

MSC

MESA STATE COLLEGE

GRAND JUNCTION, COLORADO



2009 REGIONAL ECONOMIC IMPACT





Mesa State College at a Glance

▶ **Total Student Enrollment (Fall 2008): 6,261**

Percentage in-state students: 90%

Percentage enrolled full-time: 72%

Percentage from underrepresented groups: 15%

Percentage from Western Colorado: 71%

▶ **Student - Faculty Ratio of 18:1**

▶ **Total Majors Offered: 57**

Master's: 2

Baccalaureate: 31

Associate: 14

Certificate: 8

▶ **Number of Degrees and Certificates Awarded**

(FY 2008-09): 890

Master's: 36 (4.0%)

Baccalaureate: 527 (59.2%)

Associate - transfer: 55 (6.2%)

Associate - technical: 125 (14.1%)

Technical Certificate: 147 (16.5%)

▶ **Mesa State College Faculty (Fall 2008):**

225 full-time academic and technical faculty

169 part-time

▶ **Number of Fulbright Scholar Awards: 8**

▶ **NCAA, Division II, Varsity Sports:**

Baseball (M), Basketball (M, W), Football (M),

Tennis (W, M), Cross-country (W), Golf (W), Soccer (M, W),

Softball (W), Swimming and Diving (W), Indoor and

Outdoor Track and Field (W), Volleyball (W) and

Wrestling (M)

▶ **Ranking of Mesa State as Regional Employer: 3rd**

▶ **Financial Aid Awarded: \$34 million**

▶ **Accreditation: Higher Learning Commission
of the North Central Association**

REGIONAL ECONOMIC IMPACT

by

Carol Futhey
Vice President for Academic Affairs

This publication is an update of the study *Achieving a Higher Degree of Leadership in Western Colorado*, Mesa State College, Grand Junction, Colorado, (2004), by Carol Futhey and Morgan Bridge. The original publication, and the updates focusing on Mesa State College's regional economic impact, are available online at mesastate.edu/president/impactstudy.

Acknowledgments

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Introduction

The private sector understandably is viewed as the driver of regional economic activity and recognized for the jobs it creates. Segments of the public sector—and more specifically public higher education institutions, such as Mesa State College (MSC)—however, often are less recognized for their impact on a region’s economy. Higher education institutions bring positive visibility, improve the quality of life of its region’s residents, offer employment opportunities, and are major purchasers of goods and services from area businesses. Further, they prepare a significant number of a state’s teachers, nurses, police officers, business owners, accountants, and IT professionals, just to name a few, and retrain employees who seek updated knowledge and skills for a constantly changing economy.

The Grand Junction Economic Partnership summarizes economic development as usually taking three forms: business creation, business attraction, and business retention and expansion,¹ in order to achieve a diversity of industries. All three forms aim to create new primary jobs that pay more than the prevailing wage, increase the amount of income of its residents from outside its market area, and create greater capital investment in the community. The reasons for doing so are obvious. Developing a regional economy gives more people greater opportunities to gain personal wealth, increases the tax base of communities to provide higher quality public services, and cushions them through economic cycles. But what factors enhance a region’s ability to attract businesses initially and support its on-going need for intellectual capital? Numerous studies, including one on the role of Colorado higher education by the Adams Group, have cited higher education as one of the key factors.²

This report focuses on various elements that capture the diverse roles that Mesa State College plays as a major contributor to Western Colorado’s economic development. The report begins with an overview of academic program initiatives that have been designed by MSC to support the preparation and/or retraining of the region’s projected employment needs. The report then shifts to present the regional economic impact of Mesa State, estimated to be \$225.6 million for fiscal year (FY) 2007-2008.

A Brief Overview of Mesa State

In fall 2008, Mesa State College enrolled 6,261 full- and part-time students. Approximately 71% of the enrollment was from the 14 Western Colorado counties designated as Mesa State College’s service region by the Colorado Department of Higher Education (Figure 1).³ Educational opportunities are offered at three levels: master’s programs in business and education; more than 40 fields of study through the College’s four-year division; and career and technical education in 12 programs, developmental instruction, and continuing education through MSC’s two-year division, Western Colorado Community College. The College also delivers instruction through its center in Montrose, Colorado.

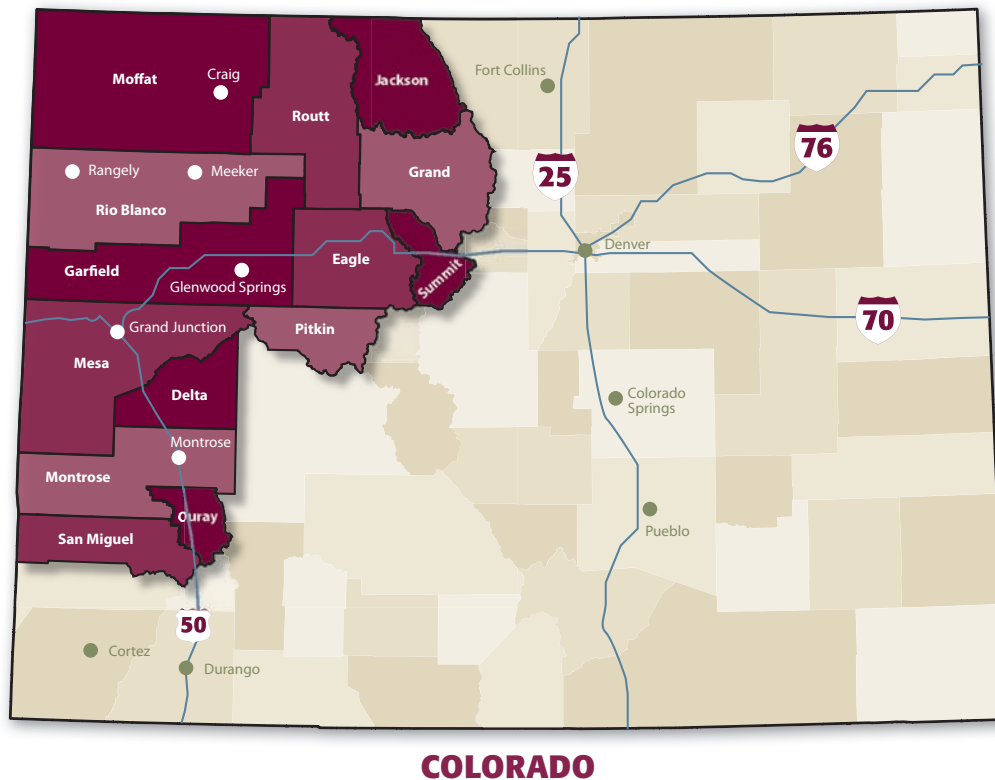
¹ Source: http://www.gjep.org/gjep/economic_development.php

² The Adams Group, *The Impact of Public Higher Education on the State of Colorado*, Colorado Springs, 2007.

³ Mesa State’s service region includes the following counties: Delta, Eagle, Garfield, Grand, Jackson, Mesa, Moffat, Montrose, Ouray, Pitkin, Rio Blanco, Routt, San Miguel, and Summit. The service region for Western Colorado Community College is limited to Delta, Mesa, Montrose, Ouray, and San Miguel Counties.



Figure 1: Mesa State College's Service Region



“The Grand Junction Economic Partnership ranked Mesa State as the third largest employer in the Grand Valley in 2008, with 1,267 employees, after Mesa County School District #51 (with 3,200 employees) and St. Mary’s Hospital and Medical Complex (employing 2,235 staff).”

In addition to its role in making higher education accessible in the region, Mesa State also serves as an economic catalyst. The Grand Junction Economic Partnership ranked Mesa State as the third largest employer in the Grand Valley in 2008, with 1,267 employees, after Mesa County School District #51 (with 3,200 employees) and St. Mary’s Hospital and Medical Complex (employing 2,235 staff).⁴ Additionally, the College generated more than \$700,000 in state income taxes for FY 2007-2008, and MSC employees’ net wages amounted to nearly \$16.9 million, most of which is re-spent within the region.

Finally, Mesa State students contributed an estimated 94,624 volunteer hours last year that represented assistance to local community services worth \$1.9 million.⁵ Volunteer projects have ranged from offering free CPR training to community members to raising funds to remodel a childcare center to mentoring high-risk teenagers to complete high school. This total does not include the numerous internship/student placement programs offered by most programs on campus.

⁴ Source: http://www.gjep.org/business_environment/industry_base.php

⁵ Based on the dollar value of time for Colorado in 2006 and reported by the Independent Sector. The value of volunteer time is based on the average hourly earnings of all production and nonsupervisory workers on private nonfarm payrolls (as determined by the Bureau of Labor Statistics). The Independent Sector takes this figure and increases it by 12 percent to estimate for fringe benefits. See http://www.independentsector.org/programs/research/volunteer_time.html

Preparing and Retraining the Region's Labor Force

Mesa State has worked aggressively in recent years to develop four- and two-year programs that support job creation and business expansion. Most recently, the College has partnered with the University of Colorado at Boulder to jointly deliver a baccalaureate mechanical engineering program in Grand Junction. Initiated in fall 2008, Mesa State faculty offer the lower division coursework and CU-Boulder faculty are responsible for the upper division classes. By efficiently pooling state resources, a fully-accredited engineering program—often cited as a critical element in economic development—can be completed in its entirety on the Western Slope.

The engineering initiative builds on continuing efforts by the College to prepare or retrain students for the region's projected labor force needs. Table 1 summarizes examples of labor needs for Grand Junction as identified by the Colorado Department of Labor and Employment, and the programs with which the College has responded.

**Table 1: Selected Examples of Projected Employment Changes
Grand Junction MSA, 2006-2016**

Occupational Title	% Increase, 2006 - 2016	Mesa State Degree Program
Construction Management	73.8	B.S., Construction Management
Elementary and Secondary Principals	22.6	M.A., Education (Educational Leadership cognate)
Emergency Medical Technician	32.8	Basic and Paramedic A.A.S., Emergency Medical Technician
Law Enforcement	22.4	A.A.S. and B.A., Criminal Justice; Technical Certificate, Peace Officer Standards and Training (POST)
Mechanical Engineering	41.2	Partnership program with University of Colorado-Boulder awards Bachelor of Science in Mechanical Engineering
Network and Computer System Admin	40.4	B.S. and B.A.S., Computer Information Systems
Nursing	42.4	B.S., Nursing/Registered Nurse; A.A.S., Registered Nurse; Practical Nurse Certificate
Oil and Gas Extraction	124.2	A.A.S., Process Systems Technology; B.B.A., Energy Management Concentration

Source for Projections: Colorado Department of Labor and Employment website. <http://lmgateway.coworkforce.com/lmgateway/analyzer/searchAnalyzer.asp?cat=OCC&session=OCCPROJ&subsession=99&time=&geo=&currsubsessavail=&incsource=&blnStart=Ture>

All of the programs build on a liberal arts core that develops communications, critical thinking, and problem-solving skills that are essential to workplace success, as well as graduate education.

Other recent initiatives include:

- Creation of degree completion programs, such as Bachelor of Applied Science degrees in Business, Computer Information Systems, Public Administration/Public Safety, and Radiologic Technology. These programs offer a route to a baccalaureate degree for individuals with a technical certificate and/or associate degree who now wish to advance in management or administration.
- Expansion of high demand programs, particularly in employment sectors that face critical shortages due to baby boomer retirements, especially in Nursing and Teacher Education. Since 2003, Mesa State has awarded nearly 400 nursing degrees⁶ and prepared over 450 teachers for elementary, secondary, or K-12 licensure.⁷

More than 800 undergraduate Business or Accounting degrees have been granted in addition to nearly 30 at the master's level over the past five years. The sciences—biological, physical, and environmental—have produced more than 300 graduates, many of whom are employed in the region's state and federal land and resource offices. Computer-related degrees in programming and applications had 100 graduates over the same timeframe, while two-year and certificate technology-based programs awarded nearly 250 degrees. Some newer professional programs are just beginning to graduate students, such as Criminal Justice which awarded 96 degrees and certificates last year, while other newer programs have not yet begun to produce graduates as in the case of Construction Management.

- Design of programs that use a career ladder curriculum model. Students can complete a program of study, exit for employment, and return later to move upward to the next degree level. The credit hours are fully transferable across all program levels. The eight programs offered at two or three levels include: Business, Computer Information Systems, Construction Technology/Management, Criminal Justice, Graphic Design, Nursing, Public Administration/Public Safety, and Radiologic Technology.
- Delivery of coursework to communities across the region via interactive video and online formats. Using distance technologies, employees can advance their education without leaving employers who can ill-afford for staff to be gone for extended periods of time to attend school. As of fall 2008, the College offered more than 100 class sections via distance technologies.
- Collaboration between the College and regional businesses/industries/agencies to build programs that leverage the resources of both, such as:
 - ▶ An Energy Management concentration within the Bachelor of Business Administration, designed with representatives of oil and gas companies;

“... programs that use a career ladder curriculum model [enable] students to complete a program of study, exit for employment, and return later to move upward to the next degree level. The credit hours are fully transferable across all program levels.”

⁶ Total includes all awards made at the baccalaureate, associate, and certificate levels.

⁷ Total includes all awards made at the baccalaureate and post-baccalaureate levels.

- ▶ Graduate Teacher Education in Educational Leadership and English for Speakers of Other Languages, with representatives from regional school districts;
 - ▶ Peace Officer Standards and Training (POST), with the Grand Junction Police and the Mesa County Sheriff's Departments;
 - ▶ Construction Technology, with the Associated Builders and Contractors, and more recently, a bachelor's degree in construction management; and
 - ▶ Associate of Applied Science/Registered Nurse and Licensed Practical Nurse degrees with the Mesa County Workforce Center.
- Development of a formal two-year division—Western Colorado Community College—that offers career and technical workforce training.

Figure 2: Examples of Reports Produced by the Natural Resources and Land Policy Institute

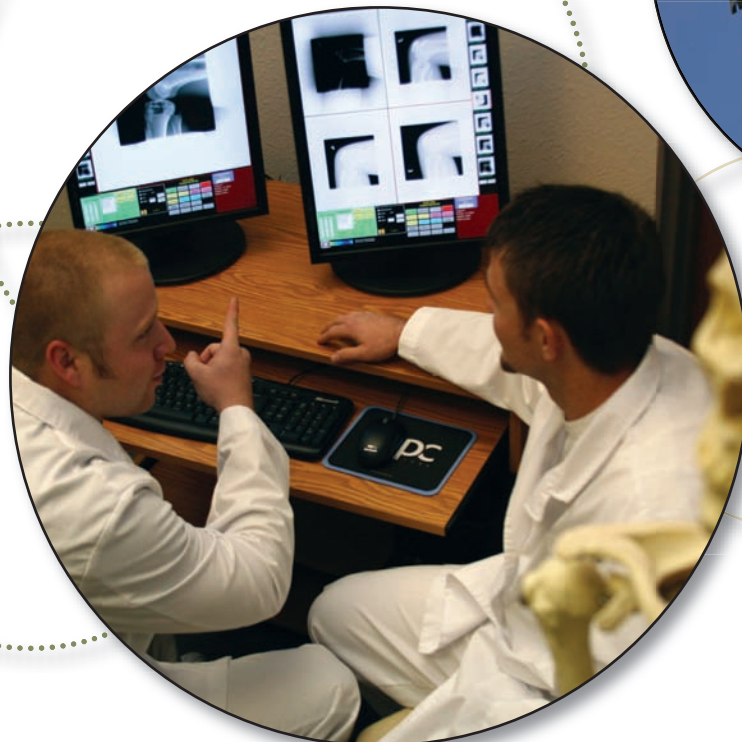


In addition to curricular developments, the faculty has collaborated with regional partners on initiatives that benefit the region more broadly, such as:

- Two institutes that assist the private or public sectors: the Entrepreneurship Business Institute offers expertise to regional businesses through education, consulting, training, and information. The Natural Resources and Land Policy Institute focuses on research assistance and mediation for local governments and federal agencies in managing public lands and natural resources.
- Application and awarding of externally-sponsored projects that support individuals currently or soon-to-be in the labor force. Some recent examples include:

- ▶ a \$1.2 million grant over five years from the U.S. Department of Education that prepares secondary content teachers to work with students identified as English as a Second Language Learners;
- ▶ a \$505,887 grant from the Colorado Department of Education to strengthen knowledge of mathematics and science of 120 middle school teachers over three years;
- ▶ a Colorado Trust grant for \$325,000 to fund development of a Practical Nurse program at the College's Bishop campus and nursing education center at the Montrose campus for three years;
- ▶ a \$600,000 award over three years from the Mesa County Workforce Center to implement a nursing career ladder that supports 20 students in the Associate Degree Program in Nursing in Grand Junction and 10 students in the Delta and Montrose areas; and
- ▶ a three-year \$445,000 grant from the National Science Foundation to prepare community college students in technology integration and manufacturing programs with critical skills that are needed in the 21st century workplace.

While program development is challenging due to the region's fluid economic climate, its vast and complex geography, and its changing demographic makeup, the College continues to design professional and technical programs that support businesses and services in Western Colorado, and in a broader context, the State of Colorado.



“A well-educated labor force, combined with the capacity to deliver educational programs and customized training, is a powerful magnet in attracting and expanding regional businesses.”

The Economic Value of Higher Education to an Individual

The most obvious investment returns from higher education are initially to the student. In the 2007 study *Education Pays*⁸ by the College Board, Baum and Ma summarize the median earnings of full-time workers by level of educational attainment (Figure 3). Using a high school diploma as the base, the differences are striking. The authors note that the differences are not solely attributable to educational levels, but the financial return from an investment in higher education is obvious. Projecting lifetime earnings, again using a high school graduate as the basis for the calculations, the increased earning power of a college education is even more notable (Figure 4).

Baum and Ma also estimate an individual’s return on their educational investment, noting that the longer college graduates remain in the workforce, the greater the economic benefit. For example, they calculate that:

By age 33, the typical college graduate who enrolled at age 18 has earned enough to compensate for borrowing to pay the full tuition and fees at the average public four-year institution, including interest on student loans to cover those charges, and earnings forgone during the college years.⁹

The benefits of an educational investment extend beyond a student’s circumstances to the region’s economy. A well-educated labor force, combined with the capacity to deliver educational programs and customized training, is a powerful magnet in attracting and expanding regional businesses. The Adams Group concluded that:

Without Colorado’s institutions of higher education, many young people would not receive a post-high school education and would face a lifetime of constrained job opportunities and lower earnings. Others would receive their higher education in other states, draining money from the Colorado economy and lessening the probability that they would become a part of Colorado’s labor force.¹⁰

Further, the presence of an institution of higher education brings socio-economic benefits to a region in ways not easily quantified. Moretti summarizes them as “. . . increases in education also may reduce criminal participation and improve voters’ political behavior. . . [and] result in better health for educated individuals and their children.”¹¹ Baum and Ma cite additional benefits that include “lower smoking rates, more positive perceptions of personal health, and healthier lifestyles . . . higher levels of civic participation, including volunteer work, voting, and blood donation, as well as greater levels of openness to the opinions of others.”¹²

8 Sandy Baum and Jennifer Ma, *Education Pays: The Benefits of Higher Education for Individuals and Society*, Washington, D.C., 2007.

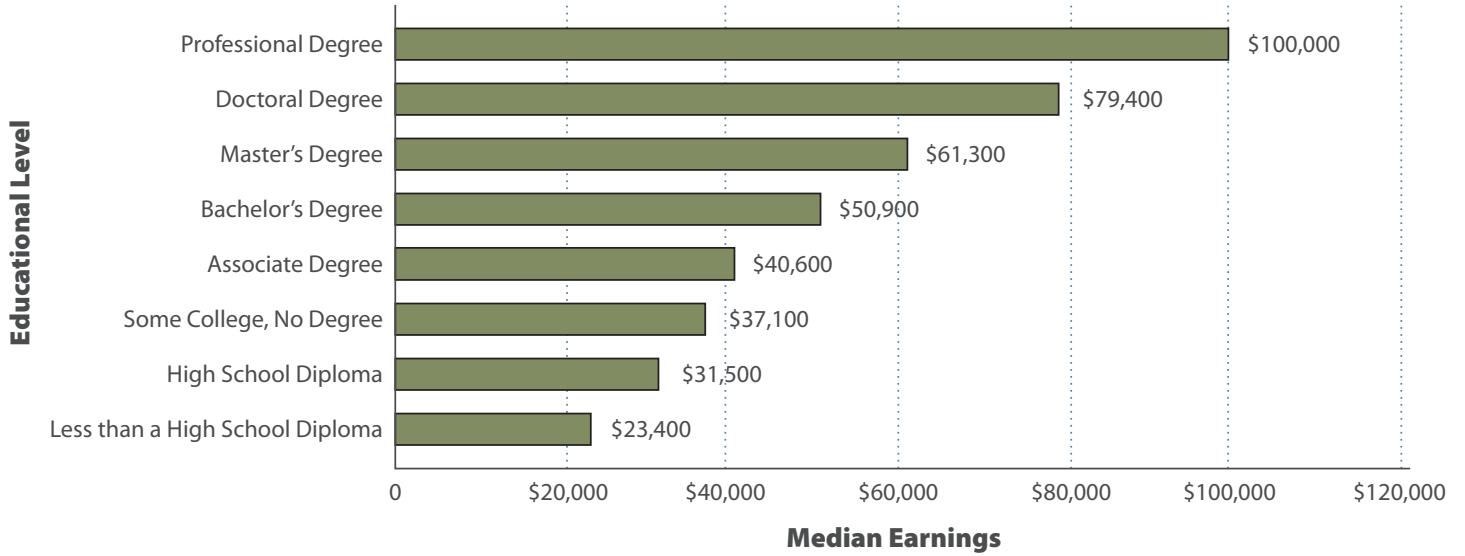
9 Baum and Ma, p. 11.

10 The Adams Group, 2007.

11 Enrico Moretti, “Social Returns to Human Capital,” *National Bureau of Economic Research Reporter*, Spring 2005.

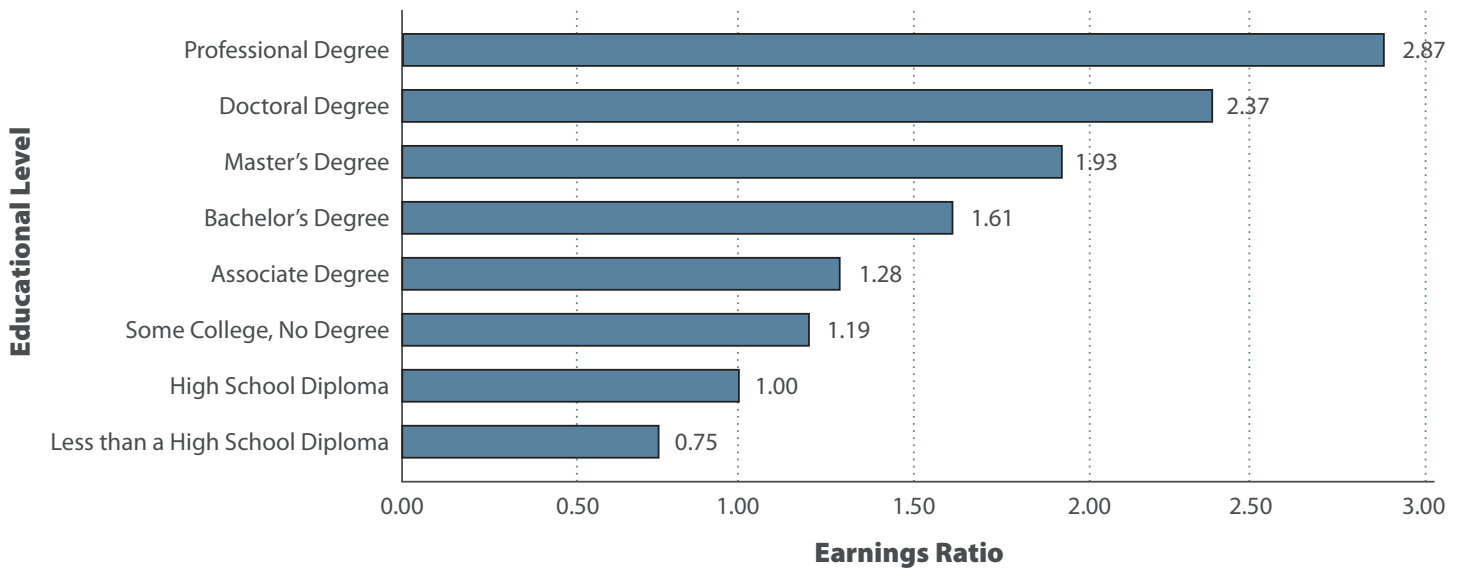
12 Baum and Ma, p. 2.

Figure 3: Median Annual Earnings for Full-time Workers (Ages 25 and Older) by Education Level, 2005



Source: Sandy Baum and Jennifer Ma, *Education Pays: The Benefits of Higher Education for Individuals and Society*, Washington, D.C., 2007, p. 10.

Figure 4: Expected Lifetime Earnings Relative to High School Graduates by Education Level, 2005



Source: Sandy Baum and Jennifer Ma, *Education Pays: The Benefits of Higher Education for Individuals and Society*, Washington, D.C., 2007, p. 10.

“The College has an estimated impact of \$125.3 million on the regional economy. When both direct and indirect, or re-spending, is taken into account by the application of an economic multiplier, the estimate expands to \$225.6 million worth of economic activity associated with Mesa State. Thus the College clearly creates a significant economic benefit, primarily to the businesses, households, and local governments of Western Colorado.”



The Economic Impact of Mesa State College on Western Colorado

Model Overview

The following section estimates the economic contribution that can be attributed to Mesa State’s presence in Western Colorado, based on the sum of the economic activity in five expenditure categories: the College, employees, students, visitors, and capital. The college spending component encompasses College non-payroll spending on everything from furniture to utilities to computers to food service to research lab equipment. Employee contribution is analyzed in terms of MSC’s payroll, while the student component accounts for that sector’s spending on a full-time equivalent basis. Visitor spending relies most heavily on campus visits related to events in the College Center and athletic competitions, while capital expenditures reflect major campus building projects.

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Methodology

The economic impact of Mesa State College on its region was estimated by using the short-term approach that examines the impact on local economic activity due to the presence of an institution. Beck and Elliot define economic impact as, “... the difference between existing economic activity in a region given the presence of the institution and the level that would have been present if the institution did not exist.”¹³ This study considers the economic impact of Mesa State College fiscal year (FY) 2007-08, and relies heavily on the American Council on Education model developed by Caffrey and Isaacs.¹⁴ The model examines the five categories noted above and then applies a multiplier to calculate the estimated total economic impact of the College.

A final note about the calculations. The estimated impact does not measure the economic contribution of organizations associated with Mesa State, such as the Alumni Association and the Mesa State College Foundation, the economic impact of faculty and staff earnings from private consulting, intellectual property, the economic impact of faculty and staff expertise used by state businesses and organizations, and other collateral economic activities. With this in mind, the economic impact of Mesa State reported in this study understates the overall economic impact of the College.

¹³ Roger Beck and Donald Elliott, “Economic Impact Study of Regional Public Colleges and Universities,” *Growth and Change*, Spring 1995, Volume 26, Issue 2, page 245.

¹⁴ John Caffrey and Herbert Isaacs, *Estimating the Impact of a College or University on the Local Economy*, Washington: American Council on Education, 1971.

Expenditure Categories

College Expenditures

Mesa State College purchases a host of products from the surrounding region, ranging from furniture to office supplies to utilities. In order to determine the College's spending on the surrounding region, budgets for all departments and auxiliary accounts were analyzed and then adjusted to exclude out-of-state companies without a regional presence. Total Colorado expenditures for FY 2007-08 were \$17.7 million (Table 2). Further analysis documented that \$12.7 million, or 72%, of the purchased goods and services stayed in Western Colorado, while approximately \$5 million of the total was spent elsewhere in the state.

Table 2: Mesa State College Expenditures in Colorado, FY 2007-08

Goods and Services Purchased -	Amount	Percent
in Western Colorado	\$12,749,006	71.98%
elsewhere in Colorado	\$4,961,842	28.02%
Total	\$17,710,848	

Employee Salary/Wage Expenditures

Employee salary/wage expenditure category includes items purchased by MSC employees from food to housing payments to entertainment to education and transportation. To determine employee salary/wage expenditure dollar amounts, all monies budgeted for salaries and wages--\$24.1 million—for all College departments and auxiliary accounts were reviewed (Table 3). Federal and state taxes represented 12.3% of the total, and benefits—including retirement, medical insurance, and life insurance—amounted to another 17.8% of the total. Once taxes and benefits were deducted, net wages amounted to approximately \$16.9 million.

Table 3: Estimated Mesa State Employee Salaries, Taxes, and Benefits, FY 2007-08

Gross Wages	\$24,144,192
Less Federal and State Taxes	\$2,958,617
Less Benefits	\$4,302,060
Net Wages	\$16,883,515
Less 10% non-local spending	\$1,688,352
Estimated Total Employee Local Spending	\$15,195,163

These individuals—directly employed by Mesa State—contribute most of their income after taxes into the area economy. The Bureau of Labor Statistics Consumer Expenditure Survey reports that housing and transportation are the two largest areas of consumer expenditures, and thus it was assumed that there was little dollar leakage out of the region. Some activities,





such as vacations and entertainment, however, are examples of dollars that may leave the local economy. Given Mesa State's location, it is assumed that ten percent adequately accounts for leakage out of the region, resulting in an estimate of \$15.2 million in employee disposable income that was added to the Western Colorado economy. Most of that income was spent in local private businesses, and these direct expenditures multiply through the economy as described in a later section of this report.

Student Spending

Mesa State students add significant dollars to the economy, and most of their spending stays in the local economy. To calculate student expenditure, a mean monthly expenditure was determined by the MSC Financial Aid Office for purchases such as room, board, personal expenses, transportation and entertainment. This produced an average of \$1,340 per month while attending college during the FY 2007-08.

Student headcount was adjusted to a full-time equivalent to allow for part-time enrollments, and no distinction was made for on-campus and off-campus students. Like that for employee spending, the study assumed that 90% of these dollars remained in the local economy, as shown in Table 4. At that rate, students infused approximately \$63 million into the local economy.

Table 4: Estimated Mesa State College Student Spending, FY 2007-08

Term	Term Full-time Equivalent Enrollment	Term Length (in months)	Average Student Monthly Expense	Total
Fall 2007 Enrollment	5,903	4	\$1,340	\$31,640,080
Spring 2008 Enrollment (including January Term)	5,464	5	\$1,340	\$36,608,800
Summer 2008 Enrollment	1,314	1	\$1,340	\$1,760,760
Estimated Annual Student Spending				\$70,009,640
Less 10% non-local spending				\$7,000,964
Estimated Total Student Local Spending				\$63,008,676

Last of all, it should be noted that the above estimate excludes other ways that Mesa State students affect the local economy. Approximately 10% of Mesa State students come to the College from outside the region, thereby bringing money into Western Colorado. Additionally, students leave the College with increased knowledge and skills that enhance their subsequent employability and spending levels. While many of these students have chosen to forego earnings during their college years, the payback on their educational investment is economically worthwhile.

Visitor Spending

Each year, the College attracts a significant number of individuals to Grand Junction to attend or participate in a wide range of events. In so doing, these visitors—frequently from communities outside Grand Junction—purchase food, entertainment, lodging, and fuel. Because these dollars are out-of-area dollars, they are “new” dollars to the community and increase overall economic activity.

Based on estimates from academic, student, and athletic departments for the past year, an estimated 12,300 individuals attended the College’s music and theatre programs and 32,769 fans attended athletic events. Table 5 offers an expanded listing of MSC activities and their estimated attendance, but excludes informal visits such as prospective students and their families.

Table 5: Mesa State College Estimated Visitors by Activity, FY 2007-08

Activity	Estimated Visitors
Tomlinson Library	15,600
Performing Arts	12,300
College Center	107,390
Athletics	32,769
Graduation	8,000
Total	176,059

The U.S. General Services Administration estimates a standard per diem destination rate within the continental U.S. of \$109 (\$70.00 for lodging and \$39.00 for meals and incidental expenses).¹⁵ Assuming that 25% of the visitors identified in Table 5—or 44,000 individuals—came to the campus from outside the region, and spent at least the daily average of \$109 for at least one day while the remaining 75% spent the estimated amount for meals (thereby excluding lodging for that segment), the estimated value to the regional economy is \$9.9 million.

Capital Spending

Capital expenditures vary annually due to their dependency on the availability of funding for construction, and as a result, are typically separated from all other College expenditures. During FY 2007-08, the College initiated, continued, and/or completed a series of projects that resulted in this expenditure category being unusually high (Table 6). More than \$27.6 million was spent on construction projects, technology upgrades for classrooms and labs, parking, and controlled maintenance. Of that amount, the amount spent locally varied by project, but as shown in Table 6, half of the 18 projects relied exclusively on local contractors and vendors, while another one-third of the projects spent 70% or more locally. Total dollars spent in the local economy from capital projects for the last year equaled \$24.4 million.



¹⁵ Source: http://www.gsa.gov/Portal/gsa/ep/contentView.do?queryYear=2008&contentType=GSA_BASIC&contentId=17943&queryState=Colorado&noc=T

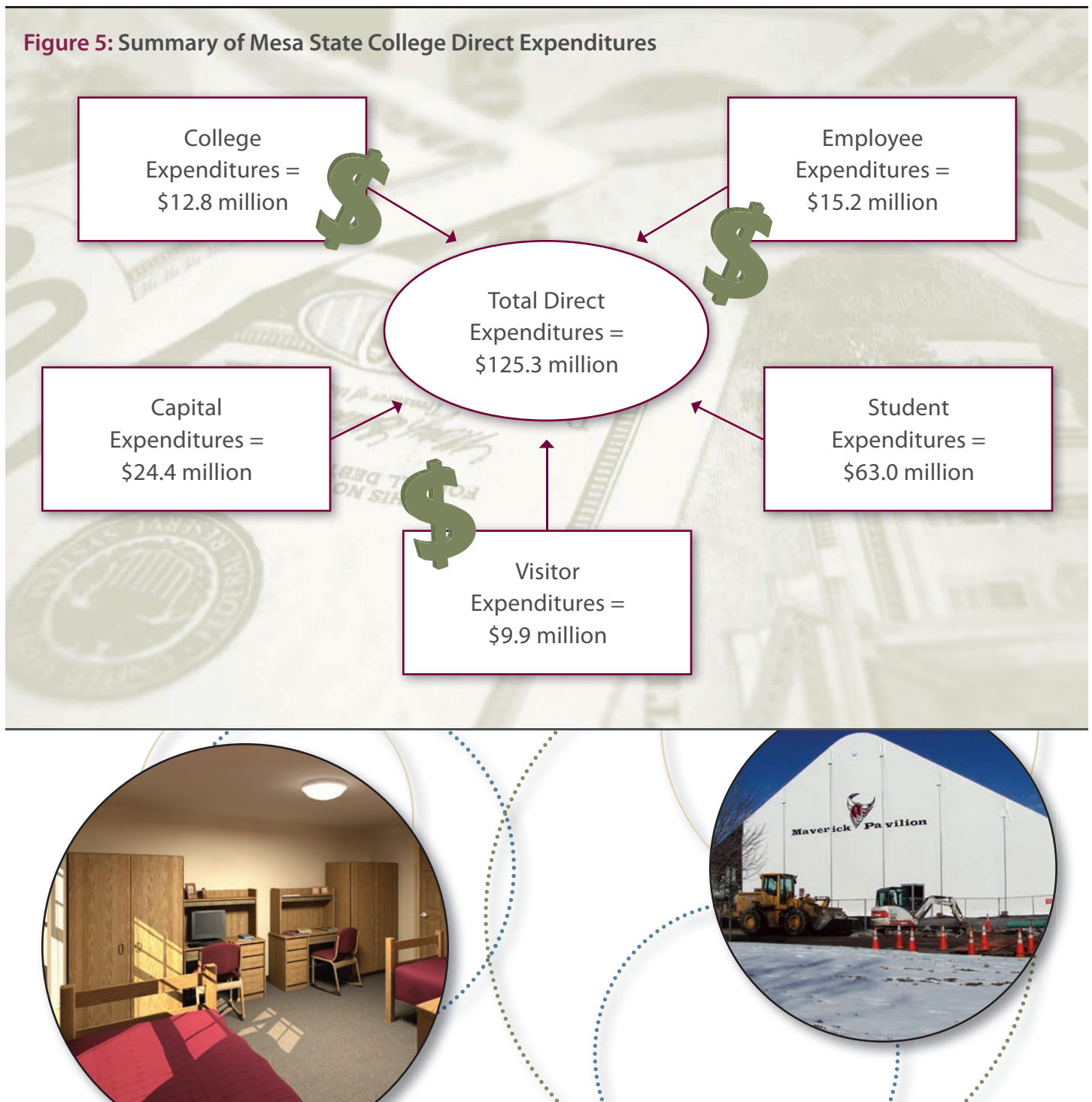
Table 6: Mesa State College Capital Expenditures, FY 2007-08

Project	Expenditure	Percent Spent Locally	Amount Spent Locally
North Avenue Student Housing Complex	\$693,462	75	\$520,096
EAS Remodel	\$251,826	100	\$251,826
College Center Renovation and Expansion	\$219,320	75	\$164,490
Relocate Admission/Housing and Outdoor Program	\$867,801	100	\$867,801
Moss Performing Arts Remodel	\$2,719	100	\$2,719
2006 Campus Services Building	\$2,593,035	100	\$2,593,035
Emergency HVAC HH/Library EM316	\$37,134	100	\$37,134
Controlled Maint. - Campus Utilities Infrastructure Upgrades	\$704,656	50	\$352,328
Controlled Maint. - Looped Primary Electrical Feed (W. Loop)	\$118,889	13	\$15,456
New Classroom Building	\$12,527,085	90	\$11,274,377
Terrace Element for New Classroom Building	\$11,600	90	\$10,440
UTEC AC System	\$73,048	100	\$73,048
Lowell Heiny Hall Chiller	\$210,160	50	\$105,080
Reassignment of Albers Hall for Student Housing	\$3,422	100	\$3,422
Saunders Field House Renovation and Expansion	\$3,856,779	70	\$2,699,746
College Place Mall	\$44,016	100	\$44,016
Geothermal Central Loop and South Campus Drill Fields	\$521,926	96	\$501,049
Additional Miscellaneous Projects	\$4,910,299	100	\$4,910,299
Total	\$27,647,179	88.4	\$24,426,362



Direct Expenditures Summary

Taking the five expenditure categories together, Mesa State College added over \$125.3 million directly to the regional economy in FY 2007-08 (Figure 5). Half of the spending is associated with students attending Mesa State, while nearly 20% of the current year's expenditures are associated with capital projects. To more accurately reflect the total economic contribution of Mesa State on Western Colorado, however, indirect expenditures also must be considered and are discussed in the next section.





Output Multiplier Effect

The multiplier effect captures the relationship between the dollar spent by one individual that then becomes the income of another person to be spent. The initial dollar, since it is being “re-spent,” has a greater impact on the economy than just the original dollar, and hence, dollars “grow” as they circulate through the economy. The ripple effect of expenditures made for goods and services supplied to Mesa State and the wages paid to MSC faculty and staff is the employees’ “re-spending” on housing, food, clothing, entertainment, etc. The remainder of the earnings is removed from the economy in the form of savings, taxes and spending on goods and services outside the economy, adjusted for here by their exclusion.

The multiplier effect magnifies the economic impact of the initial Mesa State expenditures, with a large multiplier indicating greater economic impact than a smaller one. Similarly, the revenues generated by area businesses from supplying goods and services to Mesa State are paid out in wages and material purchases, which in turn are spent on living costs. In theory, this process continues through several rounds of activity with diminishing increments at each stage. This study, however, is limited to the secondary effects of spending.

According to the Grand Junction Economic Partnership, a “typical” multiplier in the Grand Valley is in the 3.0 to 7.0 range. Generally speaking, though, higher education studies that include multipliers that vary rather widely as shown in Table 7.

Table 7: Output Multipliers Used in Selected Higher Education Economic Impact Studies

College, University, Organization	Multiplier
Colorado State University	4.0
University of Houston System	2.1
University of Colorado Health Sciences	2.06 - 2.5
University of Colorado - Boulder	1.93 - 2.06
University of Delaware	1.8
University of Wisconsin - Stout	1.67
University of California - Santa Cruz	1.5
Depauw University	1.43
Camosum College	1.37

For this study, a multiplier of 1.8 was chosen, one which is conservative compared to many other studies. Applying this multiplier to the College’s direct expenditures, the total addition to the economy was estimated to be \$225.6 million due to the presence of Mesa State College (Table 8). Put differently, without the spending by Mesa State College—including its faculty, staff, students, visitors, and all others affected by what MSC does—the income flow to Western Colorado would be \$225.6 million less each year.

Labor Multiplier Effect

The money spent by Mesa State on goods and services generates jobs in Western Colorado in several ways. First is the direct employment of faculty, staff, and students in positions at the College and their accompanying spending. Last year, there were 1,267 people who owed

Table 8: Economic Impact of Mesa State College by Expenditure Category, FY 2007-08

Expenditure Category	Direct Impact	Multiplier (indirect impact)	Total Impact	Percent of Total
College	\$12,749,006	1.8	\$22,948,211	10.2%
Employees	\$15,195,163	1.8	\$27,351,293	12.1%
Students	\$63,008,676	1.8	\$113,415,617	50.3%
Visitors	\$9,947,334	1.8	\$17,905,200	7.9%
Capital	\$24,426,362	1.8	\$43,967,452	19.5%
Total	\$125,326,541	1.8	\$225,587,773	100.0%

their jobs to the existence of the College. Second, non-payroll, regional expenditures create other jobs for workers who supply the goods and services to Mesa State.

A labor multiplier can calculate the number of jobs created by the influx of Mesa State's spending into the surrounding community. Again, when other impact studies were reviewed, differing labor multipliers were found (Table 9). Using a conservative labor multiplier of 1.4 to estimate the additional number of jobs due to Mesa State expenditures results in an additional 507 full- and part-time jobs.

Table 9: Employment Multipliers Used in Selected Higher Education Economic Impact Studies

College, University, Organization	Multiplier
University of Nevada - Las Vegas	3.08
University of Oregon	2.15
University of Colorado	1.8
Montana State University	1.67
Colorado State University	1.5
University of Idaho	1.41

Concluding Comments

In FY 2007-2008, Mesa State College added more than \$125.3 million directly to the regional economy, and when indirect spending is considered, the total exceeds \$225.6 million. Additionally, this study estimates that 507 jobs beyond those at Mesa State were supported by the \$125.3 million in direct spending. One of the major criticisms of economic impact studies that are created in-house is the temptation to inflate numbers, use larger multipliers and thus overstate the impact of the institution on the surrounding community.¹⁶ This study has used a very conservative approach in its calculations and multipliers to estimate the total economic impact of the College. Consequently, it is highly likely that the economic impact of Mesa State College is actually somewhat greater than the estimated \$225.6 million.

“... the additional number of jobs due to Mesa State expenditures results in an additional 507 full- and part-time jobs.”

¹⁶ Roger Beck and Donald Elliott, “Economic Impact Study of Regional Public Colleges and Universities,” *Growth and Change*, Spring 1995, Volume 26, Issue 2, page 245.



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