Mesa Community College
Program to Assess Student Learning

Results for Academic Year 2005-2006
Assessment Methodology

- Comparison of student groups:
  - Beginning Students (Pre): 0-9 general education hours
  - Completing Students (Post): 30+ general education hours

  “Students who have completed at least 30 hours of general education courses will perform significantly better than students who have completed fewer than 9 hours of general education courses.”

Samples are representative and balanced.
## Assessment Findings and Trends

Assessment results show clear evidence of student learning.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Spring 2004</th>
<th>Spring 2005</th>
<th>Spring 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts &amp; Humanities</td>
<td></td>
<td></td>
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<tr>
<td>Cultural Diversity</td>
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<tr>
<td>Oral Communication</td>
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<tr>
<td>Written Communication</td>
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<tr>
<td>Numeracy</td>
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<tr>
<td>Scientific Inquiry</td>
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<tr>
<td>Problem Solving/Critical Thinking</td>
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<td>Information Literacy</td>
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<tr>
<td>Workplace Skills</td>
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</tr>
</tbody>
</table>

- Significant Differences
- Not Administered
Assessment Results Patterns

• Students have had relatively higher scores in these areas:
  – using numeric models,
  – evaluating information for currency, relevancy and reliability,
  – evaluating the strength of an argument and deciding if conclusions are warranted,
  – communicating one on one,
  – making and supporting personal observations
Assessment Results Patterns

• Scores have been lowest for these areas:

  – using, applying or evaluating information,

  – working in a team and interacting in a group,

  – recognizing the opposing person’s position and seeing beyond the personal perspective

  – recognizing underlying assumptions and evaluating inferences

  – organizing, prioritizing and planning work
• Other findings:

– Students believe that their experience at MCC has broadened their understanding of diverse people and ideas.

– Completing students believe more strongly that they can improve the world, that voting is critical and that interaction with people from different backgrounds is valuable.
Numeracy Assessment 2006

Percent Correct

- *Use models to Organize Data: 54 (Post), 57 (Pre)
- *Obtain Correct Results: 62 (Post), 63 (Pre)
- *Identify and Extract Relevant Data: 67 (Post), 71 (Pre)
- *Use Results: 54 (Post), 62 (Pre)

*Use Results: 63 (Post), 81 (Pre)
Numeracy Trends

Post Group Comparison

% Correct

2001 2002 2004 2006

- Use models to organize the data
- Obtain correct results and state results with qualifiers
- Identify and extract relevant data
- Use results
Scientific Inquiry Trends

Post Group Comparison

<table>
<thead>
<tr>
<th>% Correct</th>
<th>2004</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpretation</td>
<td>70</td>
<td>75</td>
</tr>
<tr>
<td>Hypothesis</td>
<td>65</td>
<td>70</td>
</tr>
<tr>
<td>Prediction</td>
<td>55</td>
<td>60</td>
</tr>
<tr>
<td>Evaluation</td>
<td>60</td>
<td>65</td>
</tr>
<tr>
<td>Assumption</td>
<td>50</td>
<td>55</td>
</tr>
</tbody>
</table>

Legend:
- Interpretation
- Hypothesis
- Prediction
- Evaluation
- Assumption
Problem Solving/Critical Thinking 2006

Percent Correct

- Evaluation of Arguments: 73% (Post), 49% (Pre)
- Interpretation: 70% (Post), 52% (Pre)
- Recognition of Assumptions: 69% (Post), 62% (Pre)
- Deduction: 63% (Post), 60% (Pre)
- Inference: 63% (Post), 58% (Pre)

Legend:
- Post
- Pre
Problem Solving/Critical Thinking Trends

Post Group Comparison

Evaluation of Arguments: Is an argument strong or weak?
Interpretation: Is a conclusion warranted based on evidence?
Recognition of assumptions: What are unstated assumptions?
Deduction: Do conclusions necessarily follow?
Inference: Is the inference true based on facts given?
Information Literacy Assessment 2006

**Share Correct**

- Evaluate information
- Define Information
- *Identify Sources
- *Locate Information
- *Use Information

![Bar Chart showing comparison between Post and Pre assessment results for each of the listed skills. The chart displays the percentage of correct responses for each skill.](chart.png)
Information Literacy Trends

Post Group Comparison

- Evaluate information for currency, relevancy, reliability
- Identify and use appropriate print/electronic sources
- Define information needed to answer question
- Use information effectively
- Locate appropriate information
Workplace Skills Assessment Results

Share Correct

- Technology Literacy: Post 82, Pre 63
- Ethics: Post 79, Pre 53
- Interpersonal Communication: Post 78, Pre 70
- Personal and Professional Responsibility: Post 78, Pre 70
- Team Work: Post 73, Pre 67
- Organization: Post 63, Pre 53

*Organization

*Team Work

*Personal and Professional Responsibility

*Interpersonal Communication

*Ethics

*Technology Literacy
Workplace Skills Trends

Post Group Comparison

<table>
<thead>
<tr>
<th>Year</th>
<th>Technology Literacy</th>
<th>Personal and Professional Responsibility</th>
<th>Ethics</th>
<th>Interpersonal Communication</th>
<th>Team Work</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>2004</td>
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<td>2005</td>
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<tr>
<td>2006</td>
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</tr>
</tbody>
</table>
Student Views about Assessment

A short survey of participating students provided input about Assessment from the student perspective:

– 1,000 students completed the optional survey at the end of their assessment.

– 90% of students *could explain why* they were participating in the assessment process.

– The majority said that *classroom experience at the college had helped prepare them for the assessment*. Experience in a directly related course, or through the library were mentioned most often.
“The college should use the assessment results to help improve its instruction of students through classes, support services, and making students aware of the resources available to them.”

“I think that the results should be used for the implementation of new and more effective methods of learning.”

“To improve, no matter how good the statistics turn out to be, education should always seek for improvement.”

“To figure out what things may need to be stressed more in classes to promote better learning for all.”

“They should use the results to adjust course standards and do so in a way that would further extend and challenge students’ learning.”

“Hopefully, they will look at the weak areas in this assessment as places to invest in.”
Questions
Mesa Community College

- Indicators of Student Success
Selected Indicators of Student Success

- Student opinion of MCC preparation
- Student Persistence
- Subsequent success at Arizona Universities
Graduating Student Perceptions: Preparation for Transfer

- **Very well prepared**: 53%, 35%, 61%, 61%, 59%
- **Somewhat prepared**: 43%, 35%, 35%, 36%, 38%
- **Somewhat unprepared**: 4%, 4%, 3%, 2%, 3%
- **Very unprepared**: 1%, 1%, 1%, 1%, 1%
Preparation for the Workplace

Graduating Student Perceptions: Preparation for the Workplace

- Very well prepared
- Somewhat prepared
- Somewhat unprepared
- Very unprepared

For the years 2001-2002 to 2005-2006:

- 2001-2002: 51% very well prepared, 45% somewhat prepared, 3% somewhat unprepared, 4% very unprepared
- 2002-2003: 53% very well prepared, 43% somewhat prepared, 3% somewhat unprepared, 1% very unprepared
- 2003-2004: 59% very well prepared, 37% somewhat prepared, 3% somewhat unprepared, 1% very unprepared
- 2004-2005: 57% very well prepared, 38% somewhat prepared, 2% somewhat unprepared, 4% very unprepared
- 2005-2006: 60% very well prepared, 37% somewhat prepared, 2% somewhat unprepared, 1% very unprepared
Full-time students have much higher persistence rates than part-time students.

<table>
<thead>
<tr>
<th></th>
<th>Enrolled Fall 2004</th>
<th>Remaining Spring 2005</th>
<th>Remaining Fall 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
</tr>
<tr>
<td>Part Time</td>
<td>4,740</td>
<td>100%</td>
<td>2,438</td>
</tr>
<tr>
<td>Full Time</td>
<td>1,788</td>
<td>100%</td>
<td>1,568</td>
</tr>
</tbody>
</table>
Persistence

Intent to Transfer or Improve Career
Percent of cohort who re-enrolled

- Fall 2004: 100%
- Spring 2005: 100%
- Fall 2005: 88%
- Part Time: 63%
- Full Time: 31%
University Transfer

Undergraduate Enrollment of Students with MCC Transfer Credits at Arizona Universities

- U of A (All sites)
- NAU (All sites)
- ASU (All sites)
Success After Transfer

Students with MCC Transfer Credits Receiving Undergraduate Degrees at Arizona Universities

- **U of A (All sites)**
- **NAU (All sites)**
- **ASU (All sites)**

<table>
<thead>
<tr>
<th>Year</th>
<th>U of A</th>
<th>NAU</th>
<th>ASU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-2000</td>
<td>2308</td>
<td>150</td>
<td>224</td>
</tr>
<tr>
<td>2000-2001</td>
<td>2202</td>
<td>149</td>
<td>197</td>
</tr>
<tr>
<td>2001-2002</td>
<td>2366</td>
<td>133</td>
<td>223</td>
</tr>
<tr>
<td>2002-2003</td>
<td>2476</td>
<td>140</td>
<td>242</td>
</tr>
<tr>
<td>2003-2004</td>
<td>2543</td>
<td>123</td>
<td>232</td>
</tr>
<tr>
<td>2004-2005</td>
<td>2891</td>
<td>153</td>
<td>262</td>
</tr>
</tbody>
</table>
Subsequent Success of a Cohort of MCC University Transfer Students

- New freshman/new transfer students from MCC transferred 42 hours on average.

- The first year cumulative university GPA increases with the number of hours transferred.

<table>
<thead>
<tr>
<th>MCC Transfer Hours*</th>
<th>New Freshman or New Transfer Students</th>
<th>First Year Cumulative University GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-23</td>
<td>399</td>
<td>2.89</td>
</tr>
<tr>
<td>24-31</td>
<td>208</td>
<td>2.85</td>
</tr>
<tr>
<td>32-47</td>
<td>429</td>
<td>3.03</td>
</tr>
<tr>
<td>48-63</td>
<td>514</td>
<td>3.12</td>
</tr>
<tr>
<td>64+</td>
<td>227</td>
<td>3.19</td>
</tr>
</tbody>
</table>

* Students with less than 12 transfer credit hours were not included.
Subsequent Success of a Cohort of MCC University Transfer Students

• Average number of university credit hours taken was 22.
• Average GPA was 3.00.
• Students who received an MCC degree, certificate, and/or AGEC before attending the university took an average of 29 credit hours and earned a GPA of 3.20.

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Cumulative First Year University GPA</th>
<th>Average First Year University Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received Award/Cert/AGEC</td>
<td>456</td>
<td>3.20</td>
<td>29</td>
</tr>
<tr>
<td>No Award/Unknown</td>
<td>1,321</td>
<td>2.93</td>
<td>19</td>
</tr>
<tr>
<td>Total Unduplicated Students</td>
<td>1,777</td>
<td>3.00</td>
<td>22</td>
</tr>
</tbody>
</table>
88% of the new freshman/new transfer students from MCC continued their studies at the university in the subsequent school year (i.e. persisted).

<table>
<thead>
<tr>
<th></th>
<th>Total MCC Transferred 2003-04</th>
<th>Persisted* 2004-05</th>
<th>Percent Persisted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received Award/Cert/AGEC</td>
<td>456</td>
<td>411</td>
<td>90%</td>
</tr>
<tr>
<td>No Award/Unknown</td>
<td>1,321</td>
<td>1,147</td>
<td>87%</td>
</tr>
<tr>
<td>Total Unduplicated Students</td>
<td>1,777</td>
<td>1,558</td>
<td>88%</td>
</tr>
</tbody>
</table>

* Students who persisted successfully completed university courses in the subsequent academic year (2004-05).
Mesa Community College

- Student and Population Trends
Population Growth Projections

- Continued population growth is projected for Arizona and for Maricopa County.

- Projected rate of growth for the East Valley slower than Maricopa County overall.
MAG Projections

Population 2000
Maricopa Association of Governments
within the Phoenix Metropolitan Area

Legend
- 0 - 10,000
- 10,001 - 30,000
- 30,001 - 50,000
- 50,001 - 70,000
- 70,001 - 90,000
- 90,001 - 110,000
- 110,001 - 146,000
MAG Projections

Projected Population 2030
Maricopa Association of Governments
within the Phoenix Metropolitan Area

Legend
- 0 - 10,000
- 10,001 - 30,000
- 30,001 - 50,000
- 50,001 - 70,000
- 70,001 - 90,000
- 90,001 - 110,000
- 110,001 - 140,000

Office of Research & Planning
Maricopa Association of Governments -- Regional Analysis Zones
MCC Headcount/FTSE Trends

• MCC headcount and FTSE have declined for the past two consecutive years.

• Long-term perspective: since 1980, five cycles of headcount and FTSE decline amid steady overall growth.
FTSE Trends

Full Time Student Equivalent (FTSE) Trends
45th-Day Fall 1980 to Fall 2006
MCC Student Trends

• The composition of the student population is changing.
• Younger students, transfer students and Hispanic students are increasing.
• There are decreases in older students and students attending for career-related reasons or personal interest.
  – The strong local economy may influence this trend and is predicted to continue into the future.
# MCC Students by Age Group and Regional Growth Projections by Age Group

<table>
<thead>
<tr>
<th>AGE GROUP</th>
<th>AGE DISTRIBUTION MCC STUDENTS AY2005-2006</th>
<th>5-YEAR GROWTH PROJECTIONS FOR REGION** 2006-2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Age</td>
<td>3%</td>
<td>+ 13%</td>
</tr>
<tr>
<td>College Age</td>
<td>58%</td>
<td>+ 9%</td>
</tr>
<tr>
<td>Mid-Career</td>
<td>30%</td>
<td>+ 7%</td>
</tr>
<tr>
<td>Boomers</td>
<td>7%</td>
<td>+ 17%</td>
</tr>
<tr>
<td>Seniors</td>
<td>1%</td>
<td>+ 18%</td>
</tr>
</tbody>
</table>

* Source: Claritas Inc. 2006, Marketing Research Site Report

** Region represents the geographic areas where most MCC students live.
Student Intent

Percent Student Intent (excludes Unknown)

- Fall 2000: 54% Transfer, 5% Workforce Intent, 4% Personal Interest
- Fall 2001: 55% Transfer, 4% Workforce Intent, 1% Personal Interest
- Fall 2002: 57% Transfer, 29% Workforce Intent, 4% Personal Interest
- Fall 2003: 62% Transfer, 26% Workforce Intent, 12% Personal Interest
- Fall 2004: 62% Transfer, 27% Workforce Intent, 11% Personal Interest
- Fall 2005: 62% Transfer, 27% Workforce Intent, 11% Personal Interest

Legend:
- Blue: Transfer
- Red: Workforce Intent
- Orange: Personal Interest
Hispanic Projections

• The share of Hispanic students attending MCC rose from 12% to 17% in the last ten years.

• The Hispanic population in the MCC service areas is projected to grow at three times the rate of the overall population.

• Hispanic population in MCC service areas:
  – 19% in 2000
  – 24% in 2006
  – 28% by 2011 (projected)

Sources: Claritas Inc. 2006, Marketing Research Site Report, and 2000 U.S. Census
What does all of this mean for the future of the assessment program?