	<p>Mesa State nursing students give 29,700 hours back to the community each semester through clinical assignments at local hospitals, long-term care and mental health facilities and through a variety of community outreach programs. Examples of these efforts include flu clinics, health fairs, car seat safety checks, health promotion teaching in the schools, and hearing and vision screening in the schools.</p>
Physical and Environmental Sciences:	<p>Faculty and students in the environmental science and technology program provide expertise and workers for a number of non-profit agencies, private companies, and local, state and federal agencies. Approximately 35 students per year are involved in projects ranging from assessment of hospital safety practices to revegetation projects on National Park Service lands to contamination assessments and remediation of abandoned mine lands.</p> <p>Students in the geology program work during the summer for the Bureau of Land Management and the U.S. Geological Society on geology-related projects ranging from river bank morphology to ground water contamination. Five students worked during 2004. After graduation, geology students have found permanent employment with these agencies. Students in the GIS minor are employed as interns by the Bureau of Land Management and the U.S. Forest Service. Class projects, conducted during the academic year, benefit a number of local and regional government agencies and private companies. Faculty and students in the biology and chemistry programs collaborate with local wineries to provide research expertise in viticulture.</p>
Social and Behavioral Sciences:	<p>Various disciplines in the Social and Behavioral Sciences provide more than 30 student internships per year to private, non-profit agencies, governmental agencies, and professional corporations. These have included placements at the Department of Social Services, the District Attorney's Office, and the Division of Youth Services. One particularly successful program is the legislative internship, which places Mesa State College students in legislative offices at the state and federal level. Some successful interns have run for and been elected to political offices.</p>
	(continued)

Table 2-6. EXAMPLES OF APPLIED LEARNING EXPERIENCES
FOR MESA STATE COLLEGE UNDERGRADUATES

Academic Program	Student Experiences
Spanish:	Mesa State's Spanish major is involving students in community-based experiences, such as working for more than 120 hours at the Judicial Center of the Mesa County Combined Court House to provide assistance to the Spanish-English interpreting squad.
Teacher Education:	Approximately 350 students in the Teacher Education Program (TEP) work in P-12 classrooms throughout the region. In Academic Year 2004 – 05, Mesa State College's TEP will recommend 100 student teachers for initial licensure. Many of those student teachers also work in AmeriCorps schools across the 14-county region.

Beyond these applied experiences, the college offers a rich array of opportunities that enhance undergraduate research skills. More than 1,000 Mesa State students annually engage in structured research, topics, independent studies, and seminars. The Student Scholars Symposium, held each spring, demonstrates undergraduates' passion for learning and the value of participating in scholarly activities from academic programs across the campus. In languages and literature, the department publishes *Pinyon Poetry*. It hosts Pinyon Press, which publishes short stories or a novel annually and gives students the opportunity to develop editorial skills and their critical acumen. *Literary Review* features Mesa State students' artistic and literary creations. Each year, 2-3 students in computer science and 4-5 students in mathematics have been involved in structured research projects with faculty.

Of special note is the Honors curriculum, which offers advanced, stimulating courses beyond the normal college-level classes. Because the program emphasizes intensive, challenging, active learning, it has grown from 30 students in fall 2000 to the current enrollment of 180. The Honors thesis option is patterned after a graduate school format and requires independent thought and mastery of research methodology appropriate to the program of study.

All of these special study opportunities provide students with multiple benefits. Beyond linking classroom learning with real world applications, many have gained valuable experience for further study at the graduate level. It should be noted that Mesa State graduates continue to be admitted to some of the nation's most prestigious colleges and universities for graduate study.

Tomlinson Library

In addition to the traditional classroom environment, the college offers an extensive network of academic support that is constantly being expanded and updated. A

significant starting point is the availability of materials through Tomlinson Library, both in terms of hard copy as well as on-line resources. Consider the following points related to the library's holdings:

- The library is part of the statewide Colorado Library Card borrowing system. Through the Marmot Regional Library Network, a shared automation cooperative, library staff works closely with others at the 19-member libraries, of which 16 are in the college's service region.
- As part of the statewide CLC borrowing system, anyone with a Colorado public, academic, or school library card may borrow from Tomlinson Library.
- The library joined with 46 Colorado libraries to provide a new virtual reference service. Mesa State librarians answered 1,510 online reference questions from the 13 Western Colorado counties in a six-month period last year.
- As part of a Grand Valley Library Consortia, the library jointly purchases databases and shares in the development and implementation of the *Daily Sentinel Index*. Over 6,600 queries were placed on that online database last year.
- The library web page was revamped to ease use of the extensive collections, and now 70 databases can be accessed off-campus by college students, faculty, and staff. These changes are particularly noteworthy in light of the stunning increase in use of electronic library resources. Database searching increased by 27% in one year (FY 2003 – 04) to over 133,000 searches, while full text downloads increased by 44% to 164,600 items retrieved. Adding these statistics to the library's print use clearly demonstrates that library research continues as a vital part of the students' educational experience.



Information Technology

Technology is an essential part of Mesa State College, both in its primary role of teaching and in the support that it provides to that mission. In that context, the institution's philosophy toward technology is changing from being a tool focusing on infrastructure issues—networks, hardware, and accessibility issues—to one of a utility and how technology can be used to enhance both teaching and learning. Mesa State College has embraced that mission by:

- developing a high-speed infrastructure which connects all campuses, buildings, computer labs, and residence halls to facilitate delivery of multi-media content and Internet access;



- upgrading most classrooms and laboratories to aid in the delivery of interactive course content;
- developing a real-time video teleconferencing system through the college's extended campuses that uses a state-of-the-art large bandwidth inter-structure for the delivery of specialized graduate and undergraduate programs. This system allows instruction to be directed to students within outreach areas and may be their only access to higher education;
- addressing the sustainability of technology advancement in an era of limited resources. A plan is in development, which will equitably and efficiently advance the technological needs of academic instruction and improve the current support systems; and

- implementing additional wireless “hotspots” to allow mobile access to the network resources. The technology plan will consider the outreach requirements—including online coursework—to better address the needs of the rural students in the college's 14-county service area.

Each of the above elements is important to the educational process, and to a certain extent, provides some indication of academic quality. The truest measures of quality, however, lie in the results of the educational experience—student outcomes. The next section presents some findings about student performance and satisfaction.

Assessing the Quality of Experience by Mesa State Graduates

The college is collecting information on student success on exit exams. To date, most of the data are preliminary and the number of student test-takers often is too small to report valid results. In several fields of study, however, standardized test results are available due to state or national licensure/accreditation requirements. The results of graduates from Mesa State's professional programs are summarized below:

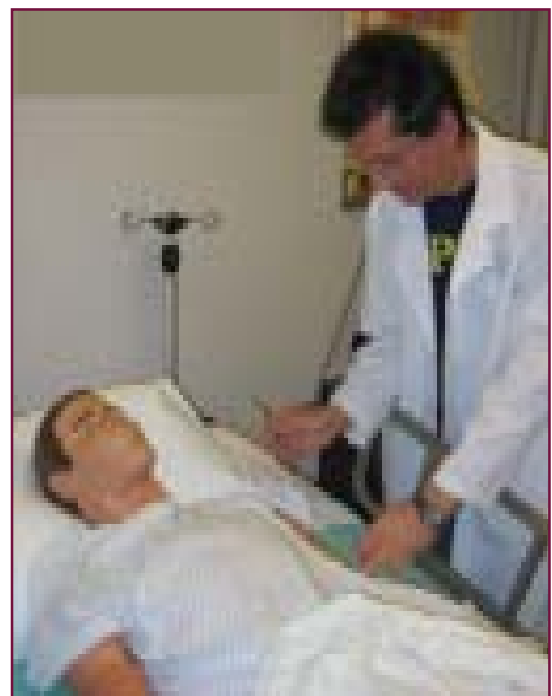
- Nursing students taking the National Council Licensure Exam for Registered Nurses (NCLEX-RN) typically have an annual pass rate of 90% or higher.

- Graduates of the radiologic technology program have achieved a 100% pass rate on the national certifying examination for the past five years.
- The Program for Licensing Assessment for Colorado Educators (PLACE) measures a student's knowledge in the content area before being recommended for initial licensure in teacher education. Mesa State students in this program scored a 95% pass rate in elementary education and a 90% pass rate for students seeking secondary education licensure.
- Business scores on Educational Testing Service's Major Field Test have continued to improve, with the most recent administration reaching an average score of more than 160, two points higher than the prior testing session.

As data become available for more academic programs, the college will be better able to assess the quality of a broader range of students' experiences.

The best overall indicator of how well the college is fulfilling its mission, however, is to ask its graduates to grade the college at the time they complete their program of study. On a national survey of student satisfaction, Mesa State graduates scored their college experiences significantly higher than students from other institutions, particularly on measures related to academic quality. The results for Academic Year 2003 – 04 are summarized in Table 2-7. Because the college uses a survey from American College Testing (ACT), results for Mesa State College can be compared with those for other public colleges across the U.S. as well as a national sample of colleges. The findings are quite striking. Mesa State respondents place a high value on the effectiveness of classroom instruction (average = 4.22), interaction with faculty (average = 4.24), and class size (average = 4.30). The graduates overall assessment of their collegiate experience averaged 4.12 on a scale where 5.00 was the highest.

Similar indicators of satisfaction with the quality of instruction are found in other assessments. In a survey of students enrolled at Mesa State College's Montrose campus, 92% of the respondents indicated that they would recommend Mesa State College-Montrose to other students. Second, from a follow-up survey of 2002 – 2003 UTEC graduates, 97% rated instruction as very good or good and 90% scored course content similarly.



**Table 2-7. PERCEPTION OF MSC's ACADEMIC ENVIRONMENT
 BY STUDENTS GRADUATING DURING AY 2004**

Academic Indicator	Mesa State College Avg. Score	Public Colleges Avg. Score	National Sample Avg. Score
	Average Score (5 = Very Satisfied)		
Instruction in Your Major Field	4.22	3.88	3.93
Course Content in Your Major Field	4.07	3.87	3.90
Attitude of Faculty Toward Students	4.24	3.89	3.99
Out-of-Class Availability of Your Instructors	4.21	3.85	3.93
Class Size Relative to the Type of Course	4.30	4.04	4.14
Availability of Your Advisor	4.18	3.73	3.82
Value of Information Provided by Your Advisor	4.02	3.68	3.76
The College in General	4.12	3.87	3.90

Source: ACT Student Opinion Survey, MSC Graduating Class AY2004 (Response Rate = 79%)

Concluding Remarks

As a regional public institution, Mesa State College has been a major contributor to the improvement in educational attainment by residents of Colorado's Western Slope. With its designation in 2003 as the Regional Education Provider for a much larger geographic area, the college is faced with the daunting challenge of trying to continue the balance of educational access with academic quality in this era of unpredictable resource availability. As it attempts to respond to this challenge, the college must be more creative and flexible in what and how it delivers programming to meet the educational needs of the residents it is mandated to serve. ■