Diversity Pipeline Programs in Legal Education: Context, Research and a Path Forward

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Diversity Pipeline Programs in Legal Education

CONTEXT, RESEARCH AND A PATH FORWARD

By Alisa Cunningham and Patricia Steele, Ph.D.

MAY 2015
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• Increasing affordability for students pursuing legal education; and,
• Expanding the value of legal education.

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Diversity Pipeline Programs in Legal Education

*Context, Research, and a Path Forward*

May 2015

A report from the AccessLex Center for Legal Education Excellence

This report was commissioned by the AccessLex Center for Legal Education Excellence from Alisa Cunningham and Patricia Steele, Ph.D., at Higher Ed Insight.
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As the racial and ethnic diversity of the United States continues to grow, it is increasingly important that comparable cultural diversity grows in the legal profession. Diversity in the legal field is central to ensuring public confidence in the legal system and provides society with a sense of fairness in the judicial system. The benefits of diverse leadership are numerous, particularly as the U.S. engages with a global, multicultural marketplace. To address gaps in the educational pipeline to the legal profession, many diversity pipeline programs have emerged to inspire interest, engagement, and success in degree programs in law. The goal of this report is to identify some of the key factors that are associated with successful diversity programs based on a scan of the literature, both within and outside of law school pipeline programs.

**Executive Summary**

As the racial and ethnic diversity of the United States continues to grow, it is increasingly important that comparable cultural diversity grows in the legal profession. Diversity in the legal field is central to ensuring public confidence in the legal system and provides society with a sense of fairness in the judicial system. The benefits of diverse leadership are numerous, particularly as the U.S. engages with a global, multicultural marketplace. To address gaps in the educational pipeline to the legal profession, many diversity pipeline programs have emerged to inspire interest, engagement, and success in degree programs in law. The goal of this report is to identify some of the key factors that are associated with successful diversity programs based on a scan of the literature, both within and outside of law school pipeline programs.

**Understanding the Education Pipeline to Law School and Beyond**

The pathway to law school shows students from racial/ethnic minority backgrounds missing opportunities to advance through the education pipeline beginning with early education, through high school, in the immediate transition to college, and culminating with students’ experiences with law school success and passing the bar. While the last 30 years have yielded substantial increases in the number of minorities enrolling in law school, as well as the total number of Juris Doctor (J.D.) degrees in the United States, there are still significant gaps for underrepresented minority groups compared to their peers. Significant gaps in the pipeline to the legal field occur early on in the pipeline, but the challenges continue into law school and beyond.

**Foundation of Diversity Pipelines: Primary and Secondary Education**

- Gaps among students from different racial/ethnic groups start before and during elementary school, continuing on to high school, in subject areas particularly relevant to law, such as reading and writing, history, and civics. Although these gaps are due to a host of factors, from parents’ educational levels to poverty, the gaps reflect the fact that many minority students may start with less knowledge of core subject areas.
- These differences lead to the first major distinction between groups: high school graduation rates are much lower for underrepresented minority students compared to White and Asian students.

**Transition into Postsecondary Education**

- Racial/ethnic disparities in educational attainment persist into college. During the transition from high school to college, minorities are less likely to enroll immediately following high school graduation compared with their White and Asian peers. This is significant, because delaying college enrollment is associated with lower persistence toward a degree.
- Despite the disparities in immediate college enrollment, over the last few decades, there have been increases in the number of minorities enrolling in college; this has resulted in a greater proportion of minorities in the total undergraduate population.
- However, underrepresented minority students are less likely to graduate with a Bachelor’s degree within four years, which delays possible enrollment in graduate education. White and Asian/Pacific Islander students are more likely than Black and Hispanic students to graduate within four years; extending the time period to six years narrows the gap, but does not eliminate it.
- Overall, fewer minorities age 25 and older have received a Bachelor’s degree compared to their White peers.

**Transition to and Enrollment in Law School**

- As students approach law school, the pipeline continues to narrow. Applications to law school by most minority groups have decreased in recent years as part of a broader trend of falling law school applications. Although the percentage of applicants who are admitted to law school has increased for all racial/ethnic groups, it remains much lower for underrepresented minorities.
• In recent years, law schools have become increasingly concerned about declining enrollments after many years of growth. One positive long-term trend suggests that the number of minorities in law school have increased substantially over a 30-year period, with roughly three times the original number of students enrolling.

• The proportion of minorities in the total J.D. population has also steadily increased during the same time period, from 9 percent of all J.D. students to 27 percent of students. Although this is positive news, there are recent hints that minority enrollment might be slipping. While total minority enrollment in 2013-2014 decreased only slightly from the previous year—within the context of a larger overall decline in J.D. enrollment—the enrollment of first-year minority students decreased over the past three years.

• These trends in enrollment varied among racial/ethnic groups over the most recent decade. Between 2002-2003 and 2013-2014, total minority enrollment increased by 27 percent.

Graduation and Bar Passage Rates

• Efforts to retain minority students may be having an impact. More J.D. degrees are being awarded to minority students than ever before; 11,951 in 2012-2013, a significant increase from only 3,169 in 1983-1984. Similarly, the proportion of all J.D. degrees awarded to minorities increased over that period from 9 percent to 25 percent.

• Overall, however, degrees are still disproportionately awarded to White students. White graduates comprise 69 percent of all professional degrees conferred in 2011-2012, followed by 13 percent for Asian/Pacific Islanders, 7 percent for Blacks, and 6 percent for Hispanics. Comparing professional fields, there is a smaller proportion of degrees conferred to minorities in law compared to other fields, such as medicine and dentistry. However, this is in part due to higher proportions of Asian/Pacific Islanders in the medical and dental fields; the proportion of degrees awarded to Black and Hispanic students is similar across professions.

• Bar passage rates may be lower among underrepresented minority graduates than those of their White and Asian counterparts.
Recommendations for Leaders and Supporters of Diversity Pipeline Programs

**Focus on early and rigorous interventions.** Many of the differences in education outcomes begin at a very early age. Therefore it is important to focus efforts on improving educational outcomes on programs in primary and secondary education settings. While all diversity pipeline efforts may not serve students during these foundational ages, partnerships with local schools could be created to enhance programs primarily serving college students, law students, and beyond. Participants could benefit from engagement with primary and secondary school students, and students could benefit from mentoring relationships with adults. Early pipeline programs must provide academically rigorous content, engaging students in coursework that will significantly improve skills such as writing, reading, critical thinking, and civic understanding and engagement. Within these programs, activities must seek to build student interest and motivation by providing wide recognition of students’ success.

**Develop strong mentor connections throughout programs.** Relationships are a critical component of successful outcomes for program participants. The opportunity to be mentored by an adult with knowledge and experience in the legal field or legal coursework is a key ingredient to successful programming and it can have positive benefits for both students and mentors. Student relationships through formal mentoring make a difference in progress through the education pipeline.

**Establish formalized partnerships across pipeline programs.** It is important to establish working partnerships through formal agreements between pipeline programs and other entities, such as law firms, institutions, legal organizations, and other community-based programs. These kinds of partnerships can be a source for obtaining funding support, mentors, meeting space, volunteer staff, and other resources. There are many examples of this kind of partnership in the existing pipeline programs, and these collaborations can contribute to long-term stability and resources for program sustainability.

**Rigorously evaluate diversity pipeline programs.** Most diversity pipeline programs are not evaluated beyond participation counts. Expanding the investment in evaluations of diversity pipeline programs should be a significant priority. New and well-established programs should begin documenting activities, noting the specifics of their program models, and theorizing on the outcomes that they intend to impact with those activities. This kind of documentation should be followed by analysis of program outcomes through the gathering of both quantitative and qualitative data, ideally by someone external to the program. Evaluation of programs should be used internally for planning and strategizing program improvements and shared externally where appropriate to expand opportunities for collaborative learning on best practices.

**Require and support evaluation of diversity programs.** Organizations, funders, institutions, and businesses seeking to support diversity pipeline programs should encourage the use of evaluation by requiring evaluation and offering resources to support it.
Context, Research, and a Path Forward

As the racial and ethnic diversity of the United States continues to grow, it is increasingly important that comparable cultural diversity grows in the legal professions, as well as other graduate and professional fields. Diversity pipeline programs have emerged in a number of professional and graduate education fields, attempting to close the gaps in educational and professional outcomes for different racial/ethnic groups. The goal of this report is to identify some of the key factors associated with successful diversity pipeline programs based on a scan of the literature, both within and outside of law school pipeline programs.

Importance of Diversity in Legal Education

According to U.S. Census data on the occupation of employed persons age 16 and over, in 2014, there were 1.1 million lawyers; only about 16 percent came from racial/ethnic minority backgrounds (6 percent Black, 6 percent Hispanic, 4 percent Asian—U.S. Census Bureau, 2014). Although these proportions represent an increase over the previous ten years, it is clear that minorities make up a disproportionately small share of all lawyers. Notably, these figures lag behind those of other professional groups, such as physicians and dentists, which have higher shares of racial/ethnic minorities (33 percent and 28 percent, respectively).

The importance of addressing diversity in the education pipeline is highly valued by many in the legal community. The driving reasons for this emphasis are that a robust education pipeline ensures diversity in the legal profession and judiciary, and visible diversity helps support public confidence in and perceptions of fairness in the legal system. Diversity can also contribute to the learning environment of all students by providing an opportunity to study and train for a workplace that is increasingly multicultural. There is consensus across a number of organizations representing the legal field that the profession must improve the preschool-to-college education pipeline, and that students, lawyers, judges, and clients need to be more involved in pipeline activities.

This report begins with a brief overview of the importance of diversity in legal education, followed by an analysis of racial/ethnic differences at each stage of the education pipeline leading to law school. The following section presents an overview of the characteristics of several diversity pipeline programs available today. The final section includes a discussion of literature review findings on important success factors, followed by recommendations for programs’ future improvement.
Understanding the Diversity Pipeline to Law School

Improving diversity in the education pipeline is not an easy task. Leaks and blockages in the pipeline can be seen at a number of critical junctures, as revealed by data pertaining to early education, high school, transition to college, and students’ experiences succeeding in law school and passing the bar. While the last 30 years have yielded substantial increases in the number of minorities enrolling in law school, as well as the total number of Juris Doctor (J.D.) degrees in the United States, there are still significant gaps for underrepresented minority groups compared to their peers. This section highlights some of the important phases of the pipeline where additional supports are needed to address those gaps.

Foundations of Diversity Pipelines: Primary and Secondary Education

Gaps among racial/ethnic groups start before elementary school and continue into high school and beyond. For example, research demonstrates that there are substantial differences between students in subject areas particularly relevant to law, such as reading and writing, but also in history and civics. In addition, minority elementary and secondary students do not receive high grades comparable to their White and Asian peers. In 2007, for example, more than half of White and Asian students received mostly As in their classes, compared to 41 percent of Hispanic students and 28 percent of Black students (U.S. Department of Education 2013a). Although these gaps are due to a host of factors, from parents’ educational levels to poverty, the gaps reflect the fact that many minority students may start with less knowledge in core subject areas.

Persistence to a high school degree also reveals disparities. High school graduation rates are much lower for underrepresented minority students compared to White and Asian students. In 2013, more than 90 percent of White and Asian people age 25 and older had completed high school, compared to 86 percent of Blacks and 66 percent of Hispanics (see Table 1). Although the completion rates for all racial/ethnic groups have increased over the past few decades, the increases for minorities have not been enough to close the gaps (U.S. Department of Education, 2013b).

Transition into Postsecondary Education

Racial/ethnic disparities in education attainment persist into college. During the transition from high school to college, minorities are less likely to enroll in the fall immediately following high school completion. While many students enroll in college later in life, immediate college enrollment is correlated with a greater likelihood of completing a degree and a greater chance of enrollment in graduate school. Immediate college enrollment for all recent high school completers was 66 percent, but it was 69 percent for White students, compared to 60 percent for Hispanics and 57 percent for Black students (see Table 2). While the immediate college participation rates for minorities have increased over time, they have not increased enough to erase the existing gaps.

Table 1: Rates of High School Completion for Adults Age 25 and Older, 1990 and 2013

<table>
<thead>
<tr>
<th></th>
<th>1990</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>78%</td>
<td>88%</td>
</tr>
<tr>
<td>White</td>
<td>81%</td>
<td>93%</td>
</tr>
<tr>
<td>Black</td>
<td>66%</td>
<td>86%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>51%</td>
<td>66%</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>84%</td>
<td>90%</td>
</tr>
</tbody>
</table>


Table 2: Percentage of Recent High School Completers Enrolled in Two-Year and Four-Year Colleges, by Race/Ethnicity, 1980-2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>White</th>
<th>Black</th>
<th>Hispanic</th>
<th>Asian</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>49.3%</td>
<td>49.8%</td>
<td>42.7%</td>
<td>52.3%</td>
<td>--</td>
</tr>
<tr>
<td>1990</td>
<td>60.1%</td>
<td>63.0%</td>
<td>46.8%</td>
<td>42.7%</td>
<td>--</td>
</tr>
<tr>
<td>2000</td>
<td>63.3%</td>
<td>65.7%</td>
<td>54.9%</td>
<td>52.9%</td>
<td>--</td>
</tr>
<tr>
<td>2010</td>
<td>68.1%</td>
<td>70.5%</td>
<td>62.0%</td>
<td>59.7%</td>
<td>84.7%</td>
</tr>
<tr>
<td>2011</td>
<td>68.2%</td>
<td>68.3%</td>
<td>67.1%</td>
<td>66.6%</td>
<td>86.1%</td>
</tr>
<tr>
<td>2012</td>
<td>66.2%</td>
<td>65.7%</td>
<td>56.4%</td>
<td>70.3%</td>
<td>81.5%</td>
</tr>
<tr>
<td>2013</td>
<td>65.9%</td>
<td>68.8%</td>
<td>56.7%</td>
<td>59.8%</td>
<td>80.1%</td>
</tr>
</tbody>
</table>

Note: Immediate enrollment is defined as enrollment in college as of October 2013 for individuals age 16 to 24 who completed high school during the calendar year.
Partially as a result of the positive trend of immediate college enrollment for minority groups, the proportion of minorities (out of the total undergraduate population) has increased from about 21 percent of all undergraduates to about 42 percent between 1990 and 2013 (U.S. Department of Education, 2014b).

<table>
<thead>
<tr>
<th>Table 3: Total Fall Undergraduate Enrollment in Degree-Granting Postsecondary Institutions, by Race/Ethnicity of Student, 1990 and 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>White</td>
</tr>
<tr>
<td>Black</td>
</tr>
<tr>
<td>Hispanic</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
</tr>
</tbody>
</table>

*Note: Percentages do not add up to 100 due to the exclusion of other racial/ethnic categories from this table. Source: U.S. Department of Education, 2014b.*

Despite this increasing representation of minorities in higher education (Table 3), underrepresented minority students are less likely to graduate with a Bachelor’s degree within four years (U.S. Department of Education, 2014c), which delays possible enrollment in graduate education (See Table 4). White and Asian/Pacific Islander students are more likely than Black and Hispanic students to graduate within four years; extending the time period to six years narrows the gap, but does not eliminate it.

Furthermore, fewer underrepresented minorities earn Bachelor’s degrees compared to their peers. In 2013, while more than half of Asian/Pacific Islanders and more than a third of Whites age 25 and over had attained a Bachelor’s degree, the numbers for Blacks and Hispanics were significantly lower—22 percent and 15 percent, respectively. Those percentages had doubled since 1990, but similar increases among all racial/ethnic groups meant that gaps still remain (U.S. Department of Education 2013b).

**Transition to Law School**

As students approach law school, the pipeline continues to narrow. For example, many underrepresented minority students show interest in law careers, but those who apply tend to have lower scores. Among students who take the LSAT, 6 percent of Black students and 15 percent of Hispanic students match or exceed the median for matriculation into an ABA-approved law school (Redfield, 2013). As a result, minority students may decide not to apply, and overall, they are less likely to be admitted.

According to recent data from the Law School Admissions Council (LSAC, 2014), between Fall 2010 and 2013, law school applicants declined by almost a third. Although decreases existed for virtually every racial/ethnic group, during this period they were highest for White students (31 percent); the decreases were lower for Hispanic/Latinos and American Indian/Alaska Natives (the latter showed a slight increase). Black and Asian students decreased in law school application numbers by 18 percent and 22 percent, respectively. At the same time, the percentage of applicants who were admitted to law school increased slightly across all groups, but remained much lower for minorities than for White students. For example, in 2013, 84 percent of White applicants were admitted, compared to 55 percent of Black applicants and 72 percent of Hispanic applicants. Furthermore, in states that have banned affirmative action in public colleges, admission rates plummeted for students of color (ABA, 2006).

<table>
<thead>
<tr>
<th>Table 4: Percentage of Students Graduating from First Institution Attended for First-time, Full-time Bachelor’s Degree-Seeking Students at Four-Year Colleges, by Race/Ethnicity, 2007 Entering Cohort</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Bachelor’s Degree in 4 Years</td>
</tr>
<tr>
<td>Bachelor’s Degree in 6 Years</td>
</tr>
</tbody>
</table>

In recent years, law schools have become increasingly concerned about declining enrollments, after many years of growth. According to recent ABA data shown in Figure 1, law school enrollment grew over the past few decades, increasing from 119,501 students in 1980-1981 to its peak in 2010-2011 of 147,525, an increase of 23 percent. Since 2010-2011, however, enrollment has decreased by 6 percent, to 139,055 in 2012-2013 (ABA, 2014c).

The numbers of minorities in law school has increased substantially, from 10,575 in 1980-1981 to 34,584 in 2013-2014, tripling in the 30-year period. The proportion of minorities in the total J.D. population has also steadily increased during the same time period, from 9 percent of all J.D. students to 27 percent of students. This is positive news, but there are recent hints that minority enrollment might be slipping. While total minority enrollment in 2013-2014 only decreased slightly from the previous year—within the context of a larger overall decline in J.D. enrollment—the enrollment of first-year minority students decreased over the past three years. (ABA, 2014c).

These trends in enrollment varied among racial/ethnic groups over the most recent decade. Between 2002-2003 and 2013-2014, total minority enrollment increased by 27 percent. Due to changes in federal guidelines for reporting race and ethnicity adopted in 2010, enrollment changes by race over the last decade are examined in two parts, using (a) the old categories reported prior to 2010, and (b) the new categories implemented in 2010.

Between 2002-2003 and 2009-2010, total minority enrollment increased by 20%. During this period, the number of Asian students increased by 23%, the number of Black students increased by 8%, the number Puerto Rican students increased by 2%, the number of Mexican-American students increased by 7%, and the number of all other Hispanic students increased by 45%.

Figure 2 shows that between 2010-2011 and 2013-2014, total minority enrollment decreased by 1%. The number of Black students decreased by 1% and Asian students decreased by 15%, while Hispanic students increased by 7%. As a proportion of total law school enrollment, Hispanic students appear to have demonstrated the most growth over the past 10 years.

1. Starting with the 2010-2011 school year, new aggregate categories for reporting racial and ethnic data were adopted in accordance with U.S. Department of Education guidelines. More information regarding the change in requirements is available at https://nces.ed.gov/ipeds/news_room/ana_Changes_to_10_25_2007_169.asp.
Graduation and Bar Passage Rates

Efforts to retain minority students may be having an impact. More J.D. degrees are being awarded to minority students than ever before—11,951 in 2012-2013, a significant increase from only 3,169 in 1983-1984 (See Figure 3). Similarly, the proportion of all J.D. degrees awarded to minorities increased over that period from 9 percent to 25 percent.

Regardless of the growth in law degrees awarded to minorities, overall, degrees are disproportionately awarded to White students. Figure 4 shows degrees conferred in one year, 2011-2012. Across all professional fields, White graduates comprise 69 percent of degrees conferred, followed by 13 percent for Asian/Pacific Islanders, 7 percent for Blacks, and 6 percent for Hispanics. In looking at degrees conferred in comparison with other professional fields, there is a smaller proportion of degrees conferred to minorities in law compared to other fields, such as medicine and dentistry. However, this is in part due to high proportions of Asian/Pacific Islanders in the medical and dental fields. When looking at Black and Hispanic students, the proportion of degrees awarded is similar across professions.

Additionally, among minority graduates, bar passage rates may be lower than those of their White and Asian counterparts. National data on passage rates are not easily available, but LSAC commissioned the National Longitudinal Bar Passage Study in 1998 to examine rates by race/ethnicity and other factors. They found that the eventual bar passage rates for minorities were lower than for all study participants—85 percent compared to 95 percent, respectively. Passage rates were particularly low for Black study participants (ABA, 2006; Wightman, 1998).
Diversity Pipeline Programs in Legal Education

Quantifying Educational Gaps

All of these data point to significant gaps in the pipeline to the legal field. Directly contributing are failures in the education system early in the pipeline, but the challenges continue into law school and beyond. As a result, there has been significant growth in diversity pipeline programs (Rothstein, 2011). Much of this growth can be traced back to efforts by the ABA and LSAC beginning in 2005, where stakeholders from K-12, postsecondary education, employers, nonprofit community organizations, and others who aimed to improve diversity in law fields came together to discuss issues and develop strategies for change. Many of the strategies and recommendations from that time period focused on the need for programs that supported students’ paths to law school, so that underrepresented students could overcome barriers. Although such programs already existed in some capacity, many more would be needed (or existing programs scaled up) for diversity in the legal profession to be realized.

Solution to the Problem: Addressing the Pipeline

To address leakages in the pipeline, many programs have been developed to support students at critical junctures. These pipeline programs have different sponsors, such as law schools, bar associations, law firms, and colleges, and serve a variety of populations, including disadvantaged students, as well as specific minority groups. These programs offer a wide range of program activities, including mentoring, skills development, advising, and bar preparation (Lollis and Burtnett, 2009). Funding and management of diversity pipeline programs occur at different levels, including federal funds, national legal organizations, as well as state, regional, and local bar associations. These efforts are supplemented by small to large programs funded or managed by law schools, law firms, and community-based organizations.

There are many approaches to diversity pipeline efforts. The least intensive programs often develop law-themed materials for students. Others are offering curriculum-based law programs, and more intensive programs are bringing in a relationship element, such as mentoring or using law students as teachers. Some programs offer co-curricular efforts, such as moot court, mock trial, and youth court activities, which also may involve some of the former activities. Some more intensive programs offer more than a course or co-curricular pieces, but are not a school or full curriculum—such as continuing mentoring over a long time, summer programs, or programs that “surround” students with supports. The next section reviews the programs identified for this report.

Figure 4: Degrees Conferred in Select Professional Fields, 2011-2012, by Race/Ethnicity

Scan of Diversity Pipeline Programs

Identification of all the diversity pipeline programs available in the United States is not a simple task. Many programs are listed on the ABA Pipeline Diversity Directory, but not all. Maintaining a current and comprehensive list of diversity pipeline programs in the legal field is a daunting undertaking, in part, because it is a moving target. Some programs are operated centrally, but have services in multiple sites around the country. In some cases, those sites vary in their focus and services. Some programs may not be consistently in operation, making information quickly out of date.

For this analysis, the authors identified 261 distinct programs. While the list may not be comprehensive, it is certainly useful for identifying a general typology of existing programs. However, without more in-depth information on program activities—including hard data on participation and outcomes—it is difficult to know the full scope of each type. Nonetheless, the analysis of these 261 identified diversity pipeline programs shows that most of the programs are fairly broad in their focus, operate mainly in one level of the education pipeline, and vary greatly in their intensity. Very limited data was analyzed on program participation, primarily due to the lack of public information on most of the programs.

Broadly Focused Approach

The majority of the 261 diversity pipeline programs reviewed are mostly national in their focus (56 percent), while the other 44 percent are programs restricted to participants from a particular institution or community. Most programs are seeking to serve any and all minority students; few had a specialized focus on individual racial/ethnic minority groups or just underrepresented minority groups. Figure 5 shows that 85.8 percent are serving all minority groups broadly (including Asian students), and just 2.7 percent have a program emphasis only on underrepresented minority students (Black, Hispanic/Latino and Native Americans), while 6.5 percent are specifically targeting Black students alone and 5 percent are serving Hispanic/Latino students alone.

Narrow Pipeline Emphasis

Most of the diversity pipeline programs reviewed are working in one part of the education pipeline. About 80 percent of the programs focus on serving students at only one level of the education pipeline. It is possible that many of these have formalized partnerships with other organizations in different levels of the education pipeline, however, which may be an important area for further inquiry. Figure 6 shows that 36 percent of the programs are serving students only in high school, 27.2 percent are working in law

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Figure 6: Breakdown of Education LevelTargeted Through Diversity Pipeline Programs Reviewed, 2014

Source: Author analysis of information on 261 diversity pipeline programs.
Note: Percentages may not sum to 100 due to rounding error.

Figure 7: Distribution of Groups Served by Targeted Education Level of Diversity Pipeline Programs Reviewed, 2014

Source: Author analysis of information on 261 diversity pipeline programs.
Note: Percentages may not sum to 100 due to rounding error.
schools exclusively, and 17.2 percent are reaching out to students in four-year colleges. Less than 15 percent of all programs are doing any work in early interventions (less than in high school), and few are exclusively working in this area (7.3 percent). In light of the significant leaks in the early pipeline, this underemphasized area may be problematic, particularly if most services and funding are being steered toward intensive late-pipeline programs.

Among those pipeline programs that are focused exclusively on four-year colleges, there is a greater likelihood for programs to emphasize specific underrepresented minority groups. Figure 7 shows that in programs in four-year colleges, 9 percent are focused on Black students exclusively and 16 percent are focused on serving Latino students. For the programs focused on serving students at law schools exclusively, none of the programs were specifically targeting Latino students, though they are serving Latino students in programs that target all minorities. The vast majority of programs are focused broadly on any minority group—including Asian students—while far fewer programs are focused on the needs of traditionally underrepresented groups. Those programs conducting their pipeline services at four-year colleges appear to be more likely to have targeted programs for underrepresented minority students (4 percent), Black (9 percent), and Latino students (16 percent).

**Program Intensity**

Diversity pipeline programs are providing an array of services, and this continuum of approaches is also evident from the analysis of identified programs. The types of services range from less intensive (providing information, scholarships, or brief one-day engagements with students) to more intensive (hands-on activities such as summer or year-long courses, internships, and mentoring) (see Figure 8). Many of the programs included in this analysis

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**Figure 8: Percentage of Programs Offering Various Services, 2014**

- Bar passage program: 5.7%
- Parent-focused program: 3.8%
- Moot court: 16.1%
- Scholarship and financial assistance: 28.4%
- Mentoring/advising service: 51.3%
- Clerkship: 10.7%
- LSAT preparation program: 15.7%
- Internship and hands-on experience: 26.8%
- Study skills, tutoring, and academic support: 42.5%
- Student-oriented conference and class (summer only): 21.1%
- Student-oriented conference and class (year round): 37.2%
- Law school and career information: 64.3%

*Source: Author analysis of information on 261 diversity pipeline programs.*
appear to be fairly low-intensity. Two-thirds are providing law school and career information through career events or law days, and about one-quarter of those we reviewed offered this low-intensity service and nothing else. Many programs were offering more intensive services beyond just information. Most notably, 51.3 percent were providing mentoring, 37.2 percent provided a year-round course to program participants, 26.8 percent offered internships, and 42.5 percent offered study skills, tutoring, or other academic supports.

Close to one-quarter of the programs are offering five or more services, and more than half are offering two to four services to participants. Narrowing the analysis to just those programs that are working exclusively in high school, college, law school, and pre-high school levels (see Figure 9), it is evident which services are more prominently offered at certain areas in the education pipeline. For example, two-thirds of the programs offering moot court programs are located in high school pipeline programs. Scholarship and financial assistance programs are more prevalent in programs based in law schools. Internships and other hands-on experience programs are also prominent services for law school-based programs. Not surprisingly, LSAT preparation is commonly found in programs working in four-year colleges and in high school programs.

**A Lack of Solid Evidence**

The analysis of programs for this report was mainly conducted via websites and limited email outreach to identifiable contacts. Among the small number of programs for

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**Figure 9: Distribution of Education Level by Services Provided, 2014**

- **Moot court**: 59% High school only, 9% Law school only, 24% Four-year colleges only, 9% Early pipeline (before high school)
- **Scholarship and financial assistance**: 22% High school only, 63% Law school only, 14% Four-year colleges only, 2% Early pipeline (before high school)
- **Mentoring/advising service**: 46% High school only, 20% Law school only, 22% Four-year colleges only, 12% Early pipeline (before high school)
- **LSAT preparation program**: 49% High school only, 9% Law school only, 40% Four-year colleges only, 3% Early pipeline (before high school)
- **Internship and hands-on experience**: 50% High school only, 30% Law school only, 13% Four-year colleges only, 8% Early pipeline (before high school)
- **Study skills, tutoring, and academic support**: 46% High school only, 11% Law school only, 31% Four-year colleges only, 12% Early pipeline (before high school)
- **Student-oriented conference and class (summer only)**: 47% High school only, 10% Law school only, 33% Four-year colleges only, 10% Early pipeline (before high school)
- **Student-oriented conference and class (year round)**: 53% High school only, 9% Law school only, 21% Four-year colleges only, 17% Early pipeline (before high school)
- **Law school and career information**: 57% High school only, 9% Law school only, 27% Four-year colleges only, 8% Early pipeline (before high school)

*Source: Author analysis of information on 261 diversity pipeline programs.*

*Note: Percentages may not sum to 100 due to rounding error.*
which reports of any kind are available or were shared, the vast majority are focused solely on reporting the number of students served, providing little to no information on key success characteristics, test score performance, enrollment, persistence, graduation, bar passage, or on detailed descriptions of how programmatic models impact change in student outcomes.

Weaknesses of Pipeline Programs

Despite the hundreds of pipeline programs that exist in the legal community, some argue that the pace of change has not been enough. Researchers point to several possible reasons (Redfield 2009, 2013):

- The focus of most programs has been at the law school entry point, which is too late for many underrepresented students facing achievement gaps at the elementary or secondary levels.
- Most of the existing programs are isolated and generally not coordinated, with unclear goals.
- Few diversity pipeline programs have been evaluated, and if they have, the findings are not widely shared, so best practices are not widely shared.
- Previous programs have failed to increase diversity, in part, because efforts are funded intermittently.

These issues are similar to problems found in programs designed to increase representation of minorities in Science, Technology, Engineering and Math (STEM) fields. For example, one study of why some programs failed (Sims, 1992) suggested that they had little oversight or assessment, no commitment at the top, vague or unrealistic goals, inconsistent funding, and targeted students too late in the pipeline.

Use of data for basic assessment of diversity pipeline programs in the legal field is extremely limited; evaluation is rare, even among some of the most widely known and accepted programs. As a result, little is known about the extent to which programs are successful.

What the Literature Proposes for Effective Pipeline Program Diversity Strategies

There is a small body of literature in the legal community that suggests that certain characteristics or strategies may facilitate the effectiveness of diversity pipeline programs. Beyond law, many organizations and researchers have looked at the factors impacting the diversity pipelines to various professions. The scan of selected literature that follows is not comprehensive, but provides context for the factors that contribute to successful diversity pipeline programs in legal education and other professional fields.

Over the years, the ABA and LSAC have developed a set of materials and brought together the legal community to discuss diversity issues in law fields. In 2005, for example, a conference hosted by ABA and LSAC brought together a wide range of audiences, who identified several overarching strategies for plugging leaks in the pipeline:

- Breaking down institutional barriers, such as low test scores and poor preparation;
- Providing academic supports to students;
- Developing mentoring and networking opportunities; and
- Collaboration between programs serving different levels of the education pipeline, including K-12 education, undergraduate education, law schools, and transition into professional practice (ABA, 2006; Rothstein, 2011).

Participants agreed that pipeline diversity programs can play an important role in employing these strategies. The discussions during the conference suggested the use of interventions that include academic rigor, the teaching of critical thinking skills, instilling student confidence, setting goals, establishing role models and mentor relationships, making long-term investments in students, and gathering relevant data on program outcomes (ABA, 2006). A follow-up report outlined some lessons learned about effective practices and models that were emerging from existing or newly developing diversity pipeline programs, such as mentoring, long-term interventions, partnerships, and assessment (ABA, 2011).
Other scholars and policy researchers have studied the effectiveness of diversity pipeline programs in law and have identified themes that align well with the ABA’s efforts. For example, one framework for thinking about the success of diversity programs is called the 3Rs (Redfield, 2009, 2012; Gates Foundation, 2005): Rigor, Relevance, and Relationships. Students need the chance to succeed at challenging courses and participate in a “continued, intense academic curriculum,” according to Redfield (2009). Students also need to be engaged in the curriculum being used, including materials that link knowledge to the real world. Moreover, students often have a need for role models, and mentorship/fostering a relationship with an adult in the profession can make a difference in a student’s success. The lessons of the 3Rs are highly applicable to diversity pipeline programs that focus on the legal profession. Taken together, one can think of a “law-theme” that represents learner-centered education and development of critical thinking and analysis skills—all of which can be integrated into every aspect of law diversity pipeline work.

Other studies in the legal and other professional fields have supported the factors going into the 3Rs, as well as other important characteristics that are associated with successful diversity pipeline programs. Together, these characteristics can be grouped into several categories: rigorous academic content and activities, motivation and expectations, student relationships with mentors, cross-program partnerships, cross-level partnerships, program goals and approaches, and data and assessment.

Focus on Rigorous and Relevant Content

Successful diversity pipeline programs appear to have several commonalities in terms of the content of their work. For example, most successful programs include academic preparation activities with a rigorous curriculum and materials that are relevant to practice or to students’ interests.

An essential element of successful pipeline programs is supporting rigorous curricula, career pathways, and academics, which also present opportunities to bring together professional and educational resources (Redfield, 2009). An intensive curriculum provided within a culture that supports and values learning is especially useful for underrepresented minorities. At the same time, the relevance of a course or curriculum helps encourage students’ engagement with the materials. There are a variety of approaches to developing relevant content, from law-themed academics, to project-based learning, to mock trials and moot court experiences.

Beyond law, research on programs that were part of the Health Professions Partnership Initiative (HPPI) demonstrated the importance of focusing on academic preparation that begins early, in an intensive way, and continues through increasing levels of schooling (AAMC, 2004). In addition, to meet the goal of increasing underrepresented minority groups in Dental Pipeline schools (Formicola et al., 2009), curriculum changes were necessary to prepare students for community work, and schools had to develop new course materials.

Build Student Motivation through Recognition

Another aspect of successful diversity pipeline programs is cultivating students’ motivation, expectations, and other factors that impact individual behavior. It is important, for example, to focus on the significance of high expectations and aspirations within the context of academic rigor and relationships (Redfield, 2009).

Evenson and Pratt (2012) use the concept of “working recognition” to describe successful Black lawyers who were recognized for their intellect at various points in the pipeline and used this on their path. For some, formal recognition led to participation in pipeline programs, in some cases, from middle school to law school. These lawyers were able to successfully navigate the pipeline by using those resources. In reviewing Evenson and Pratt’s research, Deo (2013) notes that the findings focus not only on working recognition, but also on students’ motivation. Motivation is related to mentors and other facilitators along the path; those who successfully navigate do so with “facilitators” and “routers” who provide information and resources.

Develop Strong Mentor Connections

Research also suggests that student relationships with role models or formal mentoring activities—with teachers, law students, faculty, or other adults—make a difference in their progress through the pipeline. Outreach and mentoring are important activities for pipeline programs, and effective mentoring and leadership training activities can be found in many diversity pipeline programs.
As noted above, relationships are a key part of the 3Rs, and it is essential to involve students in intensive or extended ways, including a relationship with a student over time (Redfield, 2009). Mentoring and other activities have many benefits to students, such as improved academic performance and attendance, but also benefits the schools and mentors. In addition, mentoring works successfully for positive student outcomes in a variety of different levels and environments. Often, law students and professionals are involved in these types of relationships in an informal way, but the relationships also can be highly structured within a law firm, high school, or other setting.

Deo (2013) also highlights the necessity of role models and importance of merging academic and psychosocial support, adding that supporters may come from outside legal practice and often provide psychosocial support.

Research on HPPI programs also pointed to the importance of long-term mentoring relationships and research apprenticeships in improving minority representation in health fields (AAMC, 2004). Also, the experience of the University of Maryland, Baltimore County (UMBC) with diversity programs in graduate education notes the importance of making sure each program supports a successful mentoring relationship and establishing recognition and rewards for students and mentors (Bass et al., 2007).

Cross-Program Partnerships

At a broader level, programs that form relationships with other programs, K-12 schools, higher education institutions, community-based organizations, or other entities can be more successful, as long as the goals and activities of the partners are carefully considered and coordinated.

An important suggestion to maximize the effectiveness of pipeline programs is for programs to connect with each other to share resources and evaluate effectiveness (Deo, 2013). Diversity programs do better when they create partnerships among legal professionals, clients, community organizations, and schools (ABA, 2011); some law schools are developing alliances with other professional schools that have diversity programs, and other efforts have created partnerships between mainstream bar associations and those that focus on special populations. Student organizations are also important partners (Rothstein, 2011).

According to one of the first high-ranking administrators to launch a diversity initiative at a law school (Smith, 2011), after an intentional process of research and strategic planning, the school settled on three broad areas that were related to improvement of diversity at the school: pipeline development, student recruitment and retention, and faculty recruitment and retention. Their approach to pipeline programs is guided by seven principles. Although their pipeline programs range from supporting high school debate teams to reaching out to undergraduate and high school students to encourage pre-law programs, all are based on the seven principles. The principles include focusing on fostering local connections, building partnerships with other organizations (other university programs, community-based organizations), and using others’ expertise to be efficient and not duplicate effort.

Similarly, cross-sector collaboration has been found to be crucial in building diversity in the business field. One example is the LEAD Program in Business, an initiative involving various partners, such as universities, corporations, and government bodies (Siegel, 2007). In graduate education at Memphis University, pipeline partnerships between Minority Serving Institutions (MSIs) and non-MSI schools were found to be mutually beneficial, with cross-collaboration among faculty and students and the faculty becoming advocates for diversity in recruitment (Weddle-West & Fleming, 2010). Whittaker and Montgomery (2012) discuss efforts to improve minority participation in STEM fields, including partnerships with MSIs, which generally include activities such as joint student mentoring, close collaboration in transition between schools, and sustained relationships with faculty mentors.

Partnerships Across Multiple Segments of the Pipeline

Successful programs tend to run more long-term and intensive activities with wraparound support. They are “in and connected to the pipeline for the long haul” (Redfield, 2009). One of the principles noted by Smith (2011) is the importance of embracing a long-term view. In looking at lessons emerging from pipeline programs, the ABA (2011) notes that diversity programs need to take a long view, such as law-oriented pipeline programs in middle school, high school, and college. In addition, it is important to intervene early on in the pipeline—often starting in middle school—and continuing through the path with multiple entry points. Redfield (2009) believes that involving more than one segment of the pipeline is an important aspect of successful programs.
Establish Strong Goals, Focus on Early and Intensive Approaches

Each diversity pipeline program differs in terms of its goals, structure, activities, and so on, but research suggests that successful programs appear to have certain characteristics and strategies that foster student success and program sustainability. These factors include setting an explicit diversity goal, starting program activities at early levels of education and continuing on to later parts of the pipeline with a long-term view, and institutionalizing programmatic work so that it is sustainable.

For example, successful diversity pipeline programs have a clear diversity goal from the outset. According to Rothstein (2011), it is important to decide on the goals of the program, which will drive the content; in addition, it is necessary to then adapt the program content within the unique situation of the program, such as resources, personnel, etc. Pipeline programs require the commitment of individuals in different roles – administrators, mentors, teachers, volunteers, law students, etc. For these actors and influences, it is important to align with the program goals, set limits on contact or skills developing, and so on.

Having clear goals is also important in other professional fields. For example, Akinola and Thomas (2006) find that important core attributes of an effective diversity initiative in business include a well-articulated diversity strategy with supplemental structures for underrepresented minority employees.

Document Program Activities and Results

Research suggests that data and assessment work needs to be conducted on an ongoing basis, both for self-review and to advocate with external audiences. In framing the 3Rs, Redfield (2009) also notes that there is a fourth R for Results; even if programs are using the 3Rs, it is critical that they be measured and evaluated based on sound data. Rothstein (2011) writes that planning and assessment is essential, starting with determining the program goals. For Smith (2011), monitoring and assessing program results are important principles guiding diversity efforts.

In reviewing emerging lessons from diversity pipeline programs, the ABA (2011) found that regular review of the effectiveness of diversity pipeline programs is important. Existing programs should periodically reexamine their goals using data, and all programs should build assessment tools from the beginning. However, relatively few diversity programs are designed with self-assessment mechanisms.

In examining strategies for increasing diversity in the physician workforce, Gonzalez and Stoll (2002) found that pipeline programs are strengthened by developing systematic evaluation processes, expanding the number of such programs, and ensuring that best practices for broader evaluation efforts shape the programs. Siegel (2007) also notes that annual evaluations can lead to advocacy by program champions.

Improving the law diversity pipeline will require a sustained, comprehensive effort. However, current pipeline initiatives may be broad in number, but do not always employ a concentrated or persistent approach. The focus on rigor, for example, is not always evident, and program duration varies widely. Another important point is that despite the number of diversity pipeline programs in the legal community, there continues to be a lack of coordination among programs.

Conclusion

Diversity in the legal field is central to ensuring public confidence in the legal system and provides society with a sense of fairness in the judicial system. The benefits of diverse leadership are numerous, particularly as the United States engages with a global, multicultural marketplace. It is clear that while students from underrepresented backgrounds have made significant strides in college enrollment and completion, those gains remain to be seen in law school enrollment and J.D. degree attainment.

Leaks in the education pipeline at critical junctures are evident from early education in particular, with many students not obtaining the same skills development among some minority groups, and a relatively low proportion of underrepresented minorities completing high school. Disparities also exist by race/ethnicity in the transition to college, transition to law school, and students’ experiences in succeeding in law school and passing the bar. Addressing these gaps takes time and focused effort, building and supporting diversity pipeline programs that can expand student interest in an engagement with education, leading to more opportunities for graduation and professional training in the field. The analysis of diversity pipeline programs identified for this report reveals that most of the programs may be operating on too limited a basis and potentially too late in
According to research on diversity programs in the education pipeline to various professions, there are a number of characteristics that feed into the ongoing success and sustainability of the programs. Successful programs must include courses or curricula that are early, intensive, and academically rigorous, engaging students’ interest. Programs must also utilize strong mentor relationships with adults. The literature strongly suggests that success and sustainability in pipeline programs is tied to strong collaborative partnerships between programs and other entities, such as law firms, institutions, legal organizations, and other community-based programs. Partnerships can also be established across the pipeline to yield better transitions for students from one level to the next. Most importantly, programs need to document and measure outcomes of their efforts, sharing models of success that can be widely shared.

**Recommendations for Leaders and Supporters of Diversity Pipeline Programs**

**Focus on early and rigorous interventions.** Many of the differences in education outcomes begin at a very early age. Therefore, it is important to focus efforts on improving educational outcomes with programs in primary and secondary education settings. While all diversity pipeline efforts may not serve students during these foundational ages, partnerships with local schools could be created to enhance programs primarily serving college students, law students, and beyond. Participants could benefit from engagement with primary and secondary school students, and students could benefit from mentoring relationships with adults. Early pipeline programs must provide academically rigorous content, engaging students in coursework that will significantly improve skills such as writing, reading, critical thinking, and civic understanding and engagement. Within these programs, programming must seek to build student interest and motivation by providing wide recognition of students’ success.

**Develop strong mentor connections throughout programs.** Relationships are a critical component to successful outcomes for program participants. The opportunity to be mentored by an adult with knowledge and experience in the legal field or legal coursework is a key ingredient to successful programming, and it can have positive benefits for both students and mentors. Student relationships through formal mentoring make a difference in their progress through the educational pipeline.

Establish formalized partnerships across pipeline programs. It is important to establish working partnerships through formal agreements between pipeline programs and other entities, such as law firms, institutions, legal organizations, and other community-based programs. These kinds of partnerships can be sources for obtaining funding support, mentors, meeting space, volunteer staff, and other resources. There are many examples of these kinds of partnerships in the existing pipeline programs, and these collaborations can contribute to long-term stability and resources for program sustainability.

Establish partnerships vertically among different segments of the education pipeline. Creating formalized, cross-pipeline partnerships from one level of the education pipeline to the next will help strengthen connections that may yield better transitions for students, and help program staff better understand what students need to be prepared for the next step.

Rigorously evaluate diversity pipeline programs. Most diversity pipeline programs are not evaluated beyond participation counts. Expanding the investment in evaluations of diversity pipeline programs should be a significant priority. New and well-established programs should begin documenting the activities, noting the specifics of their program models, and theorizing on the outcomes that they intend to impact with those activities. This kind of documentation should be followed by analysis of program outcomes through the gathering of both quantitative and qualitative data, ideally by someone external to the program. Evaluation of programs should be used internally for planning and strategizing program improvements, and shared externally where appropriate to expand opportunities for collaborative learning on best practices.

Require and support evaluation of diversity programs. Organizations, funders, institutions, and businesses seeking to support diversity pipeline programs should support the use of evaluation by requiring evaluation and offering resources to support it.
References


The legal community was somewhat late to the diversity pipeline effort. Pipeline work in the medical and dental fields has been extensive. Some of this was initiated by the federal Health Professions Partnerships Act of 1998, which provided grant funding to establish centers of excellence, with the goal of diversity in training health professionals. The funding provided support for developing programs and centers for excellence to support underrepresented minority groups. The grant provided through the Act required linkages with a variety of partners, including colleges and universities, K-12 systems, and community-based organizations. Programs were developed to improve academic performance, improve the capacity of schools to recruit underrepresented minority students, and train and develop underrepresented faculty. There were also many contributions by private funders, especially foundations (Redfield, 2009).

Medical Profession

In 1996, the Health Professions Partnership Initiative (HPPI) was launched by the Association of American Medical Colleges (AAMC) with funding through 2005 by the Kellogg and Robert Wood Johnson Foundations (Terrell, 2006). The HPPI included 26 collaborative sites involving health profession schools, K-12 systems, colleges, and community organizations. All of the programs were designed to address educational disparities. They were all somewhat different, but shared a number of common elements, such as collaboration, institutional commitment, a partnership governance structure, strategic planning, and various partnership activities.

Each site had a coordinator who planned activities to strengthen links between the lead academic health center and partners such as colleges, K-12 systems, local health departments, businesses, professional organizations, etc. (AAMC, 2004). Many activities focused on academic enrichment, such as tutoring, summer immersion, test-taking skills, and other ways to encourage interest in health professions.

Research on these programs demonstrated the importance of focusing on academic preparation that begins early, in an intensive way, and continues through increasing levels of schooling. Researchers also noted that in order for programs to resonate with teachers and school systems and lead to systemic reform, there must be significant resources and successful partnerships in place, as well as cultural sensitivity and clear goals. The findings suggest several strategies to improve minority representation in health careers: early intervention, academic enrichment—especially in science/math—career awareness information, long-term mentoring relationships, research apprenticeships, incentives/rewards, and parent involvement. Other effective practices include high expectations of students, strong program leadership, clear assessment and evaluation measures, and long-term financial support.

Another study found that close relationships between academic medical centers and K-16 regional collaborators was central to improving the medical pipeline (Cohen, 2006). Several lessons can be drawn that are quite similar, including the need to start early in the process, to work along all segments of the pipeline, and to integrate partnership cultures. Redfield (2009) also supports these findings by suggesting that there is a need for partnerships throughout the pipeline, and that programs aimed at improving academic preparation need to start early and be intensive. However, there has been very little research to determine the HPPI’s effectiveness (Terrell, 2006).

Beyond the HPPI effort, another study (Gonzalez & Stoll, 2002) examined strategies for increasing diversity in the physician workforce. The Kellogg Foundation has been actively involved in supporting educational pipeline programs to increase underrepresented minority groups in the professions. The community benefit approach is helpful, but needs to be part of a broader reform effort. In particular, it is essential to develop a broad-based, multi-faceted campaign that uses a variety of approaches. In addition, pipeline programs are strengthened by developing systematic evaluation processes, expanding the number of such pro-

Appendix: Examples from Other Professional and Graduate Training Programs
grams, ensuring that best practices for broader evaluation efforts shape the programs, and finally, requiring programs to have genuine partnerships with community groups.

**Dental Profession**

The Dental Pipeline program was created to address inequities by having students spend time in community clinics and practices with underserved populations with the goal of increasing underrepresented minority groups in Dental Pipeline schools (Formicola et al., 2009). Curriculum changes needed to be made to prepare students for community work, as well as efforts to improve cultural competency for both students and dentists. Dental Pipeline schools had to develop new course materials and expand student outreach to diverse populations, sometimes by collaborating with other schools. Various private philanthropic entities made it possible for underrepresented minority students to receive financial aid. The program also was designed to increase faculty member support and training; dentists participating in the program became excellent mentors. Expanding recruitment of underrepresented minority students included summer enrichment programs, post-baccalaureate programs for students who applied but were not accepted, strategic meetings and partnerships with feeder schools, student scholarships, and mentoring programs with minority dental associations. Recent discussions with the American Dental Education Association (ADEA) suggest that even where there were no major increases in student diversity, the Dental Pipeline Project had a significant impact on curriculum and in addressing issues of institutional culture.

A recent evaluation of the RWJF Summer Medical and Dental Education Program, a six-week residential science enrichment program for rising college sophomores and juniors, found that most participants earned bachelor’s degrees in a health- or science-related field and more than half applied to a medical or dental school (Cosentino et al., 2015). The most important program characteristics related to program effectiveness were a stable group of faculty, exposure to hands-on clinical experiences, and a collaborative leadership approach.

**Business Profession**

There have also been pipeline efforts in the business professions. For example, the Diversity Pipeline Alliance was a network of national organizations with the goal of preparing students and professionals of color for leadership and management positions. The Alliance focused on management students from success in middle school through college, the MBA, and business careers (Hynes & Armstead, 2006). It produced an annual pipeline report that described the status of diversity in business fields.

Currently, many corporations have diversity initiatives in place; although these are not pipeline programs per se, they have relevance for the discussion of factors that can influence the success of such programs. For example, knowledge-intensive firms can recruit and retain diverse workforces through diversity initiatives (Akinola & Thomas, 2006). The effectiveness of such initiatives often depends on top leadership that clearly supports and mediates the work. In addition, the core attributes of an effective diversity initiative include a well-articulated diversity strategy, embedded supplemental structures for underrepresented minority employees, partnerships between minorities and non-minorities, integration within existing practices, and responsibility for and monitoring of the work.

Similar to the legal field, cross-sector collaboration was found to be instrumental in building diversity in the business field. A good example is the LEAD Program in Business, an initiative involving various partners, including universities, corporations, government, and a nonprofit coordinating body (Siegel, 2007). The goal of the program is to recruit high-potential students into business fields. The sustainability of the program over time has been based on a number of factors, including the evolution of the goals of the partners and articulation of the expectations of partners. Negotiation of the terms of involvement was an ongoing concern that needed to be addressed in order for the program to succeed. In addition, division of labor among partners is important; coordination and involvement with partners has varied depending on their goals and circumstances. Finally, there have been annual evaluations of the program, which led to advocacy by program champions.

**Graduate and Doctoral Education**

The Council of Graduate School’s PhD Completion Project has been examining some of the challenges faced by underrepresented students and the ways in which selected colleges and universities are attempting to address those issues. Overall, key factors emerging from the project include mentoring, program environment, financial support, research in the field, and processes/procedures. For ex-
ample, UMBC talks about ten lessons learned from diversity programs in graduate education, including gaining faculty and staff engagement, making sure each program supports a successful mentoring relationship, the need for a mechanism for tracking success and failures, establishing recognition and rewards for students and mentors, and remembering to prepare students for the future (Bass et al., 2007). At Memphis University, it became clear that targeted, comprehensive approaches were needed, including funding to support students and inclusive school environments. Pipeline partnerships between MSIs and non-MSI schools can be mutually beneficial. Cross-collaboration among faculty and students promotes relationship-building and faculty can become advocates for diversity in recruitment (Weddle-West & Fleming, 2010).

Science, Technology, Engineering and Math (STEM) Fields

Minority participation in STEM fields has been a widespread issue both at the undergraduate and graduate levels, and diversity pipeline programs have been used to try to encourage participation and success. In 2011, a National Research Council/National Academies report noted that key program characteristics for supporting a diverse student population include summer programs, research experiences, professional development, academic support, social integration, and mentoring designed to change academic culture and improve minority participation. In addition, a champion is needed at the program level to provide leadership and commitment to long-term change. A successful program also requires substantial resources to be successful, as well as coordination of efforts with other programs to avoid duplication of effort; other important factors include a focus on transition points, a design that takes into account program goals, and ongoing evaluations with intermediate measures.

Another study (Maton & Hrabowski III, 2004) focused on the Meyerhoff Scholars Program at UMBC, which was developed in 1988 to support highly qualified African American STEM majors. The program is structured around 14 factors, including financial aid, recruitment, summer bridge programs, study groups, program values (including support for academic achievement and peer support), building community, personal advising/tutoring, summer research internships, faculty involvement, family involvement, and community service. According to evaluation data, Meyerhoff students were more likely to graduate in STEM majors and attend STEM graduate schools, and the percentage of students enrolling in PhD programs increased substantially. Five factors coming out of the evaluation were especially important—program community, financial support, program staff, research internships and mentors, and the campus academic environment.

Whittaker and Montgomery (2012) discuss numerous efforts to improve underrepresented minority participation in STEM fields, ranging from the institutional level to partnerships, to national efforts. At the institutional level, many programs exist, although program assessment and data are scarce. These programs are often open broadly to students of color, with academic assistance and attention to cultural and professional factors. Many programs target high-achieving underrepresented minority students, and according to the authors, successful ones have a critical mass of students. Programs also foster a sense of community, provide financial support, include a student orientation, have active faculty support, and include early engagement with research. There are many partnerships with MSIs, which generally include activities such as joint student mentoring, close collaboration in transition between schools, and sustained relationships with faculty mentors. Finally, there are national efforts, such as academic consortia (the Leadership Alliance and the National GEM Consortium). The study suggests that successful efforts to promote diversity in STEM include academic assistance, professional and cultural socialization, and moves to address institutional environment factors. Highly successful programs look at academic supports, funding, engagement in research, and other factors, but it is also important to address environmental issues to transform institutional climates, perhaps by using interventions such as learning communities.