



The Impact of Faculty Diversity on University Graduation Rates

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SUMMARY OF RESULTS

The advantages of diversity are increasingly being acknowledged across a range of outcomes, including educational, social, and professional. Research on student diversity at institutions of higher education has established numerous positive benefits for both minority and majority students, but little empirical research seems to have been conducted on the relationship between *faculty* diversity and student outcomes. This paper aims to fill this gap by analysing the empirical relationship between faculty diversity and student graduation rates, using survey data on thousands of higher education institutions in the United States of America. While no relationship is found between faculty diversity as proxied by ethnic minority status and graduation rates of minority students, significant positive relationships are found between faculty diversity as proxied by gender and graduation rates of female students. However, these relationships are likely not causal, and call for more work to be done using alternative measures of diversity and student outcomes.

1.0 INTRODUCTION

In recent decades, the advantages of diversity have been acknowledged across a range of outcomes, including educational, social, and professional. Research on student diversity at institutions of higher education has established numerous positive benefits for both minority and majority students. In particular, studies have found links between campus diversity and students' cognitive development, satisfaction with their college experiences, commitment to promoting racial understanding, participation in cultural activities, and even post-college workforce competencies (Astin, 2002; Gurin, Nagda, and Lopez, 2004; Smith, 1997, Milem, 2003; Smith and Schoenfeld, 2000; Gurin, Dey, Hurtado, and Gurin, 2002; Jayakumar, 2008; Villalpando, 2002).

Yet little empirical research seems to have been conducted on the relationship between *faculty* diversity and student outcomes. Existing research on faculty diversity has largely been limited to exploring the reasons behind the persistent underrepresentation of minorities in academia, advocating for increased representation, and proposing potential solutions (Cole and Arias, 2004; Cole and Barber, 2003; Cross, 1994; Edwards, 2004; Gordon, 2004; Harleston and Knowles, 1997; Milem, 2002; Milem, Change, and Antonio, 2005; Moody, 2004; Moreno et al., 2006; Smith et al., 2004; Smith, Wolf, and Busenberg, 1996; Trower and Chait, 2002; Turner, 2002; Turner, Myers, and Creswell, 1999; Weems, 2003).

Scholars in favour of increased faculty diversity have argued variously that faculty of colour improve the educational experience—by serving as diverse

role models, providing more effective mentoring to minority students, supporting minority-related or other non-traditional areas of scholarship, giving minorities a greater role in the governance of higher education institutions, and introducing innovative instructional techniques and curricula (de la Luz Reyes and Halcon, 1991; Green, 1989; Hurtado, 2001; Mickelson and Oliver, 1991; Washington and Harvey, 1989), contribute to diverse environments (Green, 1989; Turner and Myers, 2000), and even that they may serve as change agents to broaden the view of scholarship and create better integrated, socially responsive institutions (Antonio, 2002).

But while support for increased faculty diversity is clearly strong, its effects remain understudied. This paper aims to fill this gap by analysing the empirical relationship between faculty diversity and student graduation rates, using survey data on thousands of higher education institutions in the United States of America.

2.0 DATA

The data relied upon for this analysis are obtained from the National Center for Education Statistics (“NCES”) in the United States. The NCES conducts annual surveys of every higher education institution that participates in the federal student financial aid programs, as required by the Higher Education Act of 1965. The data collected in these surveys falls under the umbrella of several categories, encompassing institutional characteristics, enrolments, completions and graduation rates, student and faculty demographics, finances, and admissions. Data is available beginning in 1986 and extending to the present day. Variables of interest are described in the following sections, and summary statistics are presented in Table 1.

Table 1
Descriptive statistics for 4-year higher education institutions in the United States

	2016	2015	2014	2013	2012	2011	2010	2009	2008
% of students identifying as ethnic minorities									
Mean	35.91%	36.01%	35.41%	34.36%	33.58%	32.52%	30.54%	27.10%	25.93%
Median	28.96%	28.94%	27.97%	26.94%	25.85%	24.83%	22.72%	18.14%	14.29%
% of students identifying as female									
Mean	57.15%	56.04%	56.21%	55.87%	55.80%	55.88%	55.63%	55.81%	55.91%
Median	57.99%	57.43%	57.51%	57.41%	57.63%	57.51%	57.52%	57.55%	57.66%
% of faculty identifying as ethnic minorities									
Mean	22.12%	22.11%	20.75%	21.64%	21.45%	20.56%	18.79%	19.49%	17.56%
Median	15.63%	15.19%	15.12%	14.51%	15.17%	13.79%	13.59%	12.50%	10.00%
% of faculty identifying as female									
Mean	48.06%	47.79%	47.34%	47.06%	46.73%	45.38%	43.86%	43.60%	43.03%
Median	47.37%	46.95%	46.64%	46.43%	46.15%	44.90%	43.84%	43.58%	42.71%
% of students awarded aid									
Mean	73.02%	74.32%	73.95%	74.19%	73.85%	73.51%	71.29%	68.15%	-
Median	77.00%	78.00%	78.00%	78.00%	77.00%	77.00%	74.00%	69.00%	-
4-year graduation rates									
Mean	36.75%	36.35%	36.14%	35.71%	35.08%	35.12%	35.30%	35.16%	35.91%
Median	33.33%	32.16%	32.27%	31.37%	30.68%	31.33%	31.25%	31.33%	31.82%
4-year graduation rates for students identifying as ethnic minorities									
Mean	29.72%	29.32%	29.49%	28.99%	28.31%	28.04%	24.51%	25.76%	32.43%
Median	24.27%	23.06%	23.13%	23.08%	22.22%	22.22%	18.01%	17.91%	27.78%
4-year graduation rates for students identifying as female									
Mean	37.64%	37.10%	36.61%	35.99%	35.24%	34.90%	35.38%	35.00%	34.98%
Median	35.93%	33.96%	33.96%	33.59%	33.33%	32.47%	32.35%	32.86%	33.19%
Total enrolment									
Mean	4,738	4,417	4,395	4,335	4,359	4,448	4,552	4,562	4,367
Median	1,446	1,265	1,302	1,310	1,343	1,394	1,485	1,521	1,472
Student-faculty ratio									
Mean	13.9	14.2	14.6	14.9	15.1	16.1	16.1	15.9	-
Median	13.0	13.0	14.0	14.0	14.0	15.0	15.0	15.0	-
Tuition (in-district for full-time undergraduates)									
Mean	\$18,107	\$17,676	\$17,237	\$16,813	\$16,413	\$15,934	\$15,442	\$14,916	\$14,396
Median	\$14,040	\$14,682	\$14,713	\$14,600	\$14,560	\$14,381	\$14,085	\$13,585	\$13,200
Observations	3,226	3,243	3,259	3,299	3,217	3,157	3,064	2,971	2,906

2.1 Institutional Characteristics

Variables in this survey contain descriptive information on each institution, including identifying information, geographic information (city, state, rural or urban), the level of the institution (4 year, 2 year, or less than 2 year), the nature of the institution's controlling interest (public, private, or private not for profit), and the size of the institution as measured by the total number of students enrolled for credit. These characteristics are used as controls in the analysis, since differences in such characteristics might explain some portion of the variation in graduation rates.

2.2 Graduation Rates

Graduation rates are available in aggregate and by race (American Indians, Asians, Blacks, Hispanics, Hawaiians and Pacific Islanders, and multi-racial students). They are also available for students who graduate within 150% of normal completion time (more than 4 years but less than 6) and within 200% of normal completion time (more than 6 years but less than 8). The graduation rates reported in a given year represent the rates for students who would have been expected to graduate two years ago, if completing within 100% of normal time. To illustrate this more clearly, the graduation rates reported in 2016 represent graduation rates for students in the class of 2014 (*i.e.*, those students in a 4-year program who entered in 2010). Thus, in addition to constructing 4-year graduation rates for all students and 4-year graduation rates for minority students only, we lead the graduation rates at time intervals ranging from 2 to 5 years.

2.3 Faculty

Our main interest is in constructing a measure of faculty diversity. This is done by calculating the percentage of full-time teaching faculty who identify as members of a racial or ethnic minority group. These include all groups defined in the United States Census: American Indians and Alaskan Natives; Asians; Blacks or African Americans; Hispanics or Latinos; Hawaiians and Other Pacific Islanders; and those of two or more races. An alternative measure of faculty diversity is also calculated as the percentage of full-time teaching faculty who identify as female. A secondary measure of interest in this category of variables is the student-to-faculty ratio.

2.4 Admissions

We also consider admissions information such as SAT verbal and math scores of admitted students to control for differences in selectivity amongst institutions.

2.5 Finances

Finally, we further control for the average tuition fees for full-time undergraduates and the percentage of undergraduates reliant on scholarships or grant aid.

3.0 RESULTS

As certain variables of interest are not available prior to 2008, we conduct panel regressions from 2008 to 2016, regressing graduation rates on our measures of faculty diversity and the control variables described above for all 4-year institutions in the sample. The regressions include both institution fixed effects and time fixed effects, to capture time-invariant changes specific to each institution as well as changes over time common to all institutions in the sample.

Since the level of faculty diversity in a given year may not be expected to have an impact on graduation rates for that same year, led graduation rates at various time intervals are used. The results differ across the specifications. Table 2 presents estimates across four dependent variables, including graduation rates with a 2-year lead (as discussed above, this represents graduation rates for the same year as all independent variables), a 3-year lead, a 4-year lead, and a 5-year lead (the last possible cohort that faculty diversity in a given year may have affected).

As seen, faculty diversity, as measured by the percentage of full-time faculty members who are ethnic minorities, is significant only in the second specification, where the dependent variable is the 4-year graduation rate led by three years. In one of the remaining three specifications, the coefficient on

Table 2
Panel regression estimates using 4-year graduation rates for all students

Dependent Variable	4-year Graduation Rate, Lead 2	4-year Graduation Rate, Lead 3	4-year Graduation Rate, Lead 4	4-year Graduation Rate, Lead 5
% of faculty who are minorities	0.0272 (0.0283663)	0.0818 ** (0.0327742)	-0.0143 (0.0406981)	0.0207 (0.0460844)
% of students who are minorities	-0.0072 (0.0253123)	-0.0464 * (0.028089)	0.0780221 ** (0.0332236)	-0.0083381 (0.0351753)
Total enrolment	-0.0000003 (0.000000968)	-0.0000003 (0.00000122)	0.0000015 (0.0000022)	-0.0000003 (0.00000295)
Student faculty ratio	-0.000006 (0.0004803)	0.0004 (0.0005282)	0.00091 (0.0006283)	0.0002 (0.0007251)
Tuition (in-district for full-time undergraduates)	-0.000003 *** (0.000000622)	-0.000003 *** (0.000000753)	-0.0000005 (0.00000126)	0.0000009 (0.00000159)
% of students awarded aid	0.0002 (0.0001451)	0.0004 *** (0.000166)	0.0005 ** (0.0002124)	-0.000021 (0.0002461)
Admitted students SAT verbal score: 75th percentile	0.0001 ** (0.0001124)	0.000046 (0.0000522)	-0.00004 (0.0000694)	0.00015 * (0.0000809)
Admitted students SAT math score: 75th percentile	-0.0001 ** (0.0000458)	-0.0000004 (0.0000541)	-0.00006 (0.0000732)	0.0001 (0.0000892)
Control dummies	yes	yes	yes	yes
Urbanization dummies	yes	yes	yes	yes
State dummies	yes	yes	yes	yes
Time effects	yes	yes	yes	yes
Fixed effects	yes	yes	yes	yes
N	5,076	4,300	3,050	2,258
Groups	1,359	1,344	1,283	1,257
R-squared	0.19%	34.71%	28.70%	13.81%

* represents significance at the 10% level, ** represents significance at the 5% level, and *** represents significance at the 1% level

faculty diversity is in fact negative, contrary to expectations, though the estimate is far from significant.

Also contrary to expectations, student diversity is signed negatively in three out of four models, though insignificant at the 5% level in all three cases.

Tuition fees are also negatively signed in three out four models, and highly significant in two of the three, suggesting that an increase in tuition fees is associated with lower graduation rates. In a similar vein, the percentage of students awarded aid is positively signed in three of four models, and also highly significant in two of the three. These effects could be attributed to potential selection bias in the types of students who choose to attend institutions with higher tuition fees and less student aid, but other mechanisms, including high tuition incentivising earlier graduations, could also be at work.

The remaining controls are inconsistently signed and most often insignificant. The failure to produce significant estimates and the counter-intuitive signs on some variables lead to fairly inconclusive results. However, it is possible that the impacts of faculty diversity are lost by using graduation rates of *all* students, given that faculty diversity might reasonably be expected to have a

Table 3
Panel regression estimates using 4-year graduation rates for minority students

Dependent Variable	4-year Graduation Rate, Lead 2	4-year Graduation Rate, Lead 3	4-year Graduation Rate, Lead 4	4-year Graduation Rate, Lead 5
% of faculty who are minorities	0.0024 (0.0460099)	0.0716 (0.0535698)	-0.0305 (0.0628526)	-0.0133 (0.078967)
% of students who are minorities	-0.0846 ** 0.0410 (0.0460611)	0.0652 (0.0460611)	0.0675 (0.05133)	0.0334 (0.0602914)
Total enrolment	0.0000001 (0.00000157)	-0.0000004 (0.00000199)	0.0000017 (0.00000339)	-0.0000027 (0.00000506)
Student faculty ratio	0.0003 (0.0007808)	-0.0005 (0.0008669)	0.00145 (0.0009753)	-0.0011 (0.0012451)
Tuition (in-district for full-time undergraduates)	-0.000003 *** (0.00000101)	-0.0000007 (0.00000123)	0.0000033 * (0.00000195)	-0.0000011 (0.00000272)
% of students awarded aid	0.0004 * (0.0002367)	0.0007 ** (0.0002727)	0.00073 ** (0.0003299)	-0.00011 (0.0004253)
Admitted students SAT verbal score: 75th percentile	0.0002 *** (0.0000741)	0.0001 (0.0000856)	-0.00054 *** (0.0001074)	0.00013 (0.0001389)
Admitted students SAT math score: 75th percentile	-0.0002 ** (0.0000752)	-0.00018 ** (0.0000888)	0.00032 *** (0.0001134)	-0.00009 (0.0001535)
Control dummies	yes	yes	yes	yes
Urbanization dummies	yes	yes	yes	yes
State dummies	yes	yes	yes	yes
Time effects	yes	yes	yes	yes
Fixed effects	yes	yes	yes	yes
N	5,057	4,282	4,526	3,349
Groups	1,357	1,339	1,343	1,245
R-squared	18.36%	15.13%	11.88%	1.59%

* represents significance at the 10% level, ** represents significance at the 5% level, and *** represents significance at the 1% level

more significant impact on minority students. As such, I re-run the regressions using the 4-year graduation rate for ethnic minority students only.

The results for this series of regressions, shown in Table 3, are again inconclusive. Faculty diversity is not significant in any of the four models, and in fact signed negatively on two out of four. In contrast to the first set of regressions, student diversity is signed positively instead of negatively on three out of four specifications but is only significant in the remaining (negatively signed) specification.

As a final extension, I use gender as an alternative measure of faculty diversity, and regress graduation rates of female students on the percentage of full-time faculty members identifying as female, along with the remaining controls from previous regressions. These results are shown in Table 4. As seen, both faculty diversity and student diversity are significant at the 1% level in all four specifications. Student diversity (as measured by the percentage of students who identify as female) is, as might be expected, positively signed in all specifications, while faculty diversity is positively signed in all but one of the four.

Table 4
Panel regression estimates using 4-year graduation rates for female students

Dependent Variable	4-year Graduation Rate, Lead 2	4-year Graduation Rate, Lead 3	4-year Graduation Rate, Lead 4	4-year Graduation Rate, Lead 5
% of faculty who are female	0.0451 *** (0.021308)	0.0760 *** (0.0232435)	0.0673 *** (0.0304031)	-0.1363 *** (0.0398796)
% of students who are female	0.1256 *** (0.0324864)	0.2472 *** (0.0375341)	0.1239 *** (0.0492591)	0.2199 *** (0.063497)
Total enrolment	-0.0000007 (0.000000638)	-0.0000004 (0.000000772)	-0.0000002 (0.00000118)	0.0000002 (0.00000157)
Student faculty ratio	-0.0004 (0.0003254)	0.0000 (0.0003478)	-0.00013 (0.0003891)	0.0006 (0.0004631)
Tuition (in-district for full-time undergraduates)	-0.000001 *** (0.000000402)	-0.0000005 *** (0.000000475)	-0.0000003 (0.000000707)	0.0000000 (0.000000937)
% of students awarded aid	0.0001 (0.0000918)	0.0003 (0.0001006)	0.00032 *** (0.0001173)	-0.00003 (0.0001375)
Admitted students SAT verbal score: 75th percentile	0.0001 *** (0.0000301)	0.0000 (0.0000336)	0.00003 (0.0000396)	-0.00003 (0.0000462)
Admitted students SAT math score: 75th percentile	-0.0001 *** (0.0000309)	-0.00001 (0.0000345)	-0.00009 *** (0.0000412)	0.00017 *** (0.0000497)
Control dummies	yes	yes	yes	yes
Urbanization dummies	yes	yes	yes	yes
State dummies	yes	yes	yes	yes
Time effects	yes	yes	yes	yes
Fixed effects	yes	yes	yes	yes
N	5,997	5,231	3,978	3,187
Groups	1,385	1,374	1,324	1,303
R-squared	12.75%	3.68%	4.78%	26.31%

* represents significance at the 10% level, ** represents significance at the 5% level, and *** represents significance at the 1% level

4.0 DISCUSSION

One potential explanation for these results is that the use of ethnicity as a proxy for diversity is perhaps overly broad—given the wealth of cultures and experiences encapsulated within the term “minority,” grouping all ethnic

minority groups together may fail to capture variation within each group. To illustrate, a larger proportion of South Asian faculty members within an institution may benefit South Asian students, but these benefits may well be lesser or non-existent for South *American* students.

In contrast, using gender as a proxy for diversity seems to capture positive effects of faculty diversity on graduation rates. A one percentage point increase in the proportion of full-time faculty members identifying as female is associated with anywhere from a four to seven percentage point increase in the graduation rates of students identifying as female.

However, it bears reminding that the above results do not purport to establish the causal effect of faculty diversity on graduation rates, especially given the inconsistent signs and significance between specifications. In particular, there are a number of reasons why we might not expect the observed relationship to hold true.

First, our primary measure of faculty diversity—the percentage of faculty members identified as ethnic minorities—might be a poor proxy for actual diversity. As has been argued by many, diversity extends beyond race and ethnicity to diversity of background and thought (see, for example, Rodden, 2009). If the benefits from faculty diversity accrue less as a function of ethnicity and instead because of a diversity of opinions fostered by diverging experiences, then our measure of diversity is likely unable to capture such subtleties. Weinberg also argues that faculty diversity should be measured at more granular levels—by department, for example—rather than for an institution as a whole, as aggregate views may mask clustering of minority professors in certain departments or subjects (Weinberg, 2008). While this paper has been limited by the availability of such data, future research should consider using a more granular, disaggregated measure of diversity.

Second, faculty diversity could reasonably be expected to affect student outcomes in manners outside of graduation rates. As discussed above, the extant literature expects that students might benefit in a number of dimensions from faculty diversity, ranging from increasing levels of tolerance and cultural awareness to improved critical thinking and problem-solving skills (see, for example, Hurtado, 2001). These improvements in outcomes, though certainly consequential, may not necessarily translate to a measure such as graduation rates.

Finally, the lack of experimental or quasi-experimental data means that we cannot be confident that the effect measured is causal. As with all observational data, omitted variable bias is a non-trivial concern. Despite the use of institution and time fixed effects, the analysis cannot account for unobserved differences between institutions which vary with time. As a result, the estimates above are likely to be biased if such differences exist, which is altogether likely.

But despite the inability to establish causality, the above results can nonetheless be informative. In particular, they underscore the need for a more

appropriate measure of diversity in institutions that goes beyond race, ethnicity, or even gender. Future avenues of research should include the optimal construction of such a measure and the resulting effect of diversity, more broadly defined, on outcomes outside of the graduation rate.

ABOUT THE AUTHOR

Samantha Fu is a Master of Public Administration candidate at the London School of Economics and Political Science. Prior to pursuing graduate studies, she worked on the analytics team for the 2016 Clinton campaign, as an economic consultant at Cornerstone Research in New York, and earned a Bachelor's degree from McGill University in Montreal.

REFERENCES

Allen, W. R., Epps, E. G., Guillory, E. A., Suh, S. A., Bonous-Hammarth, M., & Stassen, M. (2000). Outsiders within: Race, gender, and faculty status in U.S. higher education. In W. Smith, P. Altbach, & K. Lomotey (Eds.), *The racial crisis in American higher education* (2nd. ed., pp. 189-220). New York: State University of New York Press.

Allen, W. R., Epps, E. G., Guillory, E. A., Suh, S. A., & Bonous-Hammarth, M. (2000). The black academic: Faculty status among African Americans in U.S. higher education. *The Journal of Negro Education*, (59(1/2), 112-127.

Antonio, A. L. (2002). Faculty of color reconsidered: Reassessing contributions to scholarship. *The Journal of Higher Education*, 73(5), 582-602. Aristotle. (1962). *Nicomachean ethics* (M. Ostwald, Trans.). Indianapolis, IN: Bobbs Merrill.

Astin, Alexander. "Diversity and Multiculturalism on the Campus: How Are Students Affected?" *Change*, 25(2), March-April 1993, pp. 44-49.

Chang, M. J. (2002). An exploratory study of the role of race in selecting a student body with a broader range of viewpoints. *Promoting Inclusion*, 5, 4-13.

Chang, M. J. (2003). Racial differences in viewpoints about contemporary issues among entering college students: Fact or fiction? *NASPA Journal*, 40(A), 55-71.

Cole, S. J., & Arias, E. (2004). The underrepresentation of minority faculty in higher education: Supply or demand? *AEA Papers and Proceedings*, 94(2), 291-295.

Cole, S. J., & Barber, E. (2003). *Increasing faculty diversity: The occupational choices of high-achieving minority students*. Cambridge, MA: Harvard University Press.

- Cross, T. (1994). Black faculty at Harvard: Does the pipeline defense hold water? *The Journal of Blacks in Higher Education*, 4, 42-46.
- Edwards, H. T. (2004). The journey from *Brown v. Board of Education* to *Grutter v. Bollinger*. From racial assimilation to diversity. *Michigan Law Review*, 102, 944-978.
- Gordon, M. (2004). Diversification of the faculty. In F. W. Hale (Ed.), *What makes racial diversity work in higher education: Academic leaders present successful policies and strategies* (pp. 183-198). Sterling, VA: Stylus.
- Gurin, Patricia, Dey, Eric, Hurtado, Sylvia and Gurin, Gerald. "Diversity and Higher Education: Theory and Impact on Educational Outcomes." *Harvard Educational Review*, 72(3), September 2002, pp. 330-367.
- Gurin, Patricia, Nagda, Biren, and Lopez, Gretchen. "The Benefits of Diversity in Education for Democratic Citizenship." *Journal of Social Issues*, 60(1), 2004, pp. 170-34.
- Harleston, B., & Knowles, M. (1997). *Achieving diversity in the professoriate: Challenges and opportunities*. Washington, DC: American Council on Education.
- Holland, D., Lachicotte, W., Skinner, D., & Cain, C. (2003). *Identity and agency in cultural worlds*. Cambridge, MA: Harvard University Press.
- Hurtado, Sylvia. "Linking Diversity and Educational Purpose: How Diversity Affects the Classroom Environment and Student Development." In: *Diversity Challenged: Evidence on the Impact of Affirmative Action*, Cambridge, Harvard Education Publishing Group, 2001, pp. 187-203.
- Jayakumar, Uma. "Can Higher Education Meet the Needs of an Increasingly Diverse and Global Society? Campus Diversity and Cross-Cultural Workforce Competencies." *Harvard Educational Review*, 78(4), December 2008, pp. 615-651.
- Kulis, S., Shaw, H., & Chong, Y. (2000). External labor markets and the distribution of black scientists and engineers in academia. *The Journal of Higher Education*, 77(2), 187-222.
- Milem, Jeffrey. "The Educational Benefits of Diversity: Evidence from Multiple Sectors." In *Compelling Interest*, 2003.
- Milem, J. F. (2000). Why Race Matters. *Academe*, 86(5), pp. 27-29.

- Milem, J. F, Chang, M. J., & Antonio, A. L. (2005). Making diversity work on campus: A research-based perspective. Washington, DC: Association of American Colleges and Universities.
- Moody, J. (2004). Faculty diversity: Problems and solutions. New York: Taylor and Francis.
- Moreno, J. F, Smith, D. G., Clayton-Pedersen, S. P., Parker, S., & Teraguchi, D. H. (2006). The revolving door for underrepresented minority faculty in higher education: An analysis from the Campus Diversity Initiative. Washington, DC: Association of American Colleges and Universities.
- Moses, M. S., & Chang, M. J. (2006). Toward a deeper understanding of the diversity rationale. *Educational Researcher*, 35(1), 6-11.
- Rodden, John. "The Perversity of 'Diversity.'" *Sociology*, 47, December 2009.
- Smith, Daryl and Schonfeld, Natalie. "The Benefits of Diversity: What the Research Tells Us," January 2000.
- Smith, Daryl et al. "Diversity Works: The Emerging Picture of How Students Benefit." January 1997.
- Smith, D. G., Turner, C, Osei-Kofi, N., & Richards, S. (2004). Interrupting the usual: Successful strategies for hiring diverse faculty. *The Journal of Higher Education*, 75(2), 133-160.
- Smith, D. G., Wolf, L. E., Busenberg, B. E. (1996). Achieving faculty diversity: Debunking the myths. Washington, DC: Association of American Colleges and Universities.
- Trower, C. A., & Chait, R. P. (2002). Faculty diversity: Too little for too long. *Harvard Magazine*, 104(4), 33-37.
- Turner, C. (2002a). Diversifying the faculty: A guidebook for search committees. Washington, DC: Association of American Colleges and Universities.
- Turner, C. (2002b). Women of color in the academe: Living with multiple marginality. *The Journal of Higher Education*, 73(1), 74-93.
- Turner, C, Myers, S. L., & Creswell, J. W. (1999). Exploring underrepresentation: The case of faculty of color in the Midwest. *The Journal of Higher Education*, 70(1), 27-59.
- Villalpando, Octavio. "The Impact of Diversity and Multiculturalism on All Students: Findings from a National Study." *NASPA Journal*, 40(1), 2002, pp. 124-144.

Weems, R. E. (2003). The incorporation of black faculty at predominantly white institutions: A historical and contemporary perspective. *Journal of Black Studies*, 34(1), 101-111.

Weinberg, Sharon. "Monitoring Faculty Diversity: The Need for a More Granular Approach." *The Journal of Higher Education*, 79(4), 2008, pp. 365-387.