Multiprogram Longitudinal Evaluation of Nina Mason Pulliam Legacy Scholars Program

Annual Report: October 2004
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Executive Summary

The fourth cohort of the Nina Mason Pulliam Legacy Scholars has been selected and this semester 124 Nina Scholars are enrolled at the four host institutions: Ivy Tech State College–Indianapolis (Ivy Tech); Indiana University–Purdue University Indianapolis (IUPUI); Arizona’s Maricopa County Community Colleges (MCCCD); and Arizona State University (ASU). The longitudinal process and outcome evaluation has been an integral part of establishing the programs, and our foremost goal is to provide ongoing feedback to staff and advisory councils to strengthen their programs.

The relationships between the Nina Mason Pulliam Charitable Trust and the four educational institutions have matured and evolved into highly effective partnerships. Intensive efforts have been made to build a strong program infrastructure, including the refinement of decision-making processes and practices. To a great extent, these efforts have been successful and the level of program cohesiveness has increased steadily within the past three years. To further enhance the integrity of the programs and to ensure consistency in applying procedures, policies and guidelines, we recommend that the programs:

- maintain high levels of procedural consistency while fulfilling the vision and spirit of the program;
- balance applicant need and potential for academic success;
- define and achieve equitable representation among the three program emphases; and
- establish an effective transfer process from the community colleges to the universities.

This 2004 Annual Report focuses primarily on scholar academic progress, but also provides “Best Practice” recommendations on two central issues researched throughout the past year, the scholar selection process and the functioning of scholar advisory councils, and profiles the 2004 Nina Scholar graduates.

The Scholar Selection Process

Each scholar cohort initially includes fifteen scholars at MCCCD, twelve at Ivy Tech, eight at ASU, and five at IUPUI. When scholars graduate they are not replaced in their respective cohorts. At the universities, when students leave the programs without completing degrees, new scholars are selected to replace them. At the community colleges, only students who leave in the first semester are replaced. At the four-year institutions, IUPUI and ASU, the advisory councils have established processes to facilitate the transfer of community college Nina Scholars. When a vacancy exists the program leads notify scholars who have completed at least one year at the community college or are graduating and invite them to apply. When selecting replacement scholars, decision makers employ the same standards as those used to select new cohort members, with the exception that having accumulated more than 24 credit hours should not disqualify the transfer applicants.

The selection of scholars is simultaneously one of the most important and challenging program responsibilities. Within the past year, the following issues have been notable:

- The role of Trust representatives in the process has been to provide...
background information and encourage consistent application of qualifying criteria. Our observations of the selection process suggest that the transition was implemented effectively and that committee members appreciated opportunities for advice from and conversations with Trust representatives. The overall process may be strengthened further if the committee-Trust interactions occur even earlier in the process, ideally during a training session for decision makers.

- Decision makers across and within the four institutions hold varying views of Nina Scholar transfers from the community colleges to the universities. Some program leads and advisory council members strongly advocate for transfers and view them as very likely to succeed and as potentially providing leadership for other cohort members and enhancing program stability. Other decision makers are less committed to potential transfer scholars and perceive them as having already gained significantly from the scholarship program and as less entitled than new applicants. There is a clear need for open, explicit dialogue on this important issue.

- Little attention has been given to the possibility that applicants from a specific qualifying group may be more or less likely to advance in the process. Our observations suggest that some selection committees may rate adults with dependents higher than foster care youths and individuals living with physical disabilities. This may occur when older, more experienced applicants are better able to present themselves as having definite, realistic academic and career goals. It is important to document whether

Left to right: Trust representative Lee Ann Hoy; Ivy Tech graduates Angela Owens, Malinda English, Jackie Wagner, and Laurie Tabor; and Trust representative Michael Twyman.
disparities exist and, if this is the case, to scrutinize possible reasons for disparity and to alter the process accordingly. The very characteristics that make individuals eligible for the scholarship must not impact the process in a manner that systematically disadvantages that group. Specifically, due to their youthfulness and lack of familial and societal supports, many foster care youths are and/or are perceived as less focused, disciplined or “realistic” than their adult counterparts.

- All programs need to clarify their approach to achieving equitable representation of scholars from all three qualifying categories: adults, 25 years or older, with dependents in their family unit; college-age youths and adults with physical disabilities; and young adults, 18 to 25 years old, who have been raised in the child welfare system and are responsible for their own financial support (also referred to as foster-care youths). Achieving equity will require explicit advisory council deliberations and decisions about how to define equitable representation, as well as establish specific goals and implement strategies to achieve them.

**Scholar Academic Progress**

The Nina Scholars are persisting at their studies at rates higher than members of the comparison group of students drawn from the ranks of students who applied to the program, were deemed eligible, but were not awarded the scholarship. It is clear that the Nina Mason Pulliam Scholarship Program enables nontraditional students to attend and persist in college at rates far beyond what their circumstances would otherwise allow. The results of this analysis also point to challenges that scholars face, even with the substantial support they receive.

Like many of their peers, Nina Scholars must accommodate an array of work and family obligations during their academic careers. As a result, they cannot take on excessive course loads. Since, on average, they complete four of five credit hours for which they enroll, scholars must enroll for at least 23 hours annually to complete the 18 required by the scholarship program. The program leads and other advisers who serve the scholars appear to be providing balanced advice such that the scholars are progressing satisfactorily through their degree programs.

Nina Scholars are persisting at a significantly higher rate than students in the comparison groups. Four out of five Nina Scholars are either still pursuing their studies or have graduated. In contrast, only three of five comparison group students have persisted. Figure 1 illustrates the

ASU graduate Tarina Wood with Trust representative Ed Portnoy
consistently higher persistence rate of Nina Scholars across the three cohorts, with the largest difference appearing for Cohort 2. As expected, persistence rates are highest among the most recently admitted scholars and comparison group students.

Figure 1. Persistence Rates

On average, the scholars completed 24 credit hours, compared to only 20 for members of the comparison groups. The Nina Scholars who are original members of a cohort are eligible for up to four years of support at the community colleges and up to six years of support at the universities. To remain in good standing, scholars must complete 18 credit hours each year and meet the GPA requirement of 2.5 during the first year and 2.7 in subsequent years.

Because the official number of credits scholars completed during the summer of 2004 are not yet available, Figure 2 shows the average credits completed by Cohort 1 and 2 scholars for the full 2002–2003 academic year (fall, spring, and summer).

Figure 2. Average Credits Completed, 2002–2003

Nina Scholars averaged “B” grades in their full year 2003–2004 courses across all three cohorts. Figure 4 summarizes the overall 2003–2004 grade point average by cohort across the campuses, showing the consistent pattern of “B” grades, with scholars achieving equal or higher grades than the comparison groups of students.

Figure 4. Grade Point Average, 2003–2004
Nine Nina Scholars graduated in the Spring of 2004, including four from Ivy Tech (Malinda English, Angela Owens, Laurie Tabor, and Jackie Wagner), three from MCCCD (Ben Bloomgren, Shellee Brown, and November Peasley), and one each from IUPUI (Michele Poindexter) and ASU (Tarina Wood).

Two of the seven community college graduates are enrolled at universities, both as Nina Scholars. Three are full-time employees: two in the nursing profession and one as a paralegal. The IUPUI graduate is working in the field of psychology and the ASU graduate has received a scholarship in the ASU master of social work program and is currently doing her internship with the Nina Trust.
Part I. Quantitative Analysis of Nina Scholar Progress and Comparison Group Students

This section of the report examines the academic progress of Nina Scholars in relation to a comparison group of students chosen from other eligible applicants to the program who were not selected for the scholarship. The present analysis examines the following aspects of academic progress:

- persistence from point of entry through the end of the Spring 2004 semester;
- course completion rates and credit-hour accrual;
- overall grade performance; and
- grade performance among new scholars in core math, reading, and writing courses.

The present analysis employs a comparison group to assess the progress and performance of Nina Scholars. The comparison group is drawn from the ranks of students who applied to the program, were deemed eligible, but were not awarded the scholarship. In each year’s Interim Report, we examine the demographic and background characteristics of the Nina Scholars and comparison group students, noting the strengths and limitations inherent in this method of analysis.

One of the most important caveats for this approach relates to the positive impact that the scholarship program has had on students’ ability to enroll in college. We have demonstrated each year that Nina Scholars are far more likely to enroll than members of the initial comparison groups. The most extreme manifestation of this impact was noted for Cohort 3, where none of the ASU comparison group students were able to enroll for the Fall 2003 semester. Furthermore, those among the comparison group that were able to enroll are likely to have more support, financial and otherwise, and so represent a relatively “selective” subset of the initial comparison groups. Despite these limitations, the comparison groups provide a useful benchmark against which the progress of Nina Scholars can be measured.

Figure 5 depicts the size and composition of the Nina Scholar cohorts and their associated comparison groups included in the analysis of student progress. The

![Figure 5. Number Included in Analysis of Academic Progress](image-url)
scholar cohorts and comparison groups are most balanced numerically in Cohort 1. Notably small comparison groups for the two four-year institutions, ASU and IUPUI, characterize Cohort 2. For Cohort 3, the comparison groups for the two community colleges are relatively balanced with the scholar cohorts.

However, the comparison groups for the four-year institutions are skewed in both directions: IUPUI has the largest comparison group ever included (21 students) while, as noted above, ASU does not have any comparison group students. This indicates that at IUPUI 21 applicants who were eligible but not chosen for the scholarship were still able to enroll, while at ASU none of the eligible applicants who did not receive the scholarship were able to enroll. The impact of these variations on assessing student progress will be noted in the remainder of this section as appropriate.

**Academic Progress**

Four aspects of academic progress are considered in this analysis: persistence, course taking/completion, overall grades, and grades of Cohort 3 students in first-year math, writing, and reading courses. A detailed Table A1 provided in the Appendix shows the performance for the Nina Scholars and comparison group students, by campus and overall, for each of the measures considered.

**Persistence as of Spring 2004**

Nina Scholars are persisting at a significantly higher rate than students in the comparison groups. Four out of five Nina Scholars are either still pursuing their studies or have graduated. In contrast, only three of five comparison group students have persisted. Figure 1 (page 3) illustrates the consistently higher persistence rate of Nina Scholars across the three cohorts, with the largest difference appearing for Cohort 2. As expected, persistence rates are highest among the most recently admitted scholars and comparison group students.

The detailed progression rates for each cohort and within each institution are shown in the top portion of Table A1 in the report Appendix. The scholar persistence rate exceeds that of the comparison group for eight of the eleven available comparisons (three comparison groups for MCCCD, Ivy Tech, and IUPUI, and two for ASU).

Students who have graduated from their respective programs of study are included among the persisters in this analysis. Figure 6 displays the number of graduates included among the Nina Scholar and comparison persisters. As expected, the numbers are still relatively small, with most graduates coming from Cohort 1. The further detail shown in Table A1 reveals that, as expected, the majority of completers (12 of 15) come from the two-year campuses.

**Course Completion and Credit Hour Accrual**

On average, Nina Scholars enroll for 20 credit hours per year and successfully complete 16 of
The rate at which students progress toward a college degree depends on both the number of courses they take per semester and the percent of those courses that they successfully complete. In order to complete an associate degree within two years or a baccalaureate degree in four years, students must complete 30 credit hours per year in appropriate courses. Figure 7 shows the average number of credit hours taken during the Fall and Spring semesters of academic year 2003–2004 by Nina Scholars and comparison group students who had enrolled for at least one of the two semesters (Fall 2003 or Spring 2004). Although scholars tend to enroll for more credits than comparison group students, the difference was statistically significant only among Cohort 2 students.

Nina Scholars successfully complete an average of 80 percent of the credits for which they enroll, or 16 on average. In this, they are no different from comparison group students. Figure 8 illustrates the similar course completion rates across the campuses and among the Nina Scholars and comparison group students. Figure 9 shows how the average of credits completed differs at the two-year and four-year campuses.

The Nina Scholars who are original members of a cohort are eligible for up to four years of support at the community colleges and up to six years of support at the universities. To remain in good standing, Nina Scholars must complete 18 credit hours each year and meet the GPA requirement of 2.5 during the first year and 2.7 in subsequent years. Unfortunately, the analysis of 2003–2004 credit loads does not reveal the full-year credit load of scholars, since summer 2004 enrollments are not included. Figure 2 (page 4) shows the average credits completed for the full 2002–2003 academic year by Cohort 1 and 2 scholars. On average, the scholars
completed 24 credit hours, compared to only 20 for members of the comparison groups. Figure 2 also reveals that the average is fairly consistent across the four institutions. Figure 3 (page 4) shows the vast majority of scholars at each campus completing at least 18 credit hours, including 19 of 21 students at MCCCD, 17 of 20 at Ivy Tech, 12 of 13 at ASU, and 7 of 9 at IUPUI. Only one in eight scholars from these two cohorts completed fewer than 18 credit hours during academic year 2002–2003.

**Overall Grade Performance**

Enrolled Nina Scholars and comparison group students averaged “B” grades in their academic year 2003–2004 courses across all three cohorts. However, over one-third of the ASU scholars did not attain a “C” average. Figure 4 (page 4) summarizes the overall 2003–2004 grade point average by cohort across the campuses, showing the consistent pattern of average “B” grades. Figure 10 shows the grade comparison by campus, collapsing across the cohorts.

**New Scholar Performance in First-year Math, Reading, and Writing Courses**

In each year’s final evaluation report, we place a special focus on the performance of the most recent scholar cohort in the first-year math, reading, and writing courses that they take. An important role of the community colleges is to offer remedial instruction to students with academic deficiencies. Among the universities, ASU offers only college-level courses. IUPUI has been phasing out a large portion of its remedial education program, deferring students with greatest need to Ivy Tech and
providing other students with supplemental instruction supports, such as peer mentoring, critical inquiry for reading, a freshman writing center, and a math assistance center.

To assess first-year course performance across these different settings, the detailed Table A2 of the Appendix lists separately the outcomes for remedial and college-level course performance. Figure 12 provides a summary of scholar and comparison group performance in the college-level writing and math courses at the four institutions.

Cohort 3 scholars generally obtained good grades in their first-year math, writing, and reading courses, with the notable exception of Cohort 3 ASU scholars who, like prior year ASU scholars, did poorly in math. As we have noted in previous reports, academic achievement in math courses is problematic in many four-year institutions. Based on scholar and comparison group student grades, the measures taken by IUPUI have produced notable improvements. In recognition of the continuing “math problem” at ASU, as of Fall 2004 all students are required to take placement tests regardless of prior math experience, enrollment in entry-level math courses is limited to 19 students, and additional math tutors are available.

Although the number of courses taken is too small to provide enough power to discern statistical differences, the detailed comparisons in Table A2 reveal that the scholars are attaining higher average grades than comparison group students in remedial math courses. This is especially notable at the two-year campuses, where most of the remedial courses are taken. Math is the only subject area where remedial enrollments are high enough to warrant any comparison. Grades in college-level math

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**Figure 12. Cohort 3 College-level Mathematics and Writing Courses Average Grades, Academic Year 2003–2004**

<table>
<thead>
<tr>
<th>Mathematics</th>
<th>Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholars</td>
<td>Comparison Group</td>
</tr>
<tr>
<td>MCCCD</td>
<td>All Cohorts</td>
</tr>
<tr>
<td>2.50</td>
<td>1.86</td>
</tr>
<tr>
<td>2.50</td>
<td>2.50</td>
</tr>
<tr>
<td>3.50</td>
<td>3.50</td>
</tr>
<tr>
<td>ASU</td>
<td>0.0</td>
</tr>
<tr>
<td>3.35</td>
<td>2.86</td>
</tr>
<tr>
<td>IUPUI</td>
<td>3.22</td>
</tr>
<tr>
<td>3.41</td>
<td>3.67</td>
</tr>
<tr>
<td>3.00</td>
<td>0.0</td>
</tr>
<tr>
<td>3.67</td>
<td>0.0</td>
</tr>
<tr>
<td>2.65</td>
<td>3.50</td>
</tr>
<tr>
<td>2.83</td>
<td>0.0</td>
</tr>
<tr>
<td>2.86</td>
<td>0.0</td>
</tr>
<tr>
<td>2.50</td>
<td>3.50</td>
</tr>
</tbody>
</table>
courses appear low on average for scholars, primarily because of the failing grades received by the four ASU students. The six Cohort 3 scholars at the other campuses who took college-level math courses all received passing grades.

Freshman writing course grades are generally higher than math grades among both the scholars and comparison group students. This is especially notable for the ASU scholars, three of whom received a grade of “A” and three a grade of “B” in their freshman writing course.

Appendix Table A2 also includes average grades obtained by the scholars and the comparison groups in Reading/Study Skill courses. These remedial courses are offered only at the two-year campuses of MCCCD and Ivy Tech. The Nina Scholars at those campuses attained slightly higher average grades in these courses than did comparison group students, but these differences were not statistically significant.
Part II. Best Practices

Scholar Selection Process
Best Practices

The following is a list of best practices for the scholar selection process, many of which are currently employed by one or more of the programs. Adoption and implementation of these practices will greatly enhance the overall quality and effectiveness of the scholarship program.

To establish a truly effective scholar selection process, it is essential to:

- implement recruitment strategies that are sufficiently robust to attract and enroll members of all three program emphases;
- conduct an early and thorough review of the applicant rating system and process used to tally and use the results in the selection process;
- provide training for selection committee members to enhance consistency in application of criteria, intercoder reliability, and overall procedural fairness;
- conduct thorough eligibility screening of applicants prior to interview selection committee action;
- include advisory council representation (in addition to the program lead) on committees that decide who will be interviewed;
- maximize benefits of online application database by familiarizing selection committee members with its use and compiling updated reports of process;
- conduct preinterview orientation session for applicants selected for interviews;
- maintain diversity on selection committees, in terms of expertise in three program areas and selection committee members’ gender, race and physical ability;
- maintain consistency in interviewers for all interviews;
- maintain consistency in interview content and tone;
- avoid arbitrary introduction of personal information not obtained uniformly for all candidates; and
- maintain transparency in final selection, including meeting specifically to finalize scholar selections.

In addition to implementing these practices, it is essential that programs take advantage of the opportunities in the coming year to advance the overall vision and mission of the Nina Scholars Program. This includes the opportunity to use the selection of Cohort 5 to address underrepresentation of any qualifying category. Each advisory council should establish specific goals in the fall semester. For example, if scholars from any of the three qualifying categories comprise less than one-fifth of the total scholar population, a council may decide to design and implement recruitment strategies to significantly enhance the number of such applicants. Selection committees should also explicitly discuss the flexibility now available to consider each applicant group and decide whether or not to apply selection criteria separately to applicants within each program emphasis.

Advisory Council Best Practices

The advisory councils are a major source of support and strength for the Nina Mason Pulliam Legacy Scholars Program.
Scholars programs at all four institutions. The commitment of campus and community members to program integrity and scholar well-being is exemplary. One of the most important challenges and opportunities is the full development of these exceptional resources. Many council members are eager to provide even greater service to the Nina Scholars program, and program staff and scholars will benefit immeasurably when those energies are utilized fully.

Several practices currently employed by one or more of the Nina advisory councils merit consideration for adoption by all programs:

- promote and facilitate regular involvement of advisory council members with Nina Scholars;
- include community expertise directly relevant to the mission of the Nina Scholarship program;
- provide in-depth orientation for new council members;
- maintain effective communication through distribution of detailed meeting agendas, frequent scholar updates, and summaries of new procedures and policies;
- conduct an internal council self-assessment;
- establish process for scholar input to advisory council;
- enhance reciprocity and cohesiveness through regular participation in sister program’s advisory council; and
- cultivate advisory council members as ambassadors to the college/university and community.
## Appendix

### Table A1. Academic Progress and Performance of Nina Scholars and Comparison Groups

<table>
<thead>
<tr>
<th>Cohort</th>
<th>All Campuses</th>
<th>MCCCD</th>
<th>Ivy Tech</th>
<th>ASU</th>
<th>IUPUI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nina Comp.</td>
<td>SigDif</td>
<td>Nina Comp.</td>
<td>Nina Comp.</td>
<td>Nina Comp.</td>
</tr>
<tr>
<td>Retained or graduated through the end of Spring 2004</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>68%</td>
<td>55%</td>
<td>n.s.</td>
<td>60%</td>
<td>53%</td>
</tr>
<tr>
<td>2</td>
<td>82%</td>
<td>41%</td>
<td>p&lt;.01</td>
<td>86%</td>
<td>33%</td>
</tr>
<tr>
<td>3</td>
<td>93%</td>
<td>81%</td>
<td>n.s.</td>
<td>87%</td>
<td>90%</td>
</tr>
<tr>
<td>Total</td>
<td>81%</td>
<td>61%</td>
<td>p&lt;.01</td>
<td>77%</td>
<td>60%</td>
</tr>
<tr>
<td>Graduated through the end of Spring 2004</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1 0 8</td>
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<td>6 2</td>
<td>2</td>
<td>2 4</td>
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<td>5 1</td>
<td>2 1 2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>15 9</td>
<td>4 1 8</td>
<td>2 2 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average credit hours attempted, academic year 2003–2004</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>20.3 17.2</td>
<td>n.s.</td>
<td>19.7 21.4</td>
<td>14.2</td>
<td>11.3</td>
</tr>
<tr>
<td>2</td>
<td>21.6 16.1</td>
<td>p&lt;.05</td>
<td>23.4 13.3</td>
<td>15.5</td>
<td>14.0</td>
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<tr>
<td>3</td>
<td>19.8 19.7</td>
<td>n.s.</td>
<td>19.3 21.6</td>
<td>17.4</td>
<td>14.3</td>
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<tr>
<td>Total</td>
<td>20.5 18.4</td>
<td>n.s.</td>
<td>20.6 19.7</td>
<td>16.0</td>
<td>13.4</td>
</tr>
<tr>
<td>Percent of credit hours successfully completed, academic year 2003–2004</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>77% 87%</td>
<td>n.s.</td>
<td>66% 89%</td>
<td>79%</td>
<td>91%</td>
</tr>
<tr>
<td>2</td>
<td>75% 65%</td>
<td>n.s.</td>
<td>75% 44%</td>
<td>78%</td>
<td>76%</td>
</tr>
<tr>
<td>3</td>
<td>79% 79%</td>
<td>n.s.</td>
<td>69% 75%</td>
<td>92%</td>
<td>73%</td>
</tr>
<tr>
<td>Total</td>
<td>77% 77%</td>
<td>n.s.</td>
<td>70% 71%</td>
<td>84%</td>
<td>79%</td>
</tr>
<tr>
<td>Grade point average for academic year 2003–2004 courses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2.94 2.72</td>
<td>n.s.</td>
<td>3.07 3.20</td>
<td>3.16</td>
<td>1.98</td>
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<tr>
<td>2</td>
<td>3.01 3.02</td>
<td>n.s.</td>
<td>2.84 2.64</td>
<td>3.25</td>
<td>2.96</td>
</tr>
<tr>
<td>3</td>
<td>2.94 2.89</td>
<td>n.s.</td>
<td>2.95 3.00</td>
<td>3.19</td>
<td>2.45</td>
</tr>
<tr>
<td>Total</td>
<td>2.96 2.88</td>
<td>n.s.</td>
<td>2.95 2.99</td>
<td>3.21</td>
<td>2.44</td>
</tr>
<tr>
<td>Percent of Students with grade point averages below 2.00 for academic year 2003–2004 courses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>13% 17%</td>
<td>n.s.</td>
<td>0% 0%</td>
<td>17%</td>
<td>43%</td>
</tr>
<tr>
<td>2</td>
<td>6% 6%</td>
<td>n.s.</td>
<td>0% 20%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>3</td>
<td>11% 10%</td>
<td>n.s.</td>
<td>8% 5%</td>
<td>8%</td>
<td>11%</td>
</tr>
<tr>
<td>Total</td>
<td>10% 11%</td>
<td>n.s.</td>
<td>3% 6%</td>
<td>7%</td>
<td>18%</td>
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Note: Chi-Square test for independence used to assess the significance of differences in retention rates. All other significance tests based on the t-test for independent samples. Nonsignificant differences indicated as “n.s.”
<table>
<thead>
<tr>
<th></th>
<th>All Campuses</th>
<th>MCCCD</th>
<th>Ivy Tech</th>
<th>ASU</th>
<th>IUPUI</th>
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<tbody>
<tr>
<td></td>
<td>Nina Comp. SigDif Nina Comp. Nina Comp. Nina Comp. Nina Comp. Nina Comp.</td>
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<tr>
<td><strong>No. of Students</strong></td>
<td>40 53</td>
<td>15</td>
<td>20</td>
<td>12</td>
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<tr>
<td><strong>Math Courses Taken</strong></td>
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<tr>
<td>Remedial</td>
<td>13 17</td>
<td>7</td>
<td>8</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Average Grade</td>
<td>2.87 2.05</td>
<td>3.14</td>
<td>2.88</td>
<td>2.60</td>
<td>0.50</td>
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<tr>
<td>College Level</td>
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<td>2</td>
<td>7</td>
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<tr>
<td>Average Grade</td>
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<td>2.50</td>
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<td>2.50</td>
<td>3.50</td>
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<td><strong>Reading Courses Taken</strong></td>
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<td></td>
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<tr>
<td>Remedial</td>
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<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Average Grade</td>
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<td>4.00</td>
<td>3.00</td>
<td>3.00</td>
<td>3.50</td>
</tr>
<tr>
<td>College Level</td>
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<td>1</td>
<td>4</td>
<td>5</td>
<td>4</td>
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<tr>
<td>Average Grade</td>
<td>3.83 2.88</td>
<td>4.00</td>
<td>2.75</td>
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<td><strong>Writing Courses Taken</strong></td>
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</tr>
<tr>
<td>Remedial</td>
<td>2 2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Average Grade</td>
<td>3.50 3.00</td>
<td>4.00</td>
<td>2.00</td>
<td>3.00</td>
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<td>9</td>
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<td>3</td>
<td>6</td>
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<td>3.22 3.41</td>
<td>3.00</td>
<td>3.67</td>
<td>3.67</td>
<td>3.50</td>
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</tbody>
</table>

Note: Chi-Square test for independence used to assess the significance of differences in remedial and college course-taking rates. The significance of grade differences is based on the t-test for independent samples. Nonsignificant differences indicated as "n.s."
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