

Student Admissions Exceptions Report 1999

Report prepared by
Dr. Steve Chatman
Director of Analytical Studies

July 1999

Office of Planning & Budget
University of Missouri

<http://www.system.missouri.edu/planning>

P&B 99/16

Student Admissions: Exceptions Report

Steve Chatman
Analytical Studies
July, 1999

Beginning in fall of 1997, admitted students were required to complete a more rigorous high school curriculum and submit higher test score and high school graduating class rank combinations than any previous freshman class. With a change of this magnitude, it was reasonable to assume that there would be a transitional phase and a period of questioning requirements. This report responds to these issues in two ways. First, progress toward reaching admissions targets is measured by comparing the academic characteristics of sequential fall freshman classes from 1996 through 1998. Second, the importance of each component of the admissions requirement is reflected by two measures of performance for those who did or did not satisfy each requirement: (a) by the rate at which fall 1997 students returned for a sophomore year and (b) by the rate at which fall 1998 freshman earned a GPA ≥ 2.0 .

Throughout the document the term exception will be used to identify students not meeting each and every component of the published required combination of test score, high school rank and core course distribution for regular admission. Many students classified as exceptions in this report were admitted because they presented strong credentials in most respects or offered other measures predicting likely success.

Two admission policies will be discussed in this report. The first is that of the University of Missouri and the second is the CBHE's standards for selective institutions. The test score and class rank requirements of the two are equal but the policies differ in high school core course requirements. The University of Missouri policy requires one more math and science unit and two foreign language units.

*The fall 1998 **UM policy** exception rate for the four campuses was 17%, 3% less than in fall of 1997.*

The retention rate for fall 1997 students who met the requirements was 12% higher than for those who did not (85% vs. 73%). Similarly, the freshman-year academic success rate for fall 1998 students who met the admission requirements was 18% higher (89% vs. 71%).

Caveats

- Appropriateness of comparing 1996 and 1997 exception rates
- Difference between admissions and enrollments
- Admissions typically based on incomplete information

Description of the 1997 Admission Requirements

Key Observations

Change from fall 1996 to fall 1998 (Table 1)

- Admissions personnel should be commended for increasing enrollment while controlling or reducing freshman exception rates.
- The fall 1998 freshman class is clearly much better prepared than the fall 1996 class and somewhat better prepared than the 1997 class. Comparing the fall 1996 and 1998 classes shows that the number of University of Missouri exceptions to 1997 policy has been reduced from one-in-two to about one-in-six (52% to 17%) and the number of CBHE exceptions has been reduced from about one-in-four to almost one-in-ten (23% to 11%). More importantly, this magnitude of improvement occurred at each campus of the system.
- When the fall 1998 class is compared with the 1997 fall class significant improvement is evident. In 1998, there were 3% fewer exceptions to UM policy and this reduction was in core requirement exceptions.

- More applicants are completing a more rigorous college preparatory program. In 1996: 30% had fewer than four math courses, 15% had less than two foreign language courses, and 7% had less than 3 science courses. By 1998, those rates were reduced from 30% to 7% in math, from 15% to 3% in foreign language, and from 7% to 1% in science. Furthermore, while 46% of fall 1996 freshman had some UM high school core unit exception, only 13% had an exception in 1998. The exception rate also improved greatly for the less rigorous CBHE core, dropping from 11% to 4%. Mathematics exceptions might improve in future years but it is unlikely that the other disciplinary exception rates will be reduced. They are all 3% or less and there are usually a few exceptional cases.
- The percentage of freshmen not meeting the test score and class rank requirement decreased from 16% to 7%. The 1998 test score and class rank combination exception rates by campus were 7% (UM-Columbia), 11% (UM-Kansas City), 1% (UM-Rolla), and 13% (UM-St Louis). The Kansas City, Rolla, and St Louis campuses each reduced the score and rank exception rate by 1%.

Fall 1998 Success Rate and Retention of Fall 1997 Freshmen (Tables 2&3)

- Based on the performance of 1998 freshmen, those who met 1997 standards succeeded at a very high rate and the large majority returned for a second year of study. Almost nine of ten students (89%) who met all 1997 UM requirements earned a GPA of 2.0 or better and five of six (85%) returned for a second year.
- It is also important to note that the success and retention rates of “exceptions” to 1997 policy were high. Seventy-one percent (71%) of 1998 students who did not meet standards earned a GPA of 2.0 or better and 73% of the 1997 exceptions returned for a sophomore year. Alternative admission policies have been reasonably successful in admitting students with a high likelihood of success in spite of specific standard policy deficiencies.

Enrollment Cost of Better Prepared Freshmen

- An April 1997 report used attendance and demographic patterns to forecast annual change in first-time freshmen by campus (Chatman, 1997). Using those steady-state forecasts as a baseline against which to compare actual enrollments suggests the following initial impact associated with more rigorous standards. Expressed relative to fall 1996 the University was expected to show a 4% increase in 1997 and a 7% increase in 1998 enrollment. It actually lost 7% in 1997 and 1% in 1998. This could have been as many as 600 students in 1997 and over 400 in 1998. Of course, there were many factors at work and this analysis is greatly over-simplified. However, there were undoubtedly initial enrollment costs associated with higher standards and additional costs as campuses worked to reduce exception rates. As a reasonably high percentage of exceptions do succeed, the enrollment costs would continue from year to year.
- The Columbia campus was expected to enroll 5% more freshmen in 1997 and 8% more in 1998 (relative to 1996). Actual experience was a 5% decline in 1997 and a 1% increase in 1998.
- The Kansas City campus was expected to increase enrollment by 1% in 1997 and by 4% in 1998 (relative to 1996). Actual enrollment of the full-time freshmen was stable in 1997 and increased by 10% in 1998. These figures suggest impressive performance.
- Rolla campus enrollments would suggest a sizeable impact as enrollment dropped by 10% when expected to increase by 6% and dropped by 6% when expected to increase by 9%. This might first appear odd given the high ability of Rolla’s freshmen, but it should be noted that Rolla reduced the exception rate from 22% in 1997 to 15% in 1998. Rolla exceptions are almost exclusively high school core related but there may have been an associated impact regardless.
- The 1997 forecast called for a 1% loss in 1997 and a 1% gain in 1998 at St Louis (relative to 1996). St Louis actually saw a 27% decrease in 1997 and a 17% decrease in 1998, again expressed relative to 1996. These are considerable losses of first-time, full-time freshmen and suggest that the admissions policy change has had a large impact on the St Louis campus.

Campus-level Observations

UM-Columbia

Table 1

The change in number of students meeting standard 1997 requirements at UM-Columbia has been substantial. Only about half of the 1996 freshman class would have met 1997 UM standards but 83% of the 1997 class and 85% of the 1998 class did so. In terms of high school core course requirements, the percentage meeting the 1997 standards went from 58% (42% exceptions) in fall 1996 to 88% (12% exceptions) in 1997 and only 10% exceptions in 1998. In terms of meeting the goal of 10% exceptions set by the Curators, UM-Columbia has reached 15% total exceptions and is reasonably close to the target. The test score, class rank exception rate was only 7% overall and the core exception rate was 12%. Only 2% of admitted students did not meet either the test score/class rank requirement or the core distribution requirement.

In terms of CBHE policy standards, the Columbia campus should probably be considered in compliance. Strictly stated, the CBHE policy allows for no core course exceptions and the UM-Columbia campus had a core course exception rate of 3%. Given the peculiarities of public university admissions, it is unlikely that any campus will be able to significantly reduce that figure. The CBHE policy does allow 10% test score and class rank combination exceptions and at 7%, UM-Columbia was well under that limit.

Of the core course requirements, the only area where exceptions exceeded 1 or 2% was the fourth unit of mathematics (7%) required by the University. There was no area of significant exception in relation to CBHE required core.

Table 2 (Retention) and Table 3 (GPA Success Rate)

If the performance of last year's freshmen is a fair predictor of the performance of this year's freshmen, then about 87% of 1998 freshmen can be expected to return in fall 1999. Consistent with prior years, nearly nine-in-ten fall 1998 students earned a GPA of 2.0 or better (88%). Examining the success and retention rates of those missing one or more requirement shows that absence of core or test score and class rank were similarly disadvantageous (71% and 65% respectively), but missing both was worse (57%). Of those missing core course requirements, performance in all areas was below the average for the class and was especially low for those deficient in math and science. Outside mathematics, it is unlikely that UM-Columbia will be able to reduce exception rates by core discipline area.

UM-Kansas City

Table 1

In fall of 1998, the Kansas City campus was able to substantially increase freshman enrollment (506 to 555) while actually reducing exception rate (30% to 27%). Reduction in exceptions from fall 1997 to fall of 1998 was across the board. High school core exception rate declined from 24% to 21% and test score/rank exceptions decreased from 13% to 11%. In terms of disciplinary exceptions, the rates were again reduced generally, with no one improvement standing out from the rest. The fourth mathematics requirement continues to be the most troublesome as 98% have three units but 87% have four. Exception rates in other disciplines were 5% or less.

Table 2 (Retention) and Table 3 (GPA Success Rate)

Before examining Kansas City's patterns it is important to note that, like St Louis, the urban environment with limited on-campus residential opportunities, appears to negatively affect retention. At the Kansas City campus, 81% of 1997 freshmen meeting requirements returned the following fall. That figure was 87% at UMC. Success rates of those meeting requirements were very similar for these two campuses (90% at UM-Kansas City and 88% at UM-Columbia). With this difference noted, the patterns were typical.

UM-Rolla

Table 1

The Rolla campus substantially reduced its exception rate from fall of 1997 to 1998 while modestly increasing freshman enrollment. The exception rate in 1997 was 22% but was only 15% in 1998. Very few exceptions are made at the Rolla campus on the basis of test score/rank combinations (1% in 1998) but exceptions due to fine arts (8%) and foreign language (4%) were more common. Given that the total percentage of core exceptions was 14% and the duplicated sum was only 18%, very few Rolla students were deficient in more than one disciplinary area. At 11% in total, Rolla is essentially in compliance with CBHE standards and is reasonably close to the Curators' 10% exception target (15%). Even with the relatively small number of exceptions at Rolla, the across-the-board improvement from 1997 to 1998 is encouraging.

Table 2 (Retention) and Table 3 (GPA Success Rate)

In terms of academic success, the difference between exceptions and those meeting requirements is fairly small. Success rates were only 6% higher for those meeting requirements. This may reflect GPAs at Rolla, which are typically lower than at other campuses. There was a 10% difference in retention between those meeting requirements (93%) and exceptions (83%). Beyond these broadly based observations, the number of core exceptions is too small to support a more detailed examination.

UM-St Louis

Table 1

Among full-time degree-seeking St Louis campus students, the 1998 exception rate was 25%, a significant 5% improvement from fall 1997. The largest reduction was in those with only core course deficiencies and most of those were in fine arts (5% to 1%) and science (5% to 2%). Very few UM-St Louis students failed to meet CBHE core requirements (6%) and most of those were in English (4%). Most UM core deficiencies were in mathematics (11%) but there were several in foreign language (5%) and English (4%).

Table 2 (Retention) and Table 3 (GPA Success Rate)

As was noted for the Kansas City campus, the retention rates of those meeting requirements tends to be lower in the urban, commuter environment. Seventy-three percent of those meeting requirements in 1997 returned the following fall and the difference in retention between those meeting requirements and exceptions was only 7%. In sum, retention among those meeting requirements at UM-St Louis was less. UM St Louis retention was 73% for those meeting requirements. It was 81% at Kansas City, 84% at Rolla, and 87% at Columbia. Success rate among those meeting requirements was also lower than at the other campuses: 83% at St Louis, 88% at Columbia, 90% at Kansas City, and 93% at Rolla. Among reasons that St Louis freshmen meeting requirements succeed at a lower rate are that admissions scores at the St Louis campus are lower, even among those regularly admitted, and factors associated with service in an urban environment.

* Chatman, S. P. (1997). *Steady-State Forecast Shows Increasing Undergraduate Enrollment at Missouri's Four-Year Public Institutions*. Planning & Budget, P&B 97/9, Columbia MO.

Caveats

Before going further, three limitations should be well understood.

1. First, this report imposes fall 1997 criteria on fall 1996 students. That is misleading because it is unreasonable to expect applicants to meet future admission standards. While misleading, imposition of 1997 standards on 1996 students can be useful because it supports the two analyses of this report: evaluation of annual change in freshman class characteristics and measurement of the importance of each admissions component to student success. However, 1996 exception figures are not a measure of the number of admissions decisions made outside standard UM policy.
2. Second, University policies apply to admitted students but campus performance is measured in this report according to the characteristics of enrolling students. Not all admitted students enroll and an admissions professional might be well within policy targets for admitted students but appear to miss the target when actual enrollments are tallied.
3. A third point to consider is that the decision to admit or deny admission to an applicant is made with partial information, usually months before the student's graduation from high school. It is not unusual for students to report a planned academic program that meets requirements and then fail to follow that plan. The University does not know of the change in behavior until it receives a final transcript and might not receive a final transcript until after the student has enrolled.

Admissions Policy

Effective fall of 1997, the criteria for regular, full-time admission of recent high school graduates require completion of 17 units of high school credit and a combination of percentile rank in graduating class and ACT (or SAT test score consistent) with the Coordinating Board for Higher Education's selective category. The 17 units required by the University of Missouri include 4 English, 1 fine arts, 2 foreign language, 4 mathematics, 3 science and 3 social studies. The University's policy is more rigorous than the Coordinating Board for Higher Education's standards in that the University requires two foreign language units, one additional unit of mathematics, and one additional unit of science. The University and the Coordinating Board share common requirements for test score and class rank. Both require an ACT or SAT equivalent of at least 24 or a combination of ACT percentile rank and percentile rank in graduating class of at least 120.

The policies of both the University and the Coordinating Board make provision for admitting students who do not meet standard criteria. Specifically, both allow an exception rate of 10%. The University's exception rate applies to both test score and rank or core course requirements. The Coordinating Board's exception policy applies only to test score and rank. The Coordinating Board expects all regularly admitted students to meet core requirements. Both policies apply to full-time, first-time, degree seeking students. It should also be noted that the required combined percentile total of 120 is a minimum requirement. The average student included in this report had a percentile sum of about 170.

TABLES

Table 1: Change from 1996 to 1998 in Number and Type of Admission Exceptions

| U of Missouri | | | CBHE | | |
|---------------|-----------|-----------|-----------|-----------|-----------|
| Fall 1996 | Fall 1997 | Fall 1998 | Fall 1996 | Fall 1997 | Fall 1998 |



Table 1: Change from 1996 to 1998 in Number and Type of Admission Exceptions

| U of Missouri | | | CBHE | | |
|---------------|-----------|-----------|-----------|-----------|-----------|
| Fall 1996 | Fall 1997 | Fall 1998 | Fall 1996 | Fall 1997 | Fall 1998 |



Table 1: Change from 1996 to 1998 in Number and Type of Admission Exceptions

| | U of Missouri | CBHE |
|--|---------------|------|
|--|---------------|------|

Table 2: Retention of Fall 1997 Freshmen

| | U of Missouri Policy | | | CBHE Policy | | |
|---|----------------------|--------------------------|------|-------------|--------------------------|------|
| | Cohort | Returned for 2nd Year | | Cohort | Returned for 2nd Year | |
| University of Missouri - COLUMBIA | | | | | | |
| Enrolled first-time, degree-seeking, full-time students | 3,402 | 2,883 | 85% | 3,402 | 2,883 | 85% |
| Meeting Standard Criteria | 2,827 | 2,451 | 87% | 3,099 | 2,655 | 86% |
| Exceptions | 575 | 432 | 75% | 303 | 228 | 75% |
| Nature of deficiency(ies) | | | | | | |
| (a) High school core course(s) only | 346 | 264 | 76% | 74 | 60 | 81% |
| (b) High school percentile rank and ACT only | 154 | 119 | 77% | 205 | 151 | 74% |
| (c) Both high school core course(s) and HS%/ACT% | 75 | 49 | 65% | 24 | 17 | 71% |
| (a+c) Total high school core exceptions | 421 | 313 | 74% | 98 | 77 | 79% |
| (b+c) Test score and high school percentile rank exceptions | 229 | 168 | 73% | 229 | 168 | 73% |
| Nature of high school core course(s) deficiency(ies) | | | | | | |
| English | 35 | 26 | 74% | 35 | 26 | 74% |
| Fine Arts | 27 | 23 | 85% | 27 | 23 | 85% |
| Foreign Language | 115 | 89 | 77% | | | |
| Math | 270 | 188 | 70% | 20 | 10 | 50% |
| Science | 48 | 37 | 77% | 1 | 0 | n<10 |
| Social Studies | 18 | 17 | 94% | 18 | 17 | 94% |
| Electives: Based only on sum and may mislead | | | | 23 | 19 | 83% |
| University of Missouri - KANSAS CITY | | | | | | |
| Enrolled first-time, degree-seeking, full-time students | 506 | 385 | 76% | 506 | 385 | 76% |
| Meeting Standard Criteria | 353 | 287 | 81% | 411 | 325 | 79% |
| Exceptions | 153 | 98 | 64% | 95 | 60 | 63% |
| Nature of deficiency(ies) | | | | | | |
| (a) High school core course(s) only | 86 | 55 | 64% | 28 | 17 | 61% |
| (b) High school percentile rank and ACT only | 34 | 20 | 59% | 53 | 35 | 66% |
| (c) Both high school core course(s) and HS%/ACT% | 33 | 23 | 70% | 14 | 8 | 57% |
| (a+c) Total high school core exceptions | 119 | 78 | 66% | 42 | 25 | 60% |
| (b+c) Test score and high school percentile rank exceptions | 67 | 43 | 64% | 67 | 43 | 64% |
| Nature of high school core course(s) deficiency(ies) | | | | | | |
| English | 12 | 8 | 67% | 12 | 8 | 67% |
| Fine Arts | 20 | 12 | 60% | 20 | 12 | 60% |
| Foreign Language | 34 | 20 | 59% | | | |
| Math | 71 | 45 | 63% | 10 | 6 | 60% |
| Science | 20 | 11 | 55% | 4 | 2 | n<10 |
| Social Studies | 11 | 5 | 45% | 11 | 5 | 45% |
| Electives: Based only on sum and may mislead | | | | 12 | 5 | 42% |
| University of Missouri - ROLLA | | | | | | |
| Enrolled first-time, degree-seeking, full-time students | 671 | 556 | 83% | 671 | 556 | 83% |
| Meeting Standard Criteria | 523 | 440 | 84% | 566 | 476 | 84% |
| Exceptions | 148 | 116 | 78% | 105 | 80 | 76% |
| Nature of deficiency(ies) | | | | | | |
| (a) High school core course(s) only | 134 | 106 | 79% | 91 | 70 | 77% |
| (b) High school percentile rank and ACT only | 8 | 6 | n<10 | 10 | 7 | 70% |
| (c) Both high school core course(s) and HS%/ACT% | 6 | 4 | n<10 | 4 | 3 | n<10 |
| (a+c) Total high school core exceptions | 140 | 110 | 79% | 95 | 73 | 77% |
| (b+c) Test score and high school percentile rank exceptions | 14 | 10 | 71% | 14 | 10 | 71% |
| Nature of high school core course(s) deficiency(ies) | | | | | | |
| English | 11 | 6 | 55% | 11 | 6 | 55% |
| Fine Arts | 67 | 53 | 79% | 67 | 53 | 79% |
| Foreign Language | 45 | 34 | 76% | | | |
| Math | 25 | 17 | 68% | 8 | 5 | n<10 |
| Science | 13 | 8 | 62% | 8 | 4 | n<10 |
| Social Studies | 31 | 22 | 71% | 31 | 22 | 71% |
| Electives: Based only on sum and may mislead | | | | 9 | 6 | n<10 |

Table 2: Retention of Fall 1997 Freshmen

| U of Missouri Policy | | CBHE Policy | |
|----------------------|----------|-------------|----------|
| Cohort | Returned | Cohort | Returned |

Table 3: Annual Report on Fall 1998 Exceptions to Current University of Missouri and CBHE Policies

| U of Missouri | | CBHE |
|---------------|------------|-----------|
| Fall 1998 | Successful | Fall 1998 |

Table 3: Annual Report on Fall 1998 Exceptions to Current University of Missouri and CBHE Policies

| | U of Missouri | | | | CBHE | | | |
|---|---------------|-----|------------|-----|-----------|-----|------------|--|
| | Fall 1998 | | Successful | | Fall 1998 | | Successful | |
| University of Missouri - ST LOUIS | | | | | | | | |
| Enrolled first-time, degree-seeking, full-time students | 483 | 380 | 79% | | 483 | 380 | 79% | |
| Meeting Standard Criteria | 362 | 75% | 299 | 83% | 401 | 83% | | |