Do Large-Scale, State-Funded Merit Scholarship Programs Promote Access and Retention?

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Evidence from Nevada’s Land-Grant University

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Purpose of Study

- Examine the impact of Nevada’s state-funded merit aid program, the Millennium Scholarship, on
  - student access
  - first-year academic experience
  - freshmen academic preparation
  - freshmen retention
  - first-year financial support
    - at the state’s flagship university (UNR), its land-grant and only research-extensive institution, with a liberal admissions policy

- Address issues raised by critics of state-funded merit aid programs, including
  - The Congressional Advisory Committee on Student Financial Assistance
  - Harvard University’s Civil Rights Project
The Millennium Scholarship

- Enacted into law 1999, available since 2000
- Initial eligibility:
  - Graduate with diploma from a state public/private high school
  - Complete high school with at least a 3.0* GPA and pass all areas of state high school proficiency exam
  - Must be state resident for at least two years during high school
- College enrollment and scholarship maintenance requirements:
  - Minimum enrollment of 12 credits/semester (6 credits at CCs) in recognized degree or certificate program
  - Maintain at least a 2.0 (2.6 in 2003) cumulative GPA and complete a minimum of 12 credits/semester
  - To regain eligibility: earn at least a 2.6 semester GPA and complete a minimum of 12 credits/semester (6 at CCs) without Millennium support
- Dollar value of scholarship is determined on a per-credit basis, with a maximum lifetime total of $10,000 (1 credit ~ $80 at UNR)
- Millennium support is limited to 8 years (6 years for 2003 and on grads) after graduating from high school
- Millennium covers remedial courses, but not credit-by-exam/AP courses

*raised to 3.1 in fall '05, 3.25 in fall '07

Data, Sources, and Variables Examined

- New full-time, in-state high-school grad freshmen* who entered fall semesters 1996 through 2003
  - Millennium years 2000-03: 6,760 students (including 6,189 on Mill.-$)
  - Pre-Millennium 1996-99: 3,769 students
- Data sources:
  - Student Information System
  - ACT test record (SPS)
  - Nevada higher education system office (UCCSN)
  - National Student Clearinghouse
  - Florida Dept. of Education (Office of Student Financial Assistance)
  - National Center for Education Statistics (NAEP)
  - US Census Bureau (SAIPE)
- Variables
  - Student demographics: ethnicity/race, income background, residency
  - Academic experience: pre-collegiate, first-year college
  - Financial aid: Millennium status, other aid type/amount
  - Subsequent enrollment: spring, second-year fall/spring

*Excluding non-degree seeking, and foreign students
Data, Sources, and Variables Examined (cont.)

- High school academic preparation measured via:
  - Preparatory index consisting of GPA, ACT/SAT test scores, and AP/IBP credits, each weighted by their odds ratio from simultaneous variable entry into a binary logit second-year retention model; final weights are averaged based on dropout/stopout and transfer results. Academic preparation score is 'retention'-weighted due to strong bivariate correlation.

- Unmet financial need:
  - Remaining (outstanding) dollar amount in financial need after subtracting expected family contribution (EFC), and all offered financial aid awards from total cost of attendance.
  - Source of data is the institutional financial aid office, which estimates that it processes about 99 percent of all aid to students.

- Variable definition for aid types at institution:
  - Scholarships = merit based
  - Grants = may be need or merit based

The Chorus of Negative Headlines

- Targeted reports:
  - State Merit Scholarship Programs and Racial Inequality (Civil Rights Project, Harvard University, 2004)
  - Who Should We Help? The Negative Social Consequences of Merit Scholarships (Civil Rights Project, Harvard University, 2002)

- General reports:
  - Access Denied: Restoring the Nation’s Commitment to Equal Educational Opportunity (Advisory Committee on Student Financial Assistance, Washington DC, 2001)
Criticism of Large-Scale State Merit Aid Programs

- They provide aid to students with little or no financial need that are likely to go to college without such aid—i.e., a middle/upper class subsidy.
- They exacerbate a growing inequity in college access for low-income and minority students and do not expand overall access.
- They do not address the growing gap of available aid to needy students and the cost of college attendance, i.e. the growing amount of unmet need and use of loans to fill it.
- They have been enacted by states at the expense of need-based programs—i.e., negative zero-sum effect.
- Students from inferior high schools may qualify for such aid based on cumulative grades, but are less likely to meet continued eligibility once in college—leading to higher dropout rates.
- They have been implemented at a time when grant dollars have shifted to merit-based programs at the institutional level.

College Access

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A National Problem?
Statements by the Congressional Advisory Committee on Student Financial Aid

- "Politically popular merit-based programs have been enacted in many states at the expense of increases in need-based programs." (ACSFA, 2002, p. 2.)
- "Parents’ education primarily affects the likelihood of being academically prepared, not the likelihood of attending college once prepared." (ACSFA, 2002, p. 19.)
- "Differences in [college] enrollment are largely attributable to the fact that students are from low-income families." (ACSFA, 2002, p. 19.)
- "High unmet need discourages college-qualified high school graduates from enrolling in a four-year college." (ACSFA, 2002, p. 21.)
- "The impact of unmet need on the behavior of college-qualified high school graduates is as dramatic as its impact on all high school graduates." (ACSFA, 2002, p. 23.)
- "Academic preparation does not inoculate high school graduates against the debilitating effects of unmet need." (ACSFA, 2002, p. 23.)

As a result:

- In academic year 2001-02, the ACSFA estimates that 406,000 college-qualified high school graduates from low- and moderate-income families were prevented from enrolling in a four-year college. (ACSFA, 2002, p. 27., Burd, 2002)

Lack of Access for the College Prepared?

From anecdotes to data:

*It is highly unlikely that there are many qualified students unable to enter college*

Source: Greene & Winters (2005), NCES (January, July 2005)
Why the Discrepancy between the ACSFA and the Numbers Reported Here?

- The Congressional ACSFA defines "college prepared" as "minimally qualified" based on
  - Highest score among high school GPA, class rank, NCES aptitude test, or ACT/SAT score (as used in the NCES college-readiness index (see Berkner & Chavez, 1997))
  - Thus, a GPA of 2.7 or an ACT score of 19 is considered 'min qualified' according to NCES index. (Greene & Winter, 2005)
  - At UNR, ACT less than 21 requires remediation; minimum admission GPA is 2.75; UNR is less selective than lower-tier 4-year CA institutions (e.g., Cal State)
  - ACSFA minimum qualification criteria are too low !!!
- Greene Method (Greene & Winter, 2005) apply three, more meaningful criteria to define "college prepared":
  - Estimate of high school graduation rate based on diploma recipients reported by the US Dept of Ed CCD and adjusted smoothed 9th grade cohort estimate
  - Transcript screen based on minimum high school coursework required by least selective 4-year colleges in CA, TX, FL, NY, IL, and MI.
  - NAEP reading score of at least 265 based on representative sample from NAEP Transcript Study

Example:

Florida’s Bright Futures Scholarship Program

The Charge:
“Inequality for Black and Hispanic students compared to White students for being eligible to receive the scholarship.”
(Source: State Merit Scholarship Programs and Racial Inequality, The Civil Rights Project, Harvard University, 2004, p. 57.)
Florida’s Bright Futures Scholarship

Urban Counties by Ethnicity Race
Percent of All Public High School Graduates and Scholarship Recipients
1999-2002

Source: State Merit Scholarship Programs and Racial Inequality, The Civil Rights Project, Harvard University, 2004, p. 58.

Florida’s Bright Futures Scholarship

Caucasians by Urban vs. Rural Counties
Percent of All Public High School Graduates and Scholarship Recipients

Juvenile poverty equal or greater than Dade County

Sum = Sumter; O = Okeechobee
W = Walton; Suw = Suwanee
H = Highlands
Florida’s Bright Futures Scholarship
Dade County by Ethnicity Race
Public High School Graduates and Scholarship Recipients
1999-2002

Asians are most likely to qualify for a Bright Futures Scholarship among Dade County high school graduates.


Florida’s Bright Futures Scholarship
Scholarship Type and Ethnicity/Race, 2002 Cohort

Percent Eligible by Ethnicity/Race

Asian Americans are twice as likely to qualify for the highest level (Academic) Bright Futures Scholarship vis-à-vis Caucasians.

*Grade 8, 1998
Findings:
- academic preparation matters most
- poverty affects all students

The Millennium Scholarship
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Impact on Statewide Access
College-going rate of Nevada high school graduates rises to 45.3 percent in 2000 as the Millennium Scholarship is introduced.
Over the past ten years, the ethnic/racial categories of Asian/Pacific Islander, Hispanic, and Black (non-Hispanic) have experienced significant enrollment growth.

Nevada Higher Education Financial Aid by Source
(based on total $, excluding Grants-in-Aid and Student Employment)

Nevada's federal grant assistance to low-income students is up since start of the Millennium Scholarship; total need-based state grants are up 7.4% between 1999 and 2004. Nationwide, state-funded need-based grants\(^*\) grew by $1.75 billion versus $1.10 billion for non-need-based grants between 1993 and 2003.

(Source: NASSGAP 2003-04 Academic Year Survey, p. 4, 9)
The Millennium Scholarship

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Impact on Institutional Access and Scholarship Participation

Enrollment Growth of New Full-Time Freshmen

Fall Semesters, NV High School Graduates

- Asian Am.
- African/Hispanic Am.
- Caucasians

- Pre-Millennium % change (1996-99)
- % change since Millennium (1999-2003)
New Full-Time Freshmen by Ethnicity/Race
Fall Semesters, NV High School Graduates

Percent

Pre-Millennium Millennium Years Pre/Post Average

Native Am. Asian Am. African Am. Hispanic Unknown

Millennium Freshmen by Ethnicity/Race
Fall Semesters 2000-2003, NV High School Graduates

Unknown African/Hispanic/ Native Am Asian Am Asian Am

75.93% 5.74% 10.94% 7.4%
Out-of-State Freshmen by Ethnicity/Race
Fall Semesters 2000-2003, New Full-Time Status

- Unknown: 6.36%
- African/Hispanic/Native Am: 11.53%
- Asian Am: 6.12%
- Caucasian: 75.99%

New Full-Time Freshmen by Family Income
Fall Semesters, NV High School Graduates

Percentage of low-income high school graduates in NV in 2002: 10.5% (WICHE, 2005)
New Full-Time Freshmen with Scholarship Offers
Fall Semesters, NV High School Graduates

Proportion of new freshmen with scholarship offers more than doubled, from 34% to 71%, after start of the Millennium Scholarship, with the vast majority among all ethnic/racial groups benefiting from it.

New Full-Time Freshmen by Family Income
Fall Semesters 2000-2003, NV High School Graduates

Millennium Scholarship Status at End of First Semester, Minorities (M) vs. Caucasians (C)
The Millennium Scholarship

Financial Impact on New Freshmen at the Institutional Level

Composition of Financial Aid Offers

New Full-Time Freshmen, Fall Semesters, NV High School Graduates

Financial Impact

- Millennium Scholarship
- Institutional aid
- Grants (all types)
- Loans (all types)
Gift Aid Offers: Size and Proportion of Beneficiaries
(New Full-Time Freshmen, Fall Semesters, NV High School Graduates)

<table>
<thead>
<tr>
<th>Year</th>
<th>Millennium Scholarship</th>
<th>Non-Millennium S'ships</th>
<th>All scholarships</th>
<th>Grants</th>
</tr>
</thead>
<tbody>
<tr>
<td>'96</td>
<td>33</td>
<td>36</td>
<td>34</td>
<td>32</td>
</tr>
<tr>
<td>'97</td>
<td>73</td>
<td>70</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>'98</td>
<td>73</td>
<td>70</td>
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<td>'99</td>
<td>73</td>
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<td>73</td>
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<td></td>
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<tr>
<td>'01</td>
<td>73</td>
<td>70</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>'02</td>
<td>73</td>
<td>70</td>
<td>69</td>
<td></td>
</tr>
</tbody>
</table>

Proportion of new freshmen on scholarships more than doubled since start of the Millennium program, while grant aid to low-income students was maintained.

Debt Aid Offers: Size and Proportion of Beneficiaries
(New Full-Time Freshmen, Fall Semesters, NV High School Graduates)

<table>
<thead>
<tr>
<th>Year</th>
<th>Subsidized loans</th>
<th>Unsubsidized loans</th>
<th>Institutional aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>'96</td>
<td>12</td>
<td>12</td>
<td>33</td>
</tr>
<tr>
<td>'97</td>
<td>12</td>
<td>12</td>
<td>35</td>
</tr>
<tr>
<td>'98</td>
<td>14</td>
<td>9</td>
<td>33</td>
</tr>
<tr>
<td>'99</td>
<td>10</td>
<td>9</td>
<td>33</td>
</tr>
<tr>
<td>'00</td>
<td>9</td>
<td>7</td>
<td>29</td>
</tr>
<tr>
<td>'01</td>
<td>9</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>'02</td>
<td>9</td>
<td>4</td>
<td>25</td>
</tr>
</tbody>
</table>

Reliance on loans and institutional aid went down as the majority of students from 2000 on qualified for the Millennium Scholarship.
Pell Grant Offers: Size and Proportion of Beneficiaries
(New Full-Time Freshmen, Fall Semesters, NV High School Graduates)

Size of Pell grants went up after start of Millennium Scholarship and proportion of students with offers rose for most groups.

Loan Offers to Low-Income* Students
(New Full-Time Freshmen, Fall Semesters, NV High School Graduates)

Fewer low-income students chose loans and borrowed less after start of the Millennium Scholarship, regardless of their level of academic preparation.

* Less than $30,000 annual income
By Academic Preparation

The amount of loan aid dropped slightly for most middle-income freshmen after start of the Millennium Scholarship, with a declining proportion of borrowers.

* $30,000 to $50,000 annual income

Gift Aid Offers to Low-Income* Students

Amount of gift aid increased for virtually all low-income freshmen after start of the Millennium Scholarship, regardless of their academic preparation, with a growing proportion relying on scholarships.

* Less than $30,000 annual income
Gift Aid Offers to Low-Mid-Income* Students
(New Full-Time Freshmen, Fall Semesters, NV High School Graduates)

By Academic Preparation

<table>
<thead>
<tr>
<th></th>
<th>Pre-Millennium ('96-'99)</th>
<th>Millennium Years ('00-02)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholarships</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top 3rd</td>
<td>156</td>
<td>222</td>
</tr>
<tr>
<td>Middle 3rd</td>
<td>50</td>
<td>163</td>
</tr>
<tr>
<td>Bottom 3rd</td>
<td>25</td>
<td>100</td>
</tr>
<tr>
<td>N =</td>
<td>156</td>
<td>222</td>
</tr>
<tr>
<td>%</td>
<td>66</td>
<td>88</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Scholarships (all types)</th>
<th>Grants (all types)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top 3rd</td>
<td>62</td>
<td>85</td>
</tr>
<tr>
<td>Middle 3rd</td>
<td>47</td>
<td>73</td>
</tr>
<tr>
<td>Bottom 3rd</td>
<td>34</td>
<td>47</td>
</tr>
<tr>
<td>N =</td>
<td>62</td>
<td>47</td>
</tr>
<tr>
<td>%</td>
<td>26</td>
<td>34</td>
</tr>
</tbody>
</table>

Gift aid increased for most middle-income freshmen after start of the Millennium Scholarship, with a growing proportion relying on scholarships.

* $30,000 to $50,000 annual income

Unmet Financial Need of Lower Income Freshmen
(Fall Semesters, NV High School Graduates, Annual Amount)

<table>
<thead>
<tr>
<th>% with unmet need</th>
<th>Pre-Millennium Years</th>
<th>Millennium Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>'96</td>
<td>52 35</td>
<td>64 48</td>
</tr>
<tr>
<td>'97</td>
<td>54 39</td>
<td>66 48</td>
</tr>
<tr>
<td>'98</td>
<td>66 48</td>
<td>60 51</td>
</tr>
<tr>
<td>'99</td>
<td>57 51</td>
<td>51 50</td>
</tr>
<tr>
<td>'00</td>
<td>65 50</td>
<td>65 50</td>
</tr>
<tr>
<td>'01</td>
<td>67 57</td>
<td></td>
</tr>
<tr>
<td>'02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'03</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Millennium program initially reduced the proportion of low-income students with unmet need and the amount of unmet need, but its fixed award value is outpaced by rising cost-of-living expenses that widen unmet need.
Financial Impact

Annual Percentage Change: Unmet Need vs. Tuition
(Fall Semesters, NV High School Graduates, Annual Amount)

Introduction of the Millennium Scholarship did not lead to larger hikes in tuition cost, which contribute little to rising unmet need.

The Millennium Scholarship

Impact on Student Performance of New Freshmen at the Institutional Level
New Full-Time Freshmen by Academic Indicators
Fall Semesters, NV High School Graduates

First-Semester College GPA
High school cumulative GPA
High School Preparation Index
Min. HS GPA for Millennium

High school preparation index score

Asian Am.  African Am.  Hispanics  Caucasians
New Full-Time Freshmen by Academic Indicators
Fall Semesters, NV High School Graduates

ACT Composite Score by High School GPA


18 19 20 21 22 23 24 25

- HS GPA < 2.8
- HS GPA 2.8 to 3.0
- HS GPA 3.0 to 3.2
- HG GPA > 3.2
Forty percent of Millennium students are in need of remediation based on ACT/SAT placement scores.

The Millennium Scholarship

Subsequent Eligibility Status of New Freshmen at the Institutional Level
Millennium Freshmen Who Lost Eligibility
Fall Semesters 2000-2003, NV High School Graduates
Lost Millennium Scholarship after First Semester

By High School Preparation

- Top Q: 7%
- 3rd Q: 30%
- 2nd Q: 22%
- Bottom Q: 41%

% of bottom Quartile:
- Caucasian: 76%
- African/Hispanic/Native Am: 17%
- Asian Am: 7%

By Parent income

- $50-80K: 32%
- $30-50K: 21%
- > $80K: 33%
- < $30K: 14%

% of low-income group:
- Caucasians: 65%
- Asian Am: 11%
- Other Minorities: 24%
New Full-Time Freshmen by High School Preparation
Fall Semesters 2000-2003, NV High School Graduates

Millennium Scholarship Status at End of First Semester

- Eligible, no Millennium
- Maintained eligibility
- Lost eligibility
- HS grad ineligible

Bottom Q  | 3rd Q  | 2nd Q  | Top Q  
---|---|---|---
100%  | 0%   | 0%   | 0%   
90%  | 10%  | 5%   | 0%   
80%  | 10%  | 2%   | 0%   
70%  | 10%  | 2%   | 0%   
60%  | 0%   | 0%   | 0%   
50%  | 0%   | 0%   | 0%   
40%  | 0%   | 0%   | 0%   
30%  | 0%   | 0%   | 0%   
20%  | 0%   | 0%   | 0%   
10%  | 0%   | 0%   | 0%   
0%   | 0%   | 0%   | 0%   

Millennium Scholarship Status at End of Second Semester

- Eligible, no initial Mill.
- Maintains eligibility (w/ %)
- Regains eligibility (w/ %)
- Continues ineligibility (w/ %)
- Lost eligibility
- HS grad ineligible (w/ %)
- Did not return (w/ %)

Bottom Q  | 3rd Q  | 2nd Q  | Top Q  
---|---|---|---
100%  | 0%   | 0%   | 0%   
90%  | 10%  | 5%   | 0%   
80%  | 10%  | 2%   | 0%   
70%  | 10%  | 2%   | 0%   
60%  | 0%   | 0%   | 0%   
50%  | 0%   | 0%   | 0%   
40%  | 0%   | 0%   | 0%   
30%  | 0%   | 0%   | 0%   
20%  | 0%   | 0%   | 0%   
10%  | 0%   | 0%   | 0%   
0%   | 0%   | 0%   | 0%   

New Full-Time Freshmen by High School Preparation
Fall Semesters 2000-2003, NV High School Graduates

Millennium Scholarship Status at End of First Semester

- Bottom Quartile
  - Income: < $30K: 40%
  - Income: > $80K: 43.9%
- Top Quartile
  - Income: < $30K: 23.8%
  - Income: > $80K: 30.6%

Eligibility Status:
- Eligible, no Millennium
- Maintained eligibility (w/ %)
- Lost eligibility (w/ %)
- HS grad ineligible (w/ %)

Millennium Scholarship Status at End of Second Semester

- Bottom Quartile
  - Income: < $30K: 20%
  - Income: > $80K: 26.9%
- Top Quartile
  - Income: < $30K: 17.6%
  - Income: > $80K: 12.6%

Eligibility Status:
- Eligible, no initial Mill.
- Maintains eligibility (w/ %)
- Regains eligibility
- Continues ineligibility (w/ %)
- Lost eligibility
- HS grad ineligible
New Full-Time Freshmen by High School Preparation
Fall Semesters 2000-2003, NV High School Graduates

Millennium Scholarship Status at End of First Semester

<table>
<thead>
<tr>
<th></th>
<th>Bottom Quartile</th>
<th>Top Quartile</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minorities</strong></td>
<td>42.1</td>
<td>93.5</td>
</tr>
<tr>
<td><strong>Caucasians</strong></td>
<td>29.6</td>
<td>91</td>
</tr>
</tbody>
</table>

- Eligible, no Millennium
- Maintained eligibility (w/ %)
- Lost eligibility (w/ %)
- HS grad ineligible (w/ %)

HS preparation: Bottom Quartile | Top Quartile

Minorities* Caucasians

*Excluding Asian American

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New Full-Time Freshmen by High School Preparation
Fall Semesters 2000-2003, NV High School Graduates

Millennium Scholarship Status at End of Second Semester

<table>
<thead>
<tr>
<th></th>
<th>Bottom Quartile</th>
<th>Top Quartile</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minorities</strong></td>
<td>36.1</td>
<td>80.6</td>
</tr>
<tr>
<td><strong>Caucasians</strong></td>
<td>15.8</td>
<td>86.5</td>
</tr>
</tbody>
</table>

- Eligible, no initial Mill.
- Maintains eligibility (w/ %)
- Regains eligibility (w/ %)
- Continues ineligibility (w/ %)
- Lost eligibility
- HS grad ineligible
- Did not return

HS preparation: Bottom Quartile | Top Quartile

Minorities* Caucasians

*Excl. Asian Am.
New Full-Time Freshmen by Parent Income
Fall Semesters 2000/2003, NV High School Graduates

Millennium Scholarship Status at End of Second Semester

- Low income (<$30K)
  - Eligible, no initial Mill.: 50.4%
  - Maintains eligibility (w/ %): 44%
  - Regains eligibility: 23.4%
  - Lost eligibility: 11.3%
  - Continued ineligibility (w/ %): 1%
  - Did not return: 0%

- High income (>=$80K)
  - Eligible, no initial Mill.: 63.8%
  - Maintains eligibility (w/ %): 56.7%
  - Regains eligibility: 13%
  - Lost eligibility: 7.8%
  - Continued ineligibility (w/ %): 0%
  - Did not return: 0%

Millennium Scholarship Attrition
Number and Percentage of New Freshmen Losing the Scholarship after the First Year

- College cumulative GPA requirement lifted from 2.0 to 2.6
- Many academically marginal students enter with Millennium Scholarships
New Full-Time Freshmen by High School
Academic Preparation
Fall Semesters 2000-2003, NV High School Graduates

Low Socioeconomic Status School: Sparks
Capture rate: 26.8%
ACT Math 2003: 20.5
ACT Participation 2003: 36%

High Socioeconomic Status School: Galena
Capture rate: 37.5%
ACT Math 2003: 21.6
ACT Participation 2003: 55%

Eligibility Status

New Full-Time Freshmen by High School Preparation
Fall Semesters 2000-2003, NV High School Graduates
Millennium Scholarship Status at End of First Semester

HS preparation: Bottom Quartile
Sparks
- Eligible, no Millennium: 29%
- Maintained eligibility (w/ %): 44.9%
- Lost eligibility (w/ %): 26.1%
- HS grad ineligible (w/ %): 24.2%

Galena
- Eligible, no Millennium: 44.4%
- Maintained eligibility (w/ %): 83.6%
- Lost eligibility (w/ %): 29%
- HS grad ineligible (w/ %): 24.2%

Top Quartile
Sparks
- Eligible, no Millennium: 29%
- Maintained eligibility (w/ %): 44.4%
- Lost eligibility (w/ %): 26.1%
- HS grad ineligible (w/ %): 24.2%

Galena
- Eligible, no Millennium: 92.9%
- Maintained eligibility (w/ %): 92.9%
- Lost eligibility (w/ %): 29%
- HS grad ineligible (w/ %): 24.2%
The Millennium Scholarship
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Impact on Retention of New Freshmen at the Institutional Level

New Full-Time Freshmen Retention
Fall Semesters, NV High School Graduates

2nd Year Fall Retention

% retained


Low Income (<$30K)  Lower Middle-Income ($30-50K)
Upper Middle-Income ($50-80K)  Upper Income (>80K)
Millennium Freshmen by Second-Year Enrollment
Fall Semesters 2000-2003

ACT Scores

Composite | English | Math
---|---|---
24 | 23 | 22
23 | 22 | 21
22 | 21 | 20

Academic Indicators

HS Prep* | 1st Sem GPA | HS GPA
---|---|---
3.5 | 3.0 | 2.5
3.0 | 2.5 | 2.0
2.5 | 2.0 | 1.5
2.0 | 1.5 | 1.0
1.5 | 1.0 | 0.5
1.0 | 0.5 | 0.0

*High school preparation index

Enrolled vs. Not enrolled vs. Transferred out

Retention

Millennium Freshmen by Second-Year Enrollment: Returners vs. Transfer-Outs
Fall Semesters 2000-2003

ACT Scores

Composite | English | Math
---|---|---
26 | 25 | 24
25 | 24 | 23
24 | 23 | 22
23 | 22 | 21
22 | 21 | 20

Academic Indicators

HS Prep* | 1st Sem GPA | HS GPA
---|---|---
4.0 | 3.5 | 3.0
3.5 | 3.0 | 2.5
3.0 | 2.5 | 2.0
2.5 | 2.0 | 1.5
2.0 | 1.5 | 1.0
1.5 | 1.0 | 0.5
1.0 | 0.5 | 0.0

Enrolled out of state (N=131, i.e., 2.4% of all re-enrolled Millennium students)

Retention

*High school preparation index
Debt Burden and College Access

National Level Data

Debt Burden of College Graduates: National Average

(Bachelor’s degree recipients in repayment a year later)

Median monthly loan payment as a percentage of monthly income by:

Family income quartile

Debt Burden of College Graduates: National Average
(1999-2000 Bachelor’s degree recipients who owed in 2001)

African Americans on average owe the most in federal loans one year after graduation, while Caucasians and Asian Americans face the largest debt from private sources. (Source: Debt Burden: A Comparison of 1992-93 and 1999-2000 Bachelor's Degree Recipients a Year After Graduating. NCES 2005-170, US Dept of Ed., p. 30)

Debt Burden of College Graduates by Income Group
(Employed Bachelor’s degree recipients in repayment a year later; monthly loan payment as a percentage of monthly income)

Debt burden for graduates with low income employment declined between 1994 (light) and 2001 (dark), but they are much more likely to face a high debt burden than graduates with higher-income employment. (Source: Debt Burden: A Comparison of 1992-93 and 1999-2000 Bachelor's Degree Recipients a Year After Graduating. NCES 2005-170, US Dept of Ed., p. 45)
Private Grants to Undergraduates: National Average
Amounts Received and Percent Receiving It by Group, 2003-2004

Low-income and minority students are slightly less likely to receive private grants, but when they do, they receive larger amounts.
(Source: Private Scholarships Count, Institute for Higher Education Policy, May 2005)

*Dependent students
Access since start of the Millennium Scholarship

- Higher college-going rate at institution and statewide
- Faster growth among minority students
- Little change in enrollment composition by ethnicity/race or income

Millennium participation

- Majority of all students among all ethnic/racial groups
- Slightly more upper-income students than low-income students

Millennium impact on financial support

- Millennium Scholarship is principal source of aid, less of other type
- Grant aid to low-income students has been maintained, amount and proportion of beneficiaries is up
- Low-income students, regardless of academic preparation, rely less on debt-incurred aid such as loans
- Unmet need for low-income students has been reduced, but trend of growing unmet need remains unaffected as cost of living outpaces growth in aid; it is not clear, however, whether unmet need outpaces disposable income after factoring in the expected family contribution (EFC)

Academic preparation since start of the Millennium Program

- About the same, may be a slight drop among African Americans
- But at least 40 percent of Millennium students are in need of remediation

Millennium eligibility status after initial enrollment

- Second-semester ineligibility is strongly associated with low academic preparation, but not with income background
- Nearly 40 percent of new freshmen in 2003 lost the Scholarship at the end of the first year—a rate that almost doubled since 2000 as the college GPA eligibility requirement increased from 2.0 to 2.6 in 2003.
- Minorities (except Asian Americans) are more likely to lose the Scholarship due to low academic preparation compared to Caucasians
- Academically well-prepared students are three times more likely to retain scholarship eligibility throughout the first year compared to low-prepared students—regardless of ethnicity/race, income background, or socioeconomic status of the high school attended
Millennium eligibility status after initial enrollment (cont.)

- Those losing the Scholarship face higher levels of initial unmet financial need, possibly indicating employment obligations that compete with a requisite academic focus.
- Millennium students transferring to out-of-state universities that are ranked higher than UNR are academically better prepared than those Millennium students that are retained—suggesting that the Scholarship fails to keep the best students in the state, though further analysis beyond the freshmen year is needed.

Millennium-Based Results vs. Critics of State-Funded Scholarships
Scholarship participation:

- Eighty-four percent of low-income students from in-state high schools received the Millennium Scholarship, about 2 percentage points lower than high-income students.
- Lower-income students are not disadvantaged, as critics charge, though long-term scholarship solvency may be better secured through targeted eligibility (e.g., income caps, tiered benefits).

Equitable college access:

- Growth in minority student enrollment did not slow down with introduction of the Millennium Scholarship.
- Minorities received Millennium offers at almost the same rate as Caucasian students.
- Millennium results do not support charges that state-funded merit scholarships exacerbate enrollment gaps.

Growing unmet financial need:

- Millennium aid does alleviate the burden of unmet need for lower-income students, but does not reverse the trend of growing unmet need due to its fixed award amount.

Growing unmet financial need (cont.):

- Further research is needed to determine whether the growing unmet need constitutes a larger percentage of disposable family/student income after factoring in the EFC

Substitution for need-based grant aid:

- Need-based grants and the number of lower-income students receiving them has been maintained since start of the Millennium Scholarship, and needy students rely less on loans.
- Introduction of the Millennium Scholarship did not reduce availability of other grant aid for lower-income students, as charged by critics.

Exacerbating the dropout rate of students from inferior high schools:

- Academic preparation is key to continued scholarship eligibility, regardless of a high school’s socioeconomic status; the latter, based on data from the institution’s primary capture area, is not associated with the level of academic preparation of new freshmen.
- Socioeconomic background does not trump academic preparation as key factor in retention, as critics charge. (e.g., ACSFA, 2001, p.13)
Perceived Determinants vs. Empirical Results

- Insufficient statistical control over key determinants of college access and success leads to unsupportable conclusions made by critics of state merit-aid programs.

**Perceived Determinants**
1. Student ethnicity/race
2. Socioeconomic background
   - Academic preparation

**Empirical Results**
1. Academic preparation
   - Socioeconomic background
   - Student ethnicity/race


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References: