# Ensure Equitable Access to Excellent Educators

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Missouri
DEPARTMENT OF ELEMENTARY & SECONDARY
EDUCATION

# Ensure Equitable Access to Excellent Educators

**Section 1: Introduction**

Missouri recognizes that inequities exist in students' access to great teachers and school leaders across the United States. Students of color, students from low-income families, rural students, students with disabilities, students with limited English proficiency, and students who struggle academically are less likely than their peers to have such access. The causes of these inequities vary from place to place and context to context, with numerous policy, practice, economic, and socio-cultural factors at play. Because of the multiple causes for inequity in teacher and leader distribution, the solutions must be systemic rather than treating merely the symptoms.

As students progress through Missouri's PK-12 public education system, it is their right to learn under the direction of effective teachers at every grade level and in every content area. The primary problematic equity outcome in the state of Missouri is that this likely does not occur. Along every student's education experience, there is reason to believe that virtually all students, at some point, learn from less-than-effective teachers. Current Missouri data suggest that high-poverty, high-minority and rural students experience less effective teachers at a higher rate than do students in more affluent schools.

According to federal guidance, less effective teachers are those who are inexperienced, unqualified, or out-of-field[1]. Although still being developed and implemented, a separate effectiveness index is included in addition to considering the experience, qualifications and assignments of teachers. The inequity issue the Missouri Plan addresses is that inexperienced, unqualified, out-of-field and less-effective teachers are more prevalent in high-poverty, high-minority and rural schools than in more affluent schools.

In alignment with federal guidance, "poor" students are those from "low-income families" and are identified by eligibility for free and reduced priced lunch (FRPL). Minority students are those who are non-white and include Hispanic students of any race. Students in schools categorized as "Rural: Remote" are in communities 25 miles from an urbanized area and also 10 miles from an urban cluster. According to the National Center for Education Statistics (NCES), urbanized areas and clusters are "densely settled cores of census blocks with adjacent densely settled surround areas. When the core contains a population of 50,000 or more, it is designated as an urbanized area. Core areas with populations between 25,000 and 50,000 are classified as urban clusters." By contrast, more affluent students are those from higher-income families and are determined using the same free and reduced priced lunch eligibility criteria. To illuminate

[1] The term "less than fully qualified" is used to mean the statutory term "unqualified"

potential areas of educational inequity for Missouri students, a comparative analysis was completed using the following groups of schools:

- Five percent (110 schools) with the highest percentage of students eligible for FRPL referenced as high-poverty schools
- Five percent (110 schools) with the highest percent of minority students (non-white and Hispanic of any race) referenced as high-minority schools
- Schools classified as "Rural: Remote" (315 schools) referenced as rural schools
- Five percent (110 schools) with the lowest percentage of students eligible for FRPL referenced as more affluent schools

The decision to focus on just five percent of the schools in the various categories was based on several factors. First, looking at schools at the highest and lowest five percent and only those categorized as Rural: Remote provided a manageable number of schools to analyze. This comparative analysis focuses on a non-duplicative total of 582 schools representing the poorest, most affluent, highest concentration of minority students, and the most rural in the state. It was additionally theorized that strategies developed for these schools would be applicable as well for schools with similar but less concentrated demographics.

The average poverty rate of the community and the percentage of FRPL students were included as a part of the analysis. A community's average poverty rate is the percentage of persons in the ZIP code in which the school is physically located who fall below the poverty threshold identified by the U.S. Census Bureau. The average poverty rate of the schools with the highest levels of FRPL students is 30.7 percent, 30.1 percent for high-minority schools, and 18.4 percent for rural schools, as compared with an average poverty rate of 7.1 percent for the more affluent schools. This represents a gap of more than 20 percent between high- poverty and minority schools and the low-poverty schools.

The five percent of schools with the highest percentage of FRPL-eligible students represent 35 LEAs, with 38 percent of them in the St. Louis Public School district and 16 percent in the Kansas City school district. An additional 16 percent of them are charter schools. The schools are located in 12 different counties in the state. These counties are located predominantly in the St. Louis and Kansas City metro areas, but also include two counties in the southeast, one county in the southwest and one county in the northeast part of the state. Approximately 88 percent of the schools are elementary or middle schools, while 12 percent of them extend to the 12th grade. These 110 schools have FRPL rates between 91.9 percent and 100 percent. Student enrollment in these schools ranges between 16 students and 830 students, with an average minority, or non-white, concentration of 86.3 percent. In these schools, 41.9 percent of the teachers are minority, or non-white.

The five percent of schools with the highest percentage of minority students represent 20 LEAs, with 35 percent of them in the St. Louis Public Schools, 11 percent in the Hazelwood School District, 11 percent in the Riverview Gardens School District, and eight percent in the Kansas City Public Schools. Seventeen are charter schools. The schools are located in three different counties in the state, corresponding to the Kansas City and St. Louis metro areas. Of these, 52 percent of them, or 57 schools, also appear in the list of the five percent of schools with the highest percentage of poor students. Due to this significant overlap, Missouri generally treated these groups together when identifying root causes and strategies in this plan. Approximately 82 percent of the schools with the highest percentage of minority students are elementary or middle schools, while 18 percent of them extend to the 12th grade.

The schools categorized as Rural: Remote represent 155 school districts/LEAs located in 71 different counties across the state. These counties are located in all regions of the state except the St. Louis and Kansas metro areas. The regions with the most schools are in the northeast, northwest, south central and west central parts of the state. Approximately 61 percent of the schools are elementary, and approximately 39 percent of the schools are secondary. Student enrollment in these schools ranges between 12 students to 735 students with an average minority, or non-white, concentration of 3.6 percent. In these schools, 0.9 percent of the teachers are minority, or non-white. On average, 60.4 percent of the students are FRPL eligible.

The five percent of schools with the lowest percentage of FRPL-eligible students represents 28 school district/LEAs, with 28 percent of them located in either the Lee's Summit or Rockwood school districts. These school district/LEAs are located in 13 different counties in the state. These counties are located predominantly in the St. Louis or Kansas City suburban areas or the central part of the state. Approximately 77 percent of the schools are elementary or middle schools, while 23 percent of them extend to the 12th grade. The FRPL rate in these schools ranges between 0 percent and 16.4 percent. Student enrollment in these schools ranges between 62 students and 257 students, with an average minority, or non-white, concentration of 16.6 percent. In these schools, 4.5 percent of the teachers are minority, or non-white.

Missouri's Educator Equity Plan was developed using data based on the comparison of these four different sets of schools. A tentative timeline for the development of this plan is provided in the Educator Equity Work Plan in Appendix B.

**Section 2: Stakeholder Engagement**

Representatives from education associations and the Missouri Department of Elementary and Secondary Education have met on multiple separate occasions. In most instances, the executive director of the association attended. If the executive director was unavailable, he or she

typically had a designee who attended on his or her behalf. The first meeting included a general overview of the equity plan process, including timelines and sections required in the final plan. The meeting also included a review of a potential data set to inform the plan and discussion on potential causes and strategies.

The second meeting was facilitated by the Center for Great Teachers and Leaders (GTL) and the Reform Support Network (RSN). In that meeting, participants again reviewed available data and made suggestions on additional data to inform the plan. The group also considered root causes for the inequity the data suggest. After exploring root causes, the group began to consider possible strategies to address in the plan. The group also considered additional stakeholders to include in future conversations. These future conversations will include focus groups in school districts where the data suggest educational inequity occurs. The groups in attendance accepted the responsibility of continued conversations with their respective constituents, agreed to bring that feedback to our next meeting, and reviewed the potential timeline for moving forward. Sample agendas for these meetings are offered in Appendix A. These are the groups that participated in these meetings and are considered co-authors of the design of Missouri's Educator Equity Plan:

- **American Federation of Teachers-Missouri:** AFT Missouri represents thousands of teachers and school support staff as well as state government workers employed with the Missouri Department of Elementary and Secondary Education. The stated mission of AFT Missouri is to champion fairness, democracy, economic opportunity, and high-quality public education, healthcare and public services for students, their families and communities. Two members of AFT Missouri participated.

- **Missouri State Teachers Association:** MSTA is a non-profit state teachers association that serves more than 44,000 educators in the state of Missouri. The stated mission of MSTA is advocating for and empowering public educators so they can teach. Two members of MSTA were invited and participated.

- **National Education Association-Missouri:** The Missouri NEA acts as an advocate for public schools, public school students and public school employees. Its 35,000 members are employed in school districts across the state, as well as in state schools, community colleges and on university campuses. MNEA's stated mission is to serve as the united voice to promote, advance and protect public education and to advocate for the rights and interests of students and members. Two members of MNEA participated.

- **Missouri Association of School Administrators:** MASA is the only statewide association in Missouri that exists for the purpose of serving the needs of school superintendents

and central office administrators with an interest in the superintendency. MASA is a statewide professional association that has grown to include more than 600 school superintendents and school administrators. Two members of MASA.

- **Missouri Association of Elementary School Principals:** MAESP is the only statewide association in Missouri that exists for the purpose of serving the needs of elementary and middle school principals, assistant principals and those educators with an interest in becoming principals. MAESP is a statewide professional association that has grown to include more than 1,000 school administrators. The stated purposes of MAESP are to form closer relations with persons concerned with the education of children; to bring about a greater unity of action among the elementary and middle school principals of Missouri, with particular emphasis on elementary and middle school education; and to foster activities that permit increased professional growth of all elementary and middle school principals. Two MAESP members were invited and participated.

- **Missouri Association of Secondary School Principals:** MASSP is a professional organization committed to the ongoing improvement of secondary education, the professional development of middle level and high school principals and assistant principals, and programs for the youth of Missouri. The stated mission of MASSP is to improve secondary education through positive leadership and the enhancement of student performance. MASSP is the only Association in Missouri serving the professional needs of principals and assistant principals of the state's middle level and high schools with programs designed by secondary school administrators for secondary school administrators. Two members of MASSP participated.

- **Missouri Association of Rural Education:** MARE is an organization of school administrators, board members, teachers, parents, institutions of higher education, and businesspeople, all of whom are interested in serving rural community school districts in Missouri. The stated purpose of this association is to focus on the needs and concerns unique to rural education, to provide a forum for the discussion and resolution of those needs and concerns, and to present a unified voice to promote rural education in Missouri. One member of MARE participated.

- **Missouri School Boards Association:** MSBA acts as an advocate for public education in Missouri, serving as the unified voice of school board members throughout the state. The association also strives to provide members with an opportunity to enhance their skills, expand their knowledge, exchange ideas and discuss important issues with their colleagues. Four MSBA members participated.

- **Missouri Parent Teacher Association:** MoPTA's stated mission is to be a powerful voice for all children, a relevant resource for all families and communities, and a strong advocate for the education and well-being of every child. Its membership includes thousands of parents and school communities across the state. One MoPTA representative participated.

- **Missouri Department of Elementary and Secondary Education:** The Department of Elementary and Secondary Education is a public education assistance agency whose mission it is to guarantee the superior preparation and performance of every child in school and in life. The Department has four goals under its Top 10 by 20 initiative, an ambitious effort to raise Missouri's student achievement to rank among the top 10 states by 2020:
    1. All Missouri students will graduate college and career ready.
    2. All Missouri children will enter kindergarten prepared to be successful in school
    3. Missouri will prepare, develop and support effective educators
    4. The Missouri Department of Elementary and Secondary Education will improve departmental efficiency and operational effectiveness.

    Eight staff members representing the separate offices of the Department, the Commissioner and Deputy Commissioners of Education participated in EEP planning.

The group discussions that occurred in these initial meetings touched upon causes and strategies that generally fell into three categories impacting education for students in high minority, high poverty and remote rural schools:

- Environmental factors
- Institutional issues (specific to the teacher education process)
- Workforce issues

Missouri's Area Supervisors have also been included in conversations about the data, possible root causes and strategies for the Equity Plan. There are eleven area supervisors serving nine different regions of the state. These supervisors work directly with the districts in their region. They are well informed regarding the issues that challenge each of their districts. The Area Supervisors of Instruction provided initial thoughts on possible root causes and potential strategies that might be included in the Equity Plan.

Stakeholder input was also gathered through an Educational Equity Leadership Conference held in St. Louis. The purpose of the conference was to create a collaborative space for equity-minded stakeholders and advocates to discuss and explore issues affecting educational equity:

- Increasing minority educators
- Parental involvement
- Faculty and student leadership
- Teaching diverse students

The conference included teams of educators, parents and students, higher education representatives, and school board members and other advocates of equity in education.

Additional feedback was collected through regional focus groups. The focus groups were organized according to the regions identified below. Area Supervisors of Instruction assisted in organizing and hosting the focus groups. Those involved in the focus groups included representatives of the 110 high-poverty schools and representatives of the 315 schools classified as Rural: Remote.

As previously stated, there is a significant overlap of 52% , or approximately 57 schools, that are both high-minority and high-poverty schools. One of the rural schools is a high-poverty as well. Due to this significant overlap, some root causes and strategies identified applied to multiple groups. The focus groups represented equal parts of districts with high-poverty schools, high-minority schools and districts with schools classified as Rural Remote. Overall, of the 472 non-duplicative schools statewide that fall into these categories, 34 percent participated in the focus groups or attended the equity conference. This represented nearly 12,000 teachers (18 percent) of the overall teacher population and nearly 130,000 students (14.4 percent) of the overall student population. Participants who discussed equity issues included district-level administrators, school leaders, higher education representatives, parents, students and school board members. A standardized protocol (see Appendix C) was used during the focus group meetings. The protocol included a review of the data provided in the Data Chart (see next section) and question prompts in reference to causes and strategies.

The data, root causes and possible strategies included in the equity plan were presented on two separate occasions to the Commissioner's Advisory Council. The purpose of the advisory council is to ensure that communication channels remain open between schools and the Department. The council is comprised of 28 superintendents from across the state and

representatives from five superintendent organizations. Meeting with these superintendents and representatives assists the Department in its strategic planning and decision-making by bringing concerns, issues and feedback from practitioners in the field. It also provides an avenue for disseminating accurate information. Those on the council either serve as association officers or have been recommended by Missouri's Area Supervisors.

At the December, March and May meetings of the State Board of Education, members of the Board were provided a presentation on Missouri's Equity Plan. It included a summary of the plan that was submitted in 2006, an overview of the plan that is currently under development and the final draft prior to its June submission. This overview included an introduction to the potential data to be reviewed, general root causes for the data results, and possible strategies to address educational inequity in our state. Board members also were provided with input gathered from focus groups that met over a two-month time span earlier this year. The input was offered by practitioners from high-poverty, high-minority and rural schools across the state. Members of the Board offered their initial thoughts, reactions, suggestions and overall approval about the information contained in the equity plan. The Board agenda items may be found in Appendices D, E and F.

**Section 3: Equity Gaps**

**Data Analysis**

In comparing teachers in high-poverty schools to high-minority schools to the most rural schools to the more affluent schools, the data illustrate potential areas of educational inequity across these schools. Missouri's Equity Plan offers possible root causes for issues illuminated by the data, as well as strategies for addressing the inequity of educational opportunity the data suggest.

Research suggests that "fully certified teachers have a statistically significant positive impact" in regard to areas of teaching and learning (Goldhaber, 2002). According to Missouri data, teachers who are less than fully qualified are more prevalent in schools with higher percentages of high-poverty and minority students. In high-poverty schools, 16.3 percent of teachers are less than fully qualified and 15.1 percent are in high-minority schools. In rural schools, 13 percent are less than fully qualified. In contrast, in low-poverty schools the percentage of less-than-fully qualified teachers is only 5.7 percent. This is particularly prevalent at the secondary level. The gap between the percentage of less than fully qualified teachers in more affluent schools and the rural schools is 9.3 percent. The gap is 17.2 percent between the affluent schools and the high-poverty schools, and 17.4 percent for minority schools.

A subset of teachers who are less than fully qualified are those who teach out-of-field. These teachers provide instruction in a subject that does not correspond to one or more of their

active certification areas. Comparison data in this area are similar to that of less than fully qualified teachers. The percentage of those teaching out-of-field at the elementary level is relatively the same at 4.1 to 4.2 percent in high-poverty, high-minority and rural schools. This is slightly over 2.5 percent more than the percentage in low-poverty schools. However, at the secondary level the gap is much greater. In high-poverty and rural schools, there are between 10.3 and 10.6 percent of out-of-field teachers. This is about four percent more than secondary teachers in low-poverty schools. In high-minority schools, 12.2 percent of teachers are instructing out-of-field, which is 5.8 percent more than secondary teachers in low-poverty schools.

In addition to more teachers being less than fully qualified, data indicate they are less effective as well. This information was collected by creating an index reflecting how the teachers in a school overall rated in regard to performance levels in evaluation systems across the state. An effective teacher would rate in one of the upper levels of an evaluation system. Data collected through the state's data reporting system on educator evaluation indicate that teachers in schools with high-poverty and minority students and in rural schools are collectively less effective than in low-poverty schools. On average, 84.7 percent of the teachers in schools with low numbers of FRPL students are collectively considered effective. In contrast, 81.2 percent of teachers in rural schools, 78.8 percent of teachers in high-poverty schools and 78.5 percent of teachers in high-minority schools are collectively considered effective. This represents a gap in overall teacher effectiveness of 3.5 percent in rural schools and as much as 6.2 percent in high-minority schools.

A number of studies confirm that on average, "brand new teachers are less effective than those with some experience under their belts" (Clotfelter, Ladd, and Vigdor 2007a, 2007b; Harris and Sass 2007; Kane, Rockoff, and Staiger 2006; Ladd 2008; Sass 2007). The teachers in the high-poverty, the high-minority and rural schools have less experience than teachers in the low-poverty schools. On average, teachers in low-poverty schools have 13.72 years of experience; teachers in rural schools have 12.1 years of experience; teachers in high-minority schools have 10.7 years of experience; and teachers in high-poverty schools have approximately 9.97 years of experience. This means that students in high-poverty schools have teachers with 3.75 fewer years of experience than students in low-poverty schools.

Teachers' average years of experience in a school is affected by the extent of retention that occurs from one year to the next. Teachers in the lowest five percent FRPL schools are retained at higher rates than teachers in the highest five percent FRPL, highest minority and rural schools. On average, 85.5 percent of teachers in low-poverty schools are retained from one year to the next as compared with 81.2 percent in the rural schools, 69.2 percent in high-minority schools, and 68.9 percent of teachers in high-poverty schools. In high-minority and high-poverty schools, that is a gap of more than 16% in teacher retention. The gap expands

when looking at retention over three years. Between low-poverty schools and rural schools, there is an 8.4 percent gap. The gap in percentage of retention between low-poverty schools and high-poverty and high-minority schools is more than 23 percent.

In a brief written in 2010, Jennifer King Rice maintains that "teacher experience – or more accurately, teacher inexperience – is systematically related to teacher productivity." This generally means that teacher productivity is influenced by the experience level of the teacher. Additionally, as summarized by Goldhaber (2002), "A number of studies have found that fully certified teachers influence student achievement positively" (p. 5). Finally, a very recent study by Papay and Craft (to be published later this year) compared multiple methods for assessing the impact of teacher experience on student academic growth. Those methods converged on the finding that teachers improve most dramatically in the first year. Schools with the highest percentages of first-year teachers likely have the steepest climb in developing effective teachers. In light of this, Missouri's equity plan defines "inexperienced teachers" as those who are in their first year of teaching, since the first year is so crucial in terms of teacher effect.

The percentage of first-year teachers in high-poverty, high-minority and rural schools is much greater than in low-poverty schools. In schools with high numbers of minority students, 13 percent of teachers are first-year teachers. In rural schools, 13.9 percent of teachers are first-year teachers. In schools with high-poverty, 15.4 percent of the teachers are in their first year. In low-poverty schools, only 6.8 percent of the teachers are first-year teachers. This shows a gap of more than eight percent of first-year teachers between high-poverty and low-poverty schools.

Similar percentages were found for first-year principals. Low-poverty schools had a relatively low percentage of first-year principals (seven of the 110 schools – 6.4 percent) as compared with the rural schools (43 of the 315 schools – 13.7 percent), to high-poverty and high-minority schools (18 of the 110 schools – 16.4 percent). This means that 10 percent more high-poverty and high-minority schools had first-year principals than low-poverty schools.

Not only are there more first-year teachers in high-poverty and high-minority schools, but they receive less mentor support. There are fewer first-year teachers in low-poverty schools and only 7.3 percent of them are not assigned a mentor. Remarkably and encouragingly, while there are a higher percentage of first-year teachers in rural schools than in low-poverty schools, less than half, or only 2.5 percent of them are not assigned a mentor. This is a gap of more than five percent. However, in high-minority schools, 17.5 percent of first-year teachers do not receive a mentor, more than twice that of low-poverty schools. In high-poverty schools, 21.4 percent of first-year teachers do not receive a mentor, a rate which is triple that of low-poverty schools.

First-year teachers and their principals are surveyed to measure how well the new teachers were prepared by their teacher education program. They are rated on a 1-5 scale, with ratings

3-5 representing preparation that was fair, good, and very good by the teacher education program. The first-year teachers in low-poverty schools gave higher ratings to the preparation they received than first-year teachers in high-poverty, high-minority and rural schools. The teachers in low poverty schools gave a rating of 4.45 (99.2 percent); first-year rural teachers gave a rating of 4.24 (97.8 percent); first-year teachers in high-minority schools gave a rating of 3.94 (90.8 percent); and first-year teachers in high-poverty schools gave a rating of 3.87 (90.1 percent). That is a difference in satisfaction ratings of .58 (9.1 percent) between first-year teachers in low-poverty schools and those in high-poverty schools.

Principals' ratings of first-year teachers were on average between .15 (1.6%) to .30 (4.4%) points lower than those of their first-year teachers. In low-poverty schools, principals rated the preparation of their first-year teachers at 4.30 (97.6 percent); principals of first-year teachers in rural schools gave a rating of 3.94 (93.4 percent); principals of first-year teachers in high-poverty schools rated their preparation at 3.66 (87 percent); and principals of first-year teachers in high-minority schools rated their preparation at 3.56 (87 percent). Overall, there was a difference of more than 10 percent in the ratings of principals in the high-minority and high-poverty schools and those in the low-poverty schools.

Salaries of the teachers in these four different categories of schools were analyzed as well. The adjusted salary takes into account a type of cost-of-living adjustment to allow for comparability. Among the four categories of schools, there is a relatively small gap of no more than $855 in salaries of first-year teachers with a bachelor's degree. However, by year five, the gap widens to nearly $5,000, with the biggest gap occurring between the low-poverty schools and the high-poverty schools. Between years six and 10, the gap widens to more than $6,500, with the largest gap now between low-poverty schools and rural schools. For teachers with more than 11 years of experience, the gap widens even further to more than $16,700, with the widest gap again between the low-poverty schools and the rural schools.

Among the different categories of teachers, there was some variation with respect to teacher absenteeism. On average, students learn more from a regular classroom teacher than from a substitute teacher. "To the extent that less learning occurs when regular teachers are absent and student motivation is also reduced, student academic performance may suffer" (Ehrenberg, Ehrenberg, Rees, and Ehrenberg, 1991). It should be noted that days of absenteeism did not include administratively approved leave for professional development, field trips, or other off-campus activities with students. Teachers are absent more than 10 days per year in high-poverty and high-minority schools as well as in schools with low percentages of FRPL students. In high-minority schools, 32.9 percent of the teachers are absent 10 days or more. In high-poverty schools, 30.2 percent of the teachers are absent 10 days or more. In low-poverty schools, 31.5 percent of the teachers are absent 10 days or more. In contrast, only 17.5 percent

teachers in rural schools are absent 10 days or more. There is a gap of more than 15 percent in teacher absenteeism between the rural schools and the high-minority schools.

One indication of a school's culture is the extent and severity of discipline issues. Research suggests that student discipline issues are strong predictors of math and science teacher turnover (Ingersoll & May, 2012). There is even evidence that discipline issues — or more accurately, teachers' efficacy in managing them — influence teachers' ability to be effective. It may also be true that ineffective teachers with lower self-efficacy make more discipline referrals or are more likely to be perceived as weaker disciplinarians, creating a less conducive environment for learning (Dibapile, 2012).

Overall, there was very little difference in discipline incident rates between rural and low-poverty schools, just less than a two percent difference in high-poverty and low-poverty schools and just a three percent difference between high-minority and low-poverty schools. When breaking that down further and looking at only elementary schools, there is just over a two percent difference between low-poverty and high-minority schools and even less between low-poverty and high-poverty or rural schools. However, when looking only at secondary schools, there was a much bigger gap. There was just over a three percent difference between low-poverty secondary schools and high-poverty secondary schools, and between high-minority secondary schools and low-poverty secondary schools, the difference was nearly seven percent.

The most important statistical difference between the separate categories of schools occurs in student performance. In high-minority schools, student proficiency in English language arts (ELA) is at 24 percent. Proficiency is 24.2 percent in high-poverty schools. Students in rural schools perform better in ELA at 54.1 percent. In low-poverty schools, ELA proficiency is at 68.8 percent, more than 44 percentage points higher than high-minority or high-poverty schools.

Similar results occur in mathematics proficiency rates, although they are slightly lower overall across all four categories of schools. In high-minority schools, math proficiency is at 22 percent and only slightly higher in high-poverty schools at 26.5 percent. Students in rural schools perform better at 50.7 percent and low-poverty schools better still at 66 percent. Like ELA, students in low-poverty schools perform 44 percentage points higher than students in high-minority schools.

It is important to note that additional data were included as a result of stakeholder engagement. Building on the original set of data, and based on stakeholders' requests, the following additional data were added to the original data set:

- Average poverty rate of the community
- The percentage of minority teachers

- A more detailed look at teacher salary that includes first-year teachers with BA, first-year teachers with MA, teachers with five years of experience or less, and teachers with six to 10 years of experience
- In addition to percentages of first-year teachers, also added was the percentage of teachers with less than three years of experience

Stakeholders felt this additional data might be informative to further clarify issues that affect the learning of the students in the four categories of schools, identify potential root causes for the gaps and possible strategies to address those root causes.

The data just described have been collected and summarized in the table that follows. The columns represent the four categories of schools: 110 high-minority schools with an average of 98.5 percent minority students; the 110 high-poverty schools with an average of 91.9 – 100 percent FRPL students; the 315 schools classified as rural remote; and the 110 low-poverty schools with an average of 0 – 16.4 percent FRPL students. The rows represent different measures related to a positive school experience. Most of these measures specifically focus on the quality of the teachers and leaders in the four categories of schools.

| Measure | Highest 5 percent Minority schools (110 schools) Non-white students and Hispanics of any race | Highest 5 percent FRPL of schools (110 schools) Students eligible for Free and Reduced Lunch | Most Rural School Buildings (315 schools) NCES Urbanicity Classification *"Rural: Remote" | Lowest 5 percent FRPL of schools (110 schools) Students eligible for Free and Reduced Lunch |
|---|---|---|---|---|
| FRPL Rate | 88.0% (average) | 91.9%-100% | 60.4% (average) | 0%-16.4% |
| Avg. Poverty Rate of Community | 30.1% | 30.7% | 18.4% | 7.1% |
| * % Minority (Students) | 98.5% | 86.4% | 3.6% | 16.6% |
| * % Minority (Teachers) | 52.0% | 41.9% | 0.9% | 4.5% |
| * Discipline Incident Rate | 3.4% | 2.2% | 0.6% | 0.4% |
| • Elementary | 2.4% | 2.0% | 0.2% | 0.2% |
| • Secondary | 7.9% | 4.4% | 1.4% | 1.1% |
| Avg. Years of Experience | 10.7 | 9.97 | 12.1 | 13.72 |
| *Adjusted Average Salary | $52,282.42 | $49,951.79 | $48,225.08 | $60,115.89 |
| • 1st yr teachers w/ Bacc. | $39,031.83 | $38,868.87 | $38,488.02 | $39,343.84 |
| • 1st yr teachers w/ Mast. | $44,689.04 | $43,603.59 | $43,443.01 | $44,498.51 |
| • Teachers w/ 5 years Experience or Less | $41,949.93 | $42,138.66 | $42,343.00 | $46,920.98 |
| • Teachers w/ 6-10 Years Experience | $49,031.10 | $48,804.28 | $47,072.14 | $53,653.01 |
| • Teachers w/ 11+ Years Experience | $62,678.20 | $60,512.59 | $53,667.07 | $70,430.06 |
| * Retention Rate 1 yr. (2013-2014) | 69.2% | 68.9% | 81.2% | 85.5% |
| * Retention Rate 3 yr (2011-2014) | 44.6% | 44.8% | 60.1% | 68.5% |
| *Absent 10 days or more | 32.9% | 30.2% | 17.5% | 31.5% |
| % First-year Teachers | 13.0% | 15.4% | 13.9% | 6.8% |
| % Teachers with Less than 3 yrs Experience | 24.4% | 26.9% | 15.0% | 8.9% |
| First-year Teachers Assigned a Mentor | 82.5% | 78.6% | 97.5% | 92.4% |
| % First-year Principals | 18 schools (16.4%) | 18 schools (16.4%) | 43 schools (13.7%) | 7 schools (6.4%) |
| Avg. Overall Preparation 1st yr Teacher Response 1-5 scale (percent) | 3.94 (90.8%) | 3.87 (90.1%) | 4.24 (97.8%) | 4.45 (99.2%) |
| Avg. Overall Preparation Principal Response 1-5 scale(percent) | 3.56 (87%) | 3.66 (87%) | 3.94 (93.4%) | 4.30 (97.6%) |
| *% Less than fully Qualified | 15.1% | 16.3% | 13.0% | 5.7% |
| • Elementary | 12.4% | 14.7% | 8.7% | 4.3% |
| • Secondary | 27.9% | 27.7% | 19.8% | 10.5% |
| *% Teaching Out-of-Field | 5.6% | 5.0% | 6.6% | 2.5% |
| • Elementary | 4.2% | 4.2% | 4.1% | 1.4% |
| • Secondary | 12.2% | 10.6% | 10.3% | 6.4% |
| *Effectiveness Index Overall Teacher Impact | 78.5% | 78.8% | 81.2% | 84.7% |
| Student Performance: ELA Proficiency | 24.0% | 24.2% | 54.1% | 68.8% |
| Student Performance: Math Proficiency | 22.0% | 26.5% | 50.7% | 66.0% |

**Fifty-seven schools appear in both the high-minority and high FRPL list; one school in both rural and high FRPL list*

The data and related discussion to follow draw upon the most recent data available. In most cases, the data correspond to the 2013-14 school year. The "Definitions" section below indicates specific exceptions to this rule where applicable, as well as cases in which multiple years were combined.

All Missouri public elementary and secondary schools are included in the analysis, except as follows:

- Area vocational/technical schools and alternative schools are excluded since data are reported at students' regular schools in their home districts.
- Correctional facilities and medical treatment centers are excluded.
- Division of Youth Services sites is excluded.

To assist with interpreting the data contained in the chart, the following definitions and information are offered for each of the measures in the table:

***Poor student**: A student eligible for a free or reduced priced lunch (FRPL). The five percent of schools (110 schools) with the highest rates of FRPL students (91.9 – 100 percent) are referred to as "high-poverty" schools. These are compared with the five percent of schools with the lowest rates of FRPL students (0 – 16.4 percent), referred to as "low-poverty" schools.

***Rural: Remote**: Census-defined rural territory that is more than 25 miles from an urbanized area and also 10 miles from an urban cluster. The "rural: remote" designations used in this plan were extracted from the National Center for Education Statistics' Elementary/Secondary Information System (ELSI) and correspond to the 2011-12 school year (most recent available data). Schools that meet these criteria are referred to as "rural schools".

***Average poverty rate of community**: Estimated percentage of persons in the ZIP code in which the school is physically located who fall below the poverty threshold identified by the U.S. Census Bureau. A person's income and family size determine poverty status. The Census Bureau's methodology uses the 1982 federal poverty threshold, adjusted by the average inflation over the last 12 months leading up to the Census Bureau's interviews. Source: U.S. Census Bureau, 2009-2013 Five-Year American Community Survey.

***Minority:** Non white students, including Hispanic of any race. The five percent of schools (110 schools) with the highest average (98.5 percent) of minority students are referred to as "high-minority" schools.

***Discipline rate**: The number of incidents divided by the number of students (incident is when a student is removed from the regular classroom half (1/2) a day or more).

***Adjusted average salary:** Uses an index developed by the National Center for Education Statistics called the "Comparable Wage Index" (CWI) to adjust teacher

salaries. While not a true cost-of-living adjustment, the basic premise of the CWI is that all types of workers — including teachers — demand higher wages in areas with a higher cost of living; by measuring systematic differences in the cost of labor, the CWI therefore accounts for much of the uncontrollable variation in education expenditures, such as teacher salaries. All salary data are for the 2013-14 school year, but the CWI was most recently updated in 2012.

***Retention rate**: Percent of teachers retained from 2013 to 2014 (one-year retention rate), or from 2011 to 2014 (three-year retention rate). A teacher is considered to be retained if, in 2014, he or she remained employed as a teacher in the same school where he or she was employed in either 2013 (for the one-year analysis) or 2011 (for the three-year analysis).

***Absenteeism**: A teacher is absent if he or she is not in attendance on a day in the regular school year when the teacher would otherwise be expected to teach students in an assigned class. This includes both days taken for sick leave and days taken for personal leave. Personal leave includes voluntary absences for reasons other than sick leave. This does not include administratively approved leave for professional development, field trips or other off-campus activities with students. Absenteeism data were extracted from the U. S. Department of Education's 2011-12 Civil Rights Data Collection (CRDC).

***Inexperienced teacher**: A first- year teacher.

***Less than fully qualified (for the statutory term "unqualified")** – A teacher who meets one or more of the following criteria:

- Is teaching on a provisional certificate
- Is teaching on a temporary authorization certificate
- Is lacking the necessary credential to be considered appropriately certified for at least one teaching assignment

***Out-of-field:** A teacher who is considered inappropriately certified by virtue of teaching a subject that does not correspond to one or more of the teacher's active certifications.

***Effective Index**: An average overall rating of the general collective effectiveness of the teachers in a school. Since Missouri does not mandate a single evaluation model for all LEAs, an index was developed to summarize aggregate teacher effectiveness ratings for each school in the most consistent manner possible. On Screen 18a of Core Data, an annual data collection by the Department that occurs at the end of the school year, LEAs submit the number of teachers evaluated that year within each of the summative

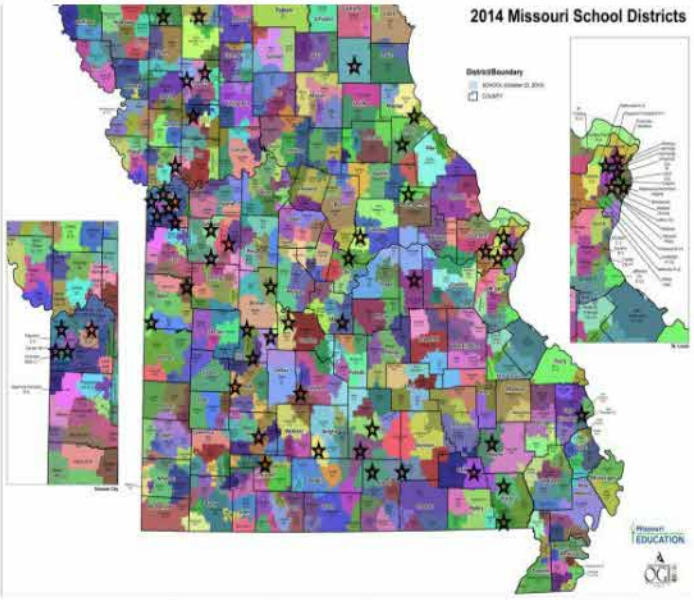
performance levels used in the local evaluation system. The data are reported in order of increasing effectiveness. The number of teachers in each level is assigned a point value equal to the rank position of the level. The total point value of the teachers' collective ratings is then divided by the maximum points possible based on the parameters of the local system. For example, in a five-level system in which 10 teachers were evaluated, the maximum point value possible would be 50 (10 x 5 = 50). If each teacher were rated at the second highest effectiveness level, that collective effectiveness would be worth 40 points (10 x 4 = 40). In this situation, the index would be calculated at .80 (40/50 = .80).

***Excellent educator** – an educator that has a positive impact on student learning.

According to a number of measures contained in the table, these data suggest that the learning experience of students in high-poverty, high-minority and rural schools compared to students in low-poverty schools is quite different. High-poverty, high-minority and rural students appear to learn from less-experienced, unqualified, out-of-field, or less-effective teachers at higher rates than occur in low-poverty schools.

**Section 3: Equity Gaps**

**Focus Groups**




As noted, focus groups were convened across the state to discuss the issue of equity. These groups hosted educators from the 110 high-poverty schools, the 110 high-minority schools and the 315 schools classified as Rural: Remote. Collectively, there are 472 buildings in these three categories. Overall, 34 percent of these buildings participated in the focus groups. The black stars on the map indicate the locations of these schools and demonstrate that input gathered from these educators through the focus groups is representative of all regions of the state.

The topics of discussion included a review of the data as summarized in the data chart. After reviewing the data, the discussion focused on how well the data represented the reality of the challenge of providing high-quality teachers and leaders, as is characteristic of more affluent

schools. The protocol used in the focus group discussions is provided in Appendix C. The general consensus of focus group participants was that, while the data captured some of the real challenges they face in providing an equitable education for their students, they generally felt it didn't necessarily tell the whole story. These discussions illuminated additional gaps and root causes and provided possible strategies. Their comments included the following:

- While the adequacy of the educator pipeline is certainly a concern, participants agreed the issue is more complex. Overall, pipeline adequacy is necessary but insufficient to fully address the issue of equity. For example, relaxing standards and doubling the number of certificates issued by the Department each year would certainly increase the number of candidates in the pipeline. But the increase in the number of candidates would exacerbate the problem of whether or not all teacher candidates would be high-quality teachers. There were several issues of particular concern regarding the quality of teacher candidates:
    - Very few candidates currently demonstrate a deep understanding of urban education. Focus group participants felt that in order to successfully teach students in an urban setting, you need to understand them and be able to relate to them.
        - "They [new teachers] come in trying to change the culture instead of understanding it."
        - "There are certain skills required when teaching children who are very different than yourself."
        - "It's very important that you find a way to build relationships with students in urban schools."
        - "Understand the context first, build relationships next and then you can teach."
    - There is a current need for prospective teacher candidates to have a deeper understanding of how to educate students beyond a superficial level of knowledge. It should include more embedded practice (i.e. working on engagement strategies with students you are trying to engage).
    - In general, focus group participants felt their schools still spent too much time and resources helping new teachers with basic student management strategies and pedagogy.
    - Not all areas of education are considered an area of shortage. Virtually all participants noted having multiple Elementary Education candidates for each position available. The same does not hold true for other areas. Specifically noted was math, science, foreign language, fine arts and practical arts.
- While the overall quality and quantity of teacher candidates in the pipeline is a contributing factor, even more important is the issue of attraction. While increasing the

quantity of quality candidates is a necessary solution, it doesn't fully address the issue of attracting candidates to high need areas, both geographic and content/grade level. Focus group participants generally agreed that people are not interested and generally would not choose to come and teach in their locations. Many of them related experiences of sitting at empty tables at job fairs looking at long lines of prospective teachers in front of the tables of the more affluent school districts. In particular, their comments included:

- "Perception is everything. If you are perceived to be a failing system, people are hesitant to be a part of your school."
- "Teachers want to be successful, and so they choose to go to places where this is likely to happen."
- As mentioned previously, certain content areas and grade levels don't appear to be much of an issue anywhere. But other areas (as noted: math, science, foreign language, fine arts and practical arts) are a challenge particularly for high-poverty, high-minority and rural schools.
- The geographical location presents challenges as well, particularly for younger teachers. The lack of available housing and fewer social opportunities in rural communities were particularly noted.
  - One superintendent joked that he has actually wondered if it would help if he bought a party bus to give new, younger teachers something to do on weekend nights.
  - Another jokingly said, "We get them here and then try to get them married off so they will stay here."

- If pipeline capacity and attraction to certain content /grade level and geographical areas is a challenge, even more so is retention. Focus group participants agreed that getting them there is not as hard as keeping them there. In some instances, the school invests in the teacher to get them additional training and even, in some circumstances, to add additional level certifications so they can be used in more areas.
  - "The problem this creates is that the teacher (now more marketable) can then go down the road and earn anywhere between $5,000 and $10,000 more per year."
- Many participants agreed that the key is building a higher quantity of quality candidates, attracting them to areas of most need and then keeping them there. A critical component is the inclusion of support systems so teachers feel successful in doing what they are doing, where they are doing it.

Throughout these discussions, participants expressed differences in the challenges they face in their communities. This was particularly apparent between high-minority, high-poverty and rural schools. While there were varied causes for the challenges these schools face, the

outcome for students was quite consistent. More specifically, if as a student you are born into or move into a zip code served by a high-minority, high-poverty or rural school in the state, your access to high-quality education is less consistent than that of students in wealthier schools. While that situation occurs for different reasons and therefore will require different strategies, the outcome for the student remains the same.

As mentioned, there was some difference in the types of issues that challenge high-poverty, high-minority and rural schools. However, there was one particular issue that was noted with surprising consistency. In fact, regardless of whether they serve students in a high-poverty, high-minority or rural school, the participants of every focus group unanimously agreed that this one particular factor is critical to the issue of equity. The issue is leadership. One superintendent put it this way: "If I had an effective principal in each of my buildings, I wouldn't have a problem."

**Educational Equity Leadership Conference**

An Educational Equity Conference was hosted in St. Louis by the Midwest Equity Assistance Center. Its purpose was to illuminate the educational equity needs across school districts in the Greater St. Louis area. Participants at the conference included administrators, teachers, parents and students, representatives of higher education, community members, the Department of Education, and other advocates for educational equity.

The conference included a number of general sessions, networking opportunities and a diversity education fair. Feedback from participants was organized around the following general prompts and responses:

- What does educational inequity look like?
  - Inequity stems from a lack of access to opportunities for particular groups of students as compared with other students.
  - An educational workforce with low numbers of diverse teachers and leaders.
  - Educators who are underprepared to work with diverse populations of students.
    - As stated by one conference participant, "All individuals who work in instructing children should have a frank discussion with one another about how they truly feel and think about equity in education versus equality in education."
  - Policies and practices that result in particular populations of students being disproportionately represented in various types of school programs such as special education, extracurricular activities, suspension and expulsion, etc.

- What challenges are you encountering in addressing equity issues?
  - Access to resources and funding to address inequity issues.

- Sustained training in working with diverse students for all educators at every level (central office, building-level leadership, classroom). Training would include cultural competencies, as well as strategies for student-centered learning, implementation, and issues of power, privilege and difference.

- What advice or solutions do you have for overcoming these challenges?
  - Access resources and funding to address inequity issues.
    - One conference participant said, "We must practice and make educating children the most important thing in the building. Next, we must allocate funds to provide resources to these students."
  - Engage in community relations and outreach strategies.
  - Build a positive culture that is student-centered, reflects more professional development for educators, uses a curriculum and/or supplemental materials that reflect diversity, and employs equity audits to determine quality of instruction.

- What are some best practices or strategies for supporting equity efforts?
  - Promote a positive culture sensitive to diversity issues.
    - As one participant said, "We must reach and learn to educate those who are now disenfranchised and quickly becoming the majority."
    - Another participant said, "We should focus more on changing the space rather than creating a new one ... more inclusive."
    - One student in attendance noted that, "their culture is not reflected in their school."
  - Quality instruction supported by a curriculum that addresses diversity.
  - Coordinated efforts to involve parents and community members.
  - Both internal and external collaboration focused on equity issues.
  - Foster positive relationships between educators, students and community members.

- How does leadership contribute to equity efforts?
  - School leaders set the direction and tone of the district and school.
  - School leaders promote an environment conducive to learning.
    - A student at the conference said, "People who should be involved in working on these steps should be teachers and administrators; they have the power to make these [decisions]."
  - School leaders foster and ensure efficient and effective communication.

        - One conference participant said, "Administrators and teachers need to be brave and open enough to talk to students and discuss what [student] needs are."
        - When asked about who should be involved in next steps, a student at the conference said, "Definitely the leaders of our school. We actually have a student-led group that deals with these topics. We luckily have many staff members from our school that are helping us overcome these barriers."
    - School leaders engage in and model positive relationships with administrators, teachers and community members.

- What are the pressing next steps needed for equity efforts?
    - Examine and revise existing policies to ensure (1) they don't disproportionately limit access to quality educational opportunities for any population of students who are attending their school district, and (2) that no one is excluded.
        - Said one participant, "Ask who is likely to benefit from this policy and practice and who is not."
        - A participating student said, "The next steps are to reach out to students that we notice are on the wrong end of equity issues" to make sure that all students feel included in the educational process.
    - Provide sustained and embedded professional development on pedagogy and practices in working with diverse students.
        - One participant said, "Many teachers have to change their [negative] thinking about minority students."
    - Engage in strategies to increase community involvement.
        - One participant noted that there should be "more effective ways to encourage and support teachers in how to communicate with families about student concerns."
        - A student at the conference said, "In my opinion, the students and parents are the most important people to be heard and included in working on equity in the community."
    - Build alliances and partnerships in support of educating diverse students.
        - A student at the conference suggested, "Getting small business owners and parents and community leaders to collaborate would be most effective."
    - Increase awareness and understanding of cultural and community issues.

        - A student attending the conference said, "The next step is understanding the [diverse] children teachers work with. After we do this, we can connect and change the lives of the youth in our community."

- Who needs to be involved in next steps?
    - Put very simply by a large majority of conference participants: "Everybody who is involved in a student's educational process."

Members of the Midwest Equity Assistance Center who convened and facilitated the St. Louis conference recommended the following priorities in addressing issues of educational inequity:

- Developing effective leadership as it is a key factor in a majority of the issues that surfaced during the conference.
- Policies and practices that treat certain populations of students inequitably should be reviewed and revised.
- Improve teacher pedagogy and instruction to more effectively work with diverse students.
- Enhance community involvement around issues of educating diverse students.
- Finally, they noted that the St. Louis conference was the initial conversation. Continued conversations should occur in follow-up conferences in the southeastern and Kansas City regions of the state.

**Section 4: Strategies for Eliminating Equity Gaps**

**Missouri's Theory of Action**

Having used a variety of different measures to complete a comparative analysis between high-poverty, high-minority, rural and low-poverty schools; having engaged in discussions with representatives of multiple professional organizations; and having facilitated dialogue with educators across the state in high-poverty, high-minority and rural schools who face the real challenges of providing equitable educational opportunities for all of their students, the following Theory of Action is established to guide Missouri's Equity Plan:

> When a high-quality, diverse pool of individuals is recruited into the teacher education programs in our state;
>
> And when those individuals are fully prepared and qualified to be successful in any classroom as evidenced by rigorous high-quality content and performance assessments;
>
> And when the quantity of high-quality teacher candidates is adequate to meet the needs of all schools at all grade levels and in all areas of content;

And when those individuals are attracted to teach in all types of educational settings and to work with all types of students, particularly those in high-poverty, high-minority and rural schools in our state;

And when those teachers are supported and developed and provided opportunities to collaborate and guide the learning opportunities of their students under the leadership of effective school administrators;

Then all students in every classroom in Missouri will have access to excellent teachers.

This Theory of Action is the foundation for the gaps, root causes and strategies outlined below.

**Categories of Root Causes**

The comparative analysis of different measures suggests that students in high-minority, high-poverty and rural schools are taught by inexperienced, unqualified, out-of-field and less than effective teachers at a greater rate than those students in more affluent schools. In initial discussions with professional organizations (see the meeting agenda in Appendix A) the following general categories of root causes were offered:

- Environmental causes
    - Working conditions
    - Stress of accountability and testing
    - Poverty/community culture
- Institutional
    - Lack of preparation to teach in challenging conditions
    - Insufficient numbers of qualified candidates in particular content areas and grade levels
    - Placement does not emphasize difficult to staff areas
- Workforce Issues
    - Teacher preference
    - Incentives for teaching in difficult to staff areas

In discussions with stakeholders, the complexity and challenge of identifying root causes emerged. In particular, within these root causes, a number of additional root causes were identified. A very complete understanding of the nature of the problem is critical to developing strategies that will have an impact on the equity issue.

**Root Cause: Imbalance of Teacher Supply and Demand**

Echoing feedback from stakeholders in the field, one potential root cause of inequitable access in Missouri public schools may be that there is not an adequate supply of teachers in the academic disciplines or regions of the state that are most difficult to staff. Since teacher preparation programs are major contributors to Missouri's supply pool — about 76 percent of individuals receiving their first teaching certificates in 2014 were recommended for certification by a Missouri educator preparation program — the health of the teacher preparation pipeline is an area to examine in order to build a more complete understanding of teacher supply and demand.

*Does the Preparation Pipeline Satisfy the Overall Demand for Teachers?*

In the 2014-2015 school year, there were 6,600 teaching positions filled in some way other than retaining last year's teachers. In other words, through a combination of teachers leaving (for any reason) and positions added, schools needed to hire 6,600 teachers in order to achieve the staffing levels that were ultimately reported for the 2014-2015 school year. Ideally, if colleges have been preparing candidates to meet the demand for teachers in these schools, there should have been a healthy supply of recent preparation program completers willing to apply for one of those 6,600 positions.

Across all traditional teacher preparation programs in Missouri, there were roughly 24,000 completers from 2009 through 2014. Many of those completers did get a job as a teacher in a Missouri public school, but many still do not have a teaching job, even those who completed their teacher preparation in 2009 or 2010. See below:

| Completion Year | Total Completers | # First Hired in 2010 | # First Hired in 2011 | # First Hired in 2012 | # First Hired in 2013 | # First Hired in 2014 | # First Hired in 2015 | # Still Not Hired |
|---|---|---|---|---|---|---|---|---|
| 2009 | 3,848 | 1,729 | 330 | 206 | 118 | 79 | 44 | 1,342 |
| 2010 | 3,978 | -- | 1,552 | 482 | 266 | 135 | 81 | 1,462 |
| 2011 | 4,098 | -- | -- | 1,692 | 525 | 253 | 121 | 1,507 |
| 2012 | 3,912 | -- | -- | -- | 1,802 | 486 | 181 | 1,443 |
| 2013 | 3,731 | -- | -- | -- | -- | 1,841 | 378 | 1,512 |
| 2014 | 3,961 | -- | -- | -- | -- | -- | 2,091 | 1,870 |
| Total | 23,528 | 1,729 | 1,882 | 2,380 | 2,711 | 2,794 | 2,896 | 9,136 |

Among the 2009 through 2013 completers still not employed as a public school teacher, any number may have considered applying for one or more of the 6,600 positions that were filled in 2014-2015. In the table above, the highlighted numbers in the "# Still Not Hired" column

delineate these potential applicants. Likewise, any of the 3,961 completers from the class of 2013-2014 may also have considered applying for teaching positions that were filled in 2014-2015. Therefore, a maximum estimate of the supply of potential teachers for school year 2015 *just from recent college graduates* would be the sum of all the highlighted numbers in the table above —11,227 in total.

Since some recent college graduates will choose not to go to work right away — some will ultimately pursue further education, take time off to raise children, etc. — the actual supply is more difficult to estimate. National figures indicate that as many 15 percent of recent college graduates do in fact remove themselves from the workforce for any number of reasons.[2] The percentage who will be employed in a private or parochial school should also be eliminated from consideration as part of the available supply, since the 6,600 positions in question were available specifically at Missouri public schools. Based on a match of completers against the state's Unemployment Insurance wage database, about 10 percent are employed in non-public education. Therefore, a more realistic accounting of the teacher supply that Missouri public schools might be able to draw from should include a downward adjustment to reflect the unavailability of roughly 25 percent of recent college graduates.

By applying this adjustment, it is estimated that about 8,420 recent teacher preparation program graduates would have been both willing — in the sense that they were seeking some kind of employment — and able to apply to one or more of the 6,600 positions that were filled in 2014-2015. The ratio between these two figures is 1.28, meaning that there was one person, plus 28 percent of another person, available for every job opening going into the 2014-2015 school year.[3] Since it was estimated that there would have been more potential job applicants than job openings, it can be said that there was a surplus of teacher supply overall.

In summary, the available data on the teacher workforce suggests that the preparation pipeline easily satisfies the demand for teachers overall.

*Does the Preparation Pipeline Satisfy the Demand for Teachers in Specific Academic Disciplines?*

Replicating the ratio method described in the previous section, individual analyses were performed for a broad cross-section of academic disciplines. Ordered from lowest to highest supply-to-demand ratio, the results are shown in the table below:

[2] For figures, see p. 10 of the Bureau of Labor Statistics' *Monthly Labor Review* for February 2013. http://www.bls.gov/opub/mlr/2013/02/art1full.pdf

[3] In practical terms, this means that for every three to four openings, one qualified applicant was unable to find a teaching job in a Missouri public school.

| Discipline | *Adjusted Available Supply of Potential 2014-2015 Hires | New Hires Demanded for 2014-2015 | Supply/Demand Ratio |
|---|---|---|---|
| Special Education | 547 | 1,482 | 0.37 |
| High School Math | 240 | 451 | 0.53 |
| High School Science | 211 | 353 | 0.60 |
| World Language | 146 | 221 | 0.66 |
| Language Arts | 836 | 1,134 | 0.74 |
| Early Childhood | 937 | 841 | 1.11 |
| Music | 341 | 301 | 1.13 |
| Physical Education | 526 | 446 | 1.18 |
| Elementary Education | 3,394 | 2,301 | 1.48 |

*Adjusted to remove 25 percent of recent completers to better reflect actual availability

Disciplines with a supply/demand ratio less than one could be considered areas of shortage; those with ratios greater than one could be considered areas of surplus. The available data strongly suggest that preparation pipelines were not equally robust across all disciplines. As a whole, the state of Missouri had an ample supply of recent college graduates from which schools in need of early childhood, music, physical education, or elementary education teachers could have drawn. Human Resource Directors likely had some difficulty recruiting special education, high school math and science, world language, and language arts teachers—there simply were not enough recent graduates to go around.

A combination of working-conditions data and feedback from school leaders may confirm that there were some kinds of schools better equipped to attract candidates than others. Perhaps some were able to offer better starting salaries, or had a safer and more nurturing climate. From statewide data alone, it is impossible to pinpoint these kinds of inequities.

One promising strategy for shining a light on inequities is to explore regional trends. There may be some regions of the state, particularly the poorer or more rural areas that are a focus of this equity plan, that face challenges which could be reduced by implementing solutions tailored to the local context. If all students are to have a quality education, all students must have access to effective teachers no matter where they attend school, and all students must have access to the kind of education that will prepare them for college and careers.

In consideration of these principles, the existence of inequities in science, technology, engineering, and mathematics (STEM) education may be particularly devastating. According to Laura Loyacano, Program Director of KC STEM Alliance, a 15 percent growth in the number of new STEM jobs in the next 10 years, especially in engineering, is projected (Missouri Department of Elementary and Secondary Education Press Release, May 23, 2014). Figures like these point to the importance of high school science education as an ingredient for college and career readiness. Students in regions lacking access to qualified high school science teachers are at a clear disadvantage, with reduced exposure to rigorous college preparatory science

courses—about 65 percent of districts with the highest rates of less-than-fully-qualified high school science teachers have no such course offerings whatsoever for their high school students, while 40 percent of districts with no unqualified high school science teachers lack such offerings—and diminished prospects for gainful employment in STEM fields.

As the data provided above have already illuminated, there is evidence that some STEM disciplines do have teacher shortages. If the data could further show that these shortages are more severe in areas already ravaged by poverty or other factors associated with worse education outcomes, it would give policymakers critical insights when formulating strategies to improve equitable access. Furthermore, since teacher preparation pipelines take time to mold—most students require a minimum of four years of college in order to earn a baccalaureate degree in education—the ability to project teacher shortages would serve as a strategy in its own right, potentially providing more information than historical data alone could provide, to improve the chances that other equity strategies will achieve their maximum intended effects. In Missouri, this strategy is already under development, and will be described next.

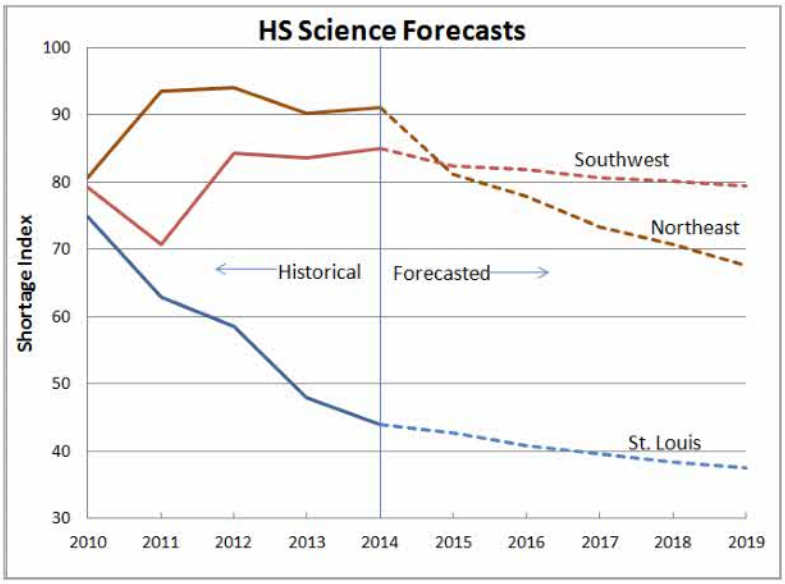
**Shortage Predictor Model**

In Spring 2014, the Missouri Department of Elementary and Secondary Education (Department), in collaboration with the REL Central Regional Educational Laboratory at Marzano Research Laboratory, the Central Comprehensive Center (C3), and the Center on Great Teachers and Leaders at the American Institutes for Research, completed Phase One of an ambitious, multi-year project to develop and implement a Shortage Predictor Model (SPM). The SPM is designed to predict educator shortages and surpluses by region and certification area. Envisioned as a source of data to inform strategies to recruit and retain educators in difficult-to-staff content areas and grade levels, the SPM has the potential to assist policymakers in addressing unequal access to effective teachers.

The 2014 iteration of the SPM utilized data collected from public school districts and charter LEAs over a period of five years or more in order to create a "shortage index," or SI. The SI reflects (1) the percentage of teachers who are less than fully qualified; and (2) perceptual ratings of teacher supply on a five-point scale, where "1" denotes "Considerable Surplus" and "5" denotes "Considerable Shortage." By combining both of these indicators instead of relying on one or the other singly, the SI is intended to provide a balanced measure of teacher supply. The SI ranges from 0 to 100, with 100 indicating the most severe shortages.

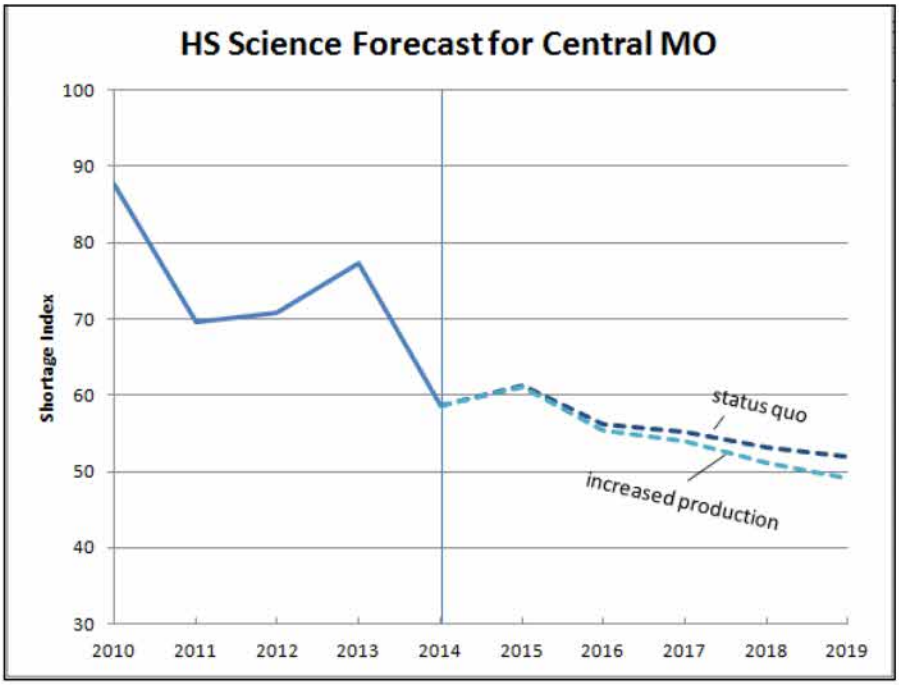
The 2014 SPM used statistical methods to estimate SI for the next five years by region and certification area. These estimates, or "forecasts," were based on historical SI data, enrollments per teacher, and supply of new teachers from professional education programs. Each of these factors was found to be predictive of future shortages when used in tandem with one another.

The initial SPM forecasted an overall decline in teacher shortages over the next five years. However, due to differences in local conditions, some regions of the state are likely to have access to a more robust teacher supply than others. Consider high school science:




For ease of reading, just three regions are shown—Southwest Missouri, Northeast Missouri and St. Louis. While there is some uncertainty in predicting the future teacher supply, the available data suggest that all three regions had similar challenges in staffing qualified high school science teachers in 2010. However, by 2014, a wide inequity emerged, with drastic improvements in St. Louis and continued challenges in the other two regions. By 2019, yet another inequity has been forecasted to emerge, with the Southwest region experiencing little relief while the other two regions continue to see steady progress in attracting qualified high school science teachers.

While the first forecasts produced in 2014 did point to future inequities in certain areas, those forecasts assumed that there will not be anything to "shake up" the status quo. The purpose of developing an equity plan, of course, is in part to alter the course of future events for the betterment of students. **The SPM's true value lies in the promise it may hold for testing out strategies to reduce inequities**. The graphic to the right illustrates the estimated impact, based on initial projections that a single producer of



high school science teachers could have if that school simply added four more college graduates trained in high school science education to Missouri's certification rolls each year over the next five years. By 2019, the model estimated that the SI could improve by 5.5 percent in Central Missouri just through this modest commitment by a single Missouri institution to produce a handful more science teachers each year. If other colleges of education joined this initiative, the cumulative impact on teacher supply could be considerable.

The high school science example merely scratches the surface. Based on last year's projections, areas such as world language, English language learner education, and high school mathematics would also be expected to remain difficult to staff with qualified teachers moving forward, particularly in specific regions of the state. The statistical methods used to generate regional data could also be used to generate forecasts for "poverty centers" as compared with "wealth centers"—grouping data from all areas of the state that are at the extremes on measures of economic disadvantage.

The SPM is just in the beginning stages of development. In Spring 2015, the Department will update its initial projections based on the latest available data. In doing so, there will be an opportunity to more explicitly model the challenges and strategies identified in this equity plan. Simulations will be carried out to show how shoring up the educator pipeline and retaining effective teachers reduces shortages and improves learning outcomes for disadvantaged students. In developing its analysis plan for 2015, the Department will thoroughly vet the SPM both internally and with nationally recognized experts, including thought partners at REL Central, GTL Center, and C3, then examine how well the new forecasts align with experiences in the field. By Fall 2015, a plan for sharing SPM data with external stakeholders will be ready for implementation.

| Milestone | Target Date / Date Completed |
|---|---|
| Department, C3, GTL Center, and REL Central form development team partnership. | Spring 2013 |
| Regular conference calls with development team partners begin. Two workgroups formed, one focusing on developing a communication plan and the other focused on developing the forecast model. | Fall 2013 |
| Development team meets in St. Louis, Missouri, to review analysis plan, refine theory of action, and plan next steps. | January 2014 |
| Began analysis of historical supply and demand data. | February 2014 |
| Compiled data in format suitable to statistical modeling. | Spring 2014 |
| Completed initial "model run," generating preliminary forecasts through 2019 by certification area and region of the state. | May 2014 |
| Completed technical manual documenting methods and initial results. | June 2014 |

| | |
|---|---|
| Debriefed internally about initial forecasts; developed plan for conducting further diagnostic tests of model technical quality, exploring alternative methods and refinements, and for improving quality of input data sources. | Summer 2014 |
| Affirmed plans to continue development team partnership into 2015. | Fall 2014 |
| Revised communication plan. | September 2014 |
| State Board of Education approves Top 10 by 20 Plan, including goals for continued SPM development through 2015; connection between SPM and Missouri's equity plan established. | October 2014 |
| Continued regular conference calls with development team; role of SPM in state equity plan becomes a team-wide focus. Internal vetting of SPM continues. | Winter 2015 |
| Data available to test accuracy of initial SPM forecasts; preliminary analysis plan for 2015 developed. | Spring 2015 |
| Finalize analysis plan for 2015 version of SPM. | April 2015 |
| Collect "pipeline" data from educator preparation providers to include in 2015 version of SPM. | May 2015 |
| Generate updated forecasts using revised SPM (i.e., 2015 version); update technical manuals as necessary. | June 2015 |
| Debrief internally about updated forecasts; launch communication plan; begin sharing SPM data with educator preparation programs | Summer 2015 |
| Develop plans for continued work on SPM through 2016 | Fall 2015 |

**Categories of Potential Strategies**

In continued discussions and reflections with professional organizations (See Appendix A) on possible ways to address the inequity that exists in the educational experience for students in Missouri related to the causes listed above, the following categories of strategies were explored:

- Environmental causes
    - Collect data on working conditions
    - Increase community support
        - Wrap around services
    - Establish professional learning communities
    - Improve conditions in difficult to staff settings
        - Smaller class size
        - Increased opportunities for professional collaboration

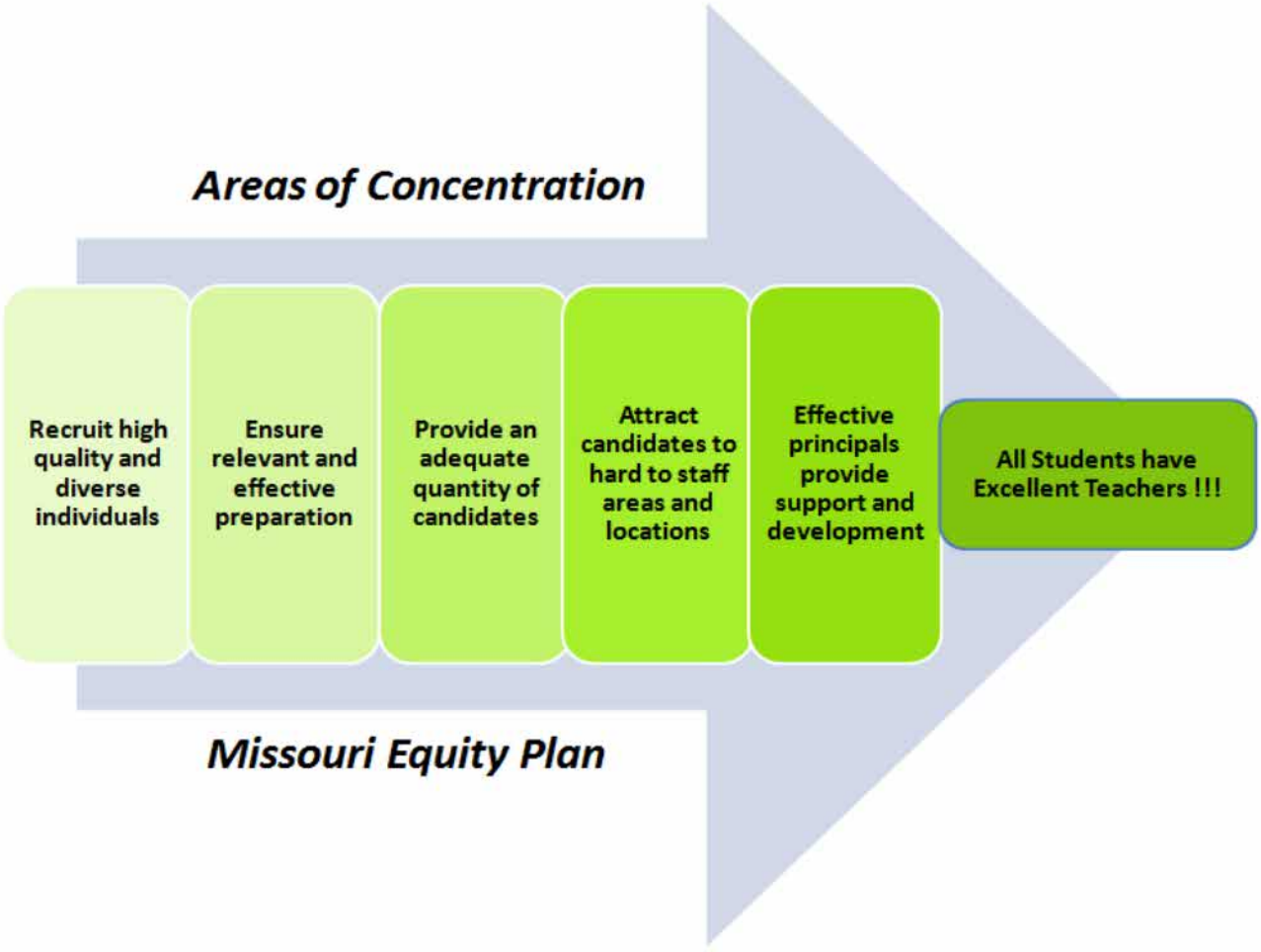
        - More opportunities for teacher leadership
        - Expand support for educators
            - Mentoring
                - Pay for cooperating teachers
            - Increased opportunities for professional collaboration
            - Ways to improve teaching and leadership skills
                - Growth-based evaluation system
                - Professional learning tied to educator needs
        - Incentives to teach in difficult to staff settings
            - Salary increases
                - Both starting salary and salary expectations
                - Support with housing or compensation
            - Incentive programs for retention in areas of inequity
- Institutional
    - Develop a template for training teachers to succeed in challenging settings
    - Increase the pipeline through particular higher education programs and urban centers
    - Fund prospective teachers to enroll in teacher preparation
    - Expand year-long internship program
    - Develop loan forgiveness programs
- Workforce Issues
    - Incentives to teach in difficult to staff settings
        - Significant salary increases
            - Both starting salary and salary expectations
            - Support with housing or compensation
        - Incentive programs for retention in areas of inequity

- Encourage "grow your own" programs
- Explore the use of technology for increasing distance learning

These general categories of strategies were captured during a "brainstorming" session with the state's professional organizations. This information, taken with suggested strategies from the focus groups, is offered in the following section.

**Strategies for Eliminating Equity Gaps**

Based on conversations with professional organizations on categories of potential strategies and the extensive input from practitioners across the state on the real challenges they face in providing equitable education to all students, the following Areas of Concentration aligned to the state's Theory of Action have been established as the key components of the Equity Plan:



## Recruiting high-quality and diverse individuals

### Gaps

Producing high-quality teachers begins with recruiting high-quality individuals. These individuals are more likely to successfully complete the requirements of their educator preparation programs, including passing the appropriate content and performance assessments, and become fully certified.

Less-than-fully qualified teachers are those teaching on a provisional certificate, teaching on a temporary certificate, or lacking the necessary credential to be considered appropriately certified for at least one teaching assignment. Less than fully qualified teachers are particularly prevalent at the secondary level and in high-poverty and high-minority schools. The gap between the percentage of less than fully qualified teachers in the wealthiest schools and the rural schools is 9.3 percent and as much as 17.2 to 17.4 percent between the wealthiest and the poorest or highest minority schools.

In addition to high-quality candidates, Missouri schools are in need of more diverse candidates. In all schools, teachers of diversity enrich the culture. Minority students are those students that are non-white and Hispanic of any race. In high-minority schools where the average student population is 98.5 percent minority, the teachers in those schools are only 52 percent minority. The same situation is also found in high-poverty schools where the percentage of minority students averages 86.4 percent and yet only 41.9 percent of the teachers are minority.

Even in more affluent schools, less than five percent of teachers are minority teachers. This is slightly less than the overall statewide average, which is about seven percent. Input gathered through focus groups of people working in high-poverty, high-minority and rural schools indicated that more diverse teacher candidates would create a better overall teacher workforce in that it better matches the diverse student population found in many of Missouri's schools.

### Root Cause

One of the primary reasons that more high-quality and diverse individuals are not recruited into teacher education programs is that there is no comprehensive effort underway at this time. While some educator preparation programs and professional associations engage in general recruitment strategies, there is no comprehensive effort and certainly none including the Department of Education.

**Strategies**

A comprehensive recruitment campaign with a focus on increasing the quality and diversity of individuals entering the teacher education pipeline would help create a higher quality, more diverse teacher workforce.

a. Educator Preparation Programs and the Department of Elementary and Secondary Education will collaboratively develop and implement an effective process for recruiting high-quality individuals as future teachers. This will include an assessment to ensure these individuals possess an adequate level of basic content knowledge.

    - Recruitment of individuals into teacher education programs will also include an entry level screening tool. This will be an assessment of work style preferences used to support the development of effective educator work habits.

b. Educator Preparation Programs and the Department of Elementary and Secondary Education will collaboratively develop and implement a statewide recruiting strategy for diverse individuals to enter the teacher education pipeline. This would include a systematic, comprehensive campaign to attract high school students from all types of schools, both poor and rural, to consider a profession in teaching.

**Area of Concentration #1: Recruit High-quality, Diverse Candidates**

| Equity Strategy Outcome | Action Steps | Target Date |
|---|---|---|
| a. High-quality individuals enter the teacher education pipeline | Convene committee to review recruiting strategies | 10-1-15 |
| | Produce recruitment materials | 12-1-15 |
| | Establish and require a work styles inventory | ✓ |
| | Establish and require an entry assessment | ✓ |
| b. Diverse individuals enter the teacher education pipeline | Convene committee to review recruiting strategies | 10-1-15 |
| | Produce recruitment materials | 12-1-15 |
| | Engage in a recruitment campaign | Spring 2016 |

## Ensure Relevant and Effective Preparation

### Gaps

Having a pool of high-quality and diverse individuals recruited into the teaching pipeline, it is next necessary to ensure that these individuals receive high-quality preparation. More than 40 institutions in the state offer programs in teacher education. The quality of these programs is paramount to ensuring that high-quality teacher candidates emerge at the end of the experience. Individuals who have experienced relevant and effective preparation to be a teacher are more likely to successfully complete the requirements of their educator preparation programs, including passing the appropriate content and performance assessments, and to become fully certified.

Less than fully qualified teachers are those teaching on a provisional certificate, teaching on a temporary certificate, or lacking the necessary credential to be considered appropriately certified for at least one teaching assignment. Less-than-fully qualified teachers are particularly prevalent at the secondary level in high-poverty and high-minority schools. The gap between the percentage of less than fully qualified teachers in the low-poverty schools and the rural schools is 9.3 percent and as much as 17.2 to 17.4 percent between the low-poverty schools and the high-poverty or high-minority schools.

One measure of program quality is the success of teachers in their first year of teaching. First-year teachers are surveyed to determine how well they felt they were prepared by their teacher education program. They rate their program on a 1-5 scale, with ratings 3-5 representing preparation that was fair, good, or very good by the teacher education program. Teachers in high-poverty schools gave their programs an average of a 3.87 rating (with 90.1 percent rating their program "Fair" or better). In the state's low-poverty schools, teachers gave their preparation program an average of a 4.45 rating (with 99.2 percent rating their program "Fair" or better) This represents about a nine percent gap between high-poverty and low-poverty schools.

Principals of first-year teachers are surveyed to determine if they felt their first-year teachers were adequately prepared. The principals' ratings of the preparation of their first-year teachers were on average between .15 (1.6%) to .30 (4.4%) points lower than the ratings the first-year teachers gave their own preparation. In low-poverty schools, principals rated the preparation of their first-year teachers at 4.30 (97.6 percent); principals of first-year teachers in rural schools gave a rating of 3.94 (93.4 percent); principals of first-year teachers in high-poverty schools rated their preparation at 3.66 (87 percent); and principals of first-year teachers in high-minority schools rated their preparation at 3.56 (87 percent). Overall, the ratings given by principals of high-minority and high-poverty schools was more than 10 percent lower than

those of principals in the low-poverty schools. This suggests that teacher education programs are doing a better job of preparing teachers to be successful in low-poverty schools than they are in preparing them to be successful in high-poverty and high-minority schools.

In focus group discussions, practitioners from high-poverty, high-minority and rural schools indicated a similar disparity in preparation. A frequent comment given was that too many teacher education graduates are not ready to be successful in the classroom. Particularly highlighted was a need for teacher education graduates to be ready to succeed in urban education.

**Root Cause**

Beginning teachers who lack the necessary content knowledge and pedagogical skills to be successful are an indication that educator preparation can be improved. In addition, too many teacher education graduates are unfamiliar with the particular challenges of urban education and are unsuccessful when placed in those settings.

**Strategies**

A comprehensive effort to ensure all teacher candidates are receiving highly relevant and effective preparation would benefit all Missouri students and, in particular, those in high-poverty and high-minority schools.

a. Develop a process to ensure that teacher candidates possess the necessary content knowledge to be successful as a teacher. This would require that the approval process for teacher education programs be based in part on an accurate assessment of whether program completers possess the necessary content knowledge for their area of certification.

b. Develop a process to ensure teacher candidates possess the necessary pedagogical skills to be successful as a teacher. This would require that the approval process for teacher education programs be based in part on an accurate assessment of whether teacher candidates possess necessary pedagogical skills to be successful teachers.

c. Within educator preparation, focus specifically on preparing teacher candidates for urban education with a particular focus on working with diverse students. Also consider ways to prepare teacher candidates who can communicate with students and their parents/guardians who do not speak English. Include a wide variety of field experiences to expose candidates to the learning of diverse students. This will specifically assist teacher candidates in being successful with student populations in high-poverty and high-minority schools.

d. The Missouri Standards for the Preparation of Educators (MoSPE) outline the expectations for programs preparing educators for certification in Missouri. In order to ensure that programs are meeting these expectations, MoSPE also has established an Annual Performance Report for Educator Preparation Programs (APR-EPP) to measure the performance of educator preparation programs (EPPs) in valid, accurate and meaningful ways. Information provided through these reports will facilitate identification of programs in need of improvement so they can receive appropriate support and interventions. Likewise, the reports will assist in recognizing high-performing programs as models of excellence based on the same set of indicators. The APR-EPP is based on the MoSPE performance standards and provides a mechanism to review and approve EPPs at the certification program level.

**Area of Concentration #2: Ensure Relevant and Effective Preparation**

| Equity Strategy Outcome | Action Steps | Target Date |
|---|---|---|
| a. Teacher candidates have content knowledge | Establish new content assessments | ✓ |
| | Adjust qualifying score based on impact data | 8-1-15 |
| b. Teacher candidates have pedagogy skills | Establish a performance assessment | 9-1-15 |
| | Review performance assessment impact data | 6-1-16 |
| | Set qualifying score for a performance assessment | 8-1-16 |
| c. Teacher candidates understand urban education | Convene committee to determine content | 10-1-15 |
| | Prepare content modules for distribution | 12-1-15 |
| | Includes a suggestion of a variety of field experiences | 12-1-15 |
| | Distribute to preparation programs | Spring 2016 |
| d. Preparation programs continuously improve | Establish Annual Performance Report for prep programs | ✓ |
| | Use APR process to assess program quality | 2-1-16 |
| | Use intervention process for program improvement | 2-2-17 |

**Provide an Adequate Quantity of Qualified Candidates**

**Gaps**

There are certain areas of certification (i.e. elementary education) for which there appears to be an adequate supply of candidates. Other areas of certification are considered shortage areas for a large number of schools across the state. In situations where schools do not have an adequate supply of teachers for their content areas, teachers who are less than fully qualified are often used. This poses particular challenges for high-poverty, high-minority and rural schools. Students in these schools, in most need of intensive educational experiences and opportunities, experience less than qualified teachers at higher rates.

Less than fully qualified teachers are those teaching on a provisional certificate, teaching on a temporary certificate, or lacking the necessary credential to be considered appropriately certified for at least one teaching assignment. Less than fully qualified teachers are particularly prevalent at the secondary level in high-poverty and high-minority schools. The gap between the percentage of less than fully qualified teachers in low-poverty schools and the rural schools is 9.3 percent and as much as 17.2 to 17.4 percent between the low-poverty schools and the high-poverty or high-minority schools.

In addition to using unqualified teachers, schools often need teachers to provide instruction in a subject that does not correspond to one or more of their active certification areas. Out-of-field teachers are considered to be a subset of the less than fully qualified group, because teaching out-of-field is one way a teacher can be less than fully qualified. Comparison data in this area are similar to that of less than fully qualified teachers. The percentage of those teaching out-of-field at the elementary level is relatively the same at 4.1 to 4.2 percent in high-poverty, high-minority and rural schools. This is slightly over 2.5 percent more than in low-poverty schools. However, at the secondary level the gap is much greater. In high-poverty and rural schools, between 10.3 and 10.6 percent of teachers are instructing out-of-field. This is about four percent more than secondary teachers in low-poverty schools. In high-minority schools, 12.2 percent of teachers are instructing out-of-field, which is 5.8 percent more than secondary teachers in low-poverty schools.

**Root Cause**

A lack of accurate data about the disciplines and regions in the state where shortages are likely to occur contributes to the use of less than fully qualified teachers. In addition to a lack of accurate data, the data are not available far enough in advance to act to alleviate the shortage.

**Strategies**

a. Use tools like the Shortage Predictor Model (SPM) to predict more accurately what types of shortages will occur and in what regions they will be most pronounced.

b. Educator Preparation Programs and the Department of Elementary and Secondary Education will collaboratively use this data to develop strategies targeted at ensuring an adequate supply of teacher candidates is available in these areas.

**Area of Concentration #3: Provide an Adequate Quantity of Qualified Candidates**

| Equity Strategy Outcome | Action Steps | Target Date |
|---|---|---|
| a. Content & geographic areas of need are identified | Create tools to determine shortage | 8-1-15 |
| | Determine shortage areas by content | 8-1-15 |
| | Determine shortage areas by region | 8-1-15 |
| b. Strategies address areas of highest need | Convene regional recruiting committee | 11-1-15 |
| | Use data to target area needs | 12-1-15 |
| | Establish recruitment campaign | 2-1-16 |

**Attract Candidates to Hard-To-Staff Areas and Locations**

**Gaps**

Attracting teacher candidates to areas they might not necessarily choose themselves creates challenges for schools, particularly those that are high-poverty, high-minority and rural.

In addition to using unqualified teachers, schools often need teachers to provide instruction in a subject that does not correspond to one of more of their active certification areas. Out-of-field teachers are considered to be a subset of the less than fully qualified group, because teaching out-of-field is one way that a teacher can be less than fully qualified. Comparison data in this area are similar to that of less-than-fully qualified teachers. The percentage of those teaching out-of-field at the elementary level is relatively the same at 4.1 to 4.2 percent in high-poverty, high-minority and rural schools. This is slightly over 2.5 percent more than in low-poverty schools. However, at the secondary level the gap is much greater. In high-poverty and rural schools, between 10.3 and 10.6 percent of teachers are instructing of out-of-field. This is about 4 percent more than secondary teachers in low-poverty

schools. In high-minority schools, 12.2 percent of teachers are instructing out-of-field, which is 5.8 percent more than secondary teachers in low-poverty schools.

Accurate information about what and where the needs are is crucial to any strategy to attract teachers where they are most needed, but by itself it is insufficient. It is also necessary to convince these prospective teachers to be a part of the strategy for addressing the need.

**Root Cause**

Communities that are very rural offer few options outside of the school (i.e. housing, social events, etc). High-poverty and high-minority schools are sometimes located in areas that are perceived as unsafe or with student populations that a prospective teacher might not feel they will be successful teaching. When teachers are not attracted to schools in these locations, schools often must attempt to educate students with teachers who are unqualified or are needed to teach in areas for which they are not certified.

**Strategies**

a. Development and implementation of strategies that provide incentives as a way to attract candidates. This might require the use of funds to offer incentives to potential candidates. One example is to develop loan forgiveness strategies particularly for candidates serving in poor and rural schools.

b. Engage a campaign to utilize available incentives to attract available candidates to hard to staff locations, content areas and grade levels

**Area of Concentration #4: Attract Candidates to Hard-To-Staff Areas and Locations**

| Equity Strategy Outcome | Action Steps | Target Date |
|---|---|---|
| a. Incentives are identified | Convene regional committees to study possible incentives | 10-1-15 |
| | Match incentives to shortage areas | 11-1-15 |
| b. Incentives attract candidates | Create campaign to promote incentives | 2-1-15 |
| | Engage campaign | Spring 2016 |

**Ensure Teachers are Supported and Developed by Effective Principals**

**Gaps**

Retaining teachers requires a system of support and development to enhance the quality of the teaching experience. This allows a teacher to feel successful in areas of strength and to experience a systematic process for continuous improvement. When surveyed, many teachers maintain that the critical catalyst for this type of culture is the school leader. One measure of a positive school culture is the overall discipline rate, which is the number of incidents divided by the number of students (incident is when a student is removed from the regular classroom half (1/2) a day or more).

Overall, there was very little difference in discipline incident rates between rural and low-poverty schools; just less than two percent difference between high-poverty and low-poverty schools; and a three percent difference between high-minority and low-poverty schools. When breaking that down further and looking at only elementary schools, there is just over a 2 percent difference between low-poverty and high-minority schools, and less between low-poverty and high-poverty or rural schools. However, when looking only at secondary schools, there was a much bigger gap. There was a more than three percent difference between low-poverty secondary schools and high-poverty secondary schools and a nearly seven percent difference between high-minority secondary schools and low-poverty secondary schools.

A positive school culture improves retention rates. On average, 85.5 percent of teachers in low-poverty schools are retained from one year to the next as compared with 81.2 percent in the rural schools, 69.2 percent in high-minority schools, and 68.9 percent of teachers in high-poverty schools. In high-minority and high-poverty schools, that is a gap in teacher retention of more than 16 percent. The gap expands even further when looking at retention over three years. Between low-poverty schools and rural schools, there is an 8.4 percent gap. The gap in retention rates is more than 23 percent between low-poverty schools and either high-poverty or high-minority schools.

A lower retention rate means an ongoing need to hire more teachers, and many of those are new teachers with much less experience. The teachers in high-poverty, high-minority and rural schools have less experience than teachers in the low-poverty schools. On average, teachers in low-poverty schools have 13.72 years of experience; teachers in the rural schools have 12.1 years of experience; teachers in high-minority schools have 10.7 years of experience; and teachers in high-poverty schools have approximately 9.97 years of experience. This means that students in high-poverty schools have teachers with 3.75 fewer years of experience than students in low-poverty schools.

The percentage of first-year teachers in high-poverty, high-minority and rural schools is much greater than in low-poverty schools. In schools with high numbers of minority students, 13 percent of teachers are first-year teachers. In rural schools, 13.9 percent of teachers are first-year teachers. In schools with high-poverty, 15.4% of the teachers are in their first year. In low-poverty schools, only 6.8 percent of the teachers are first-year teachers. This shows a gap of more than eight percent of first-year teachers between high-poverty and low-poverty schools.

Not only are there more first-year teachers in high-poverty and high-minority schools, but they receive less mentor support. There are fewer first-year teachers in low-poverty schools and only 7.3 percent of them are not assigned a mentor. Remarkably and encouragingly, while there are a higher percentage of first-year teachers in rural schools than in low-poverty schools, only 2.5 percent of them are not assigned a mentor – more than five percent lower than in low-poverty schools. However, in high-minority schools, 17.5 percent of first-year teachers do not receive a mentor, which is more than twice that of low-poverty schools. In high-poverty schools, 21.4 percent of new teachers do not receive a mentor, which is triple that of low-poverty schools. In other words, one in five new teachers in high-poverty schools receives no mentor support.

Another measure possibly related to school culture is how often teachers are absent. Schools with less positive culture tend to have higher rates of teacher absenteeism. A teacher is absent if he or she is not in attendance on a day in the regular school year when the teacher would otherwise be expected to teach students in an assigned class. This includes both days taken for sick leave and days taken for personal leave. Personal leave includes voluntary absences for reasons other than sick leave. This does not include administratively approved leave for professional development, field trips, or other off-campus activities with students. In high-poverty schools, 30.2 percent of the teachers are absent 10 days or more; in high-minority schools, 32.9 percent of the teachers are absent 10 days or more; in low-poverty schools, 31.5 percent of the teachers are absent 10 days or more. In contrast, only 17.5 percent teachers in rural schools are absent 10 days or more. There is a gap of more than 15 percent in teacher absenteeism between the rural schools and the high-minority schools.

An effective school leader building a positive school culture is particularly important for high-poverty and high-minority schools. These schools must have a system to develop the capacity of all educators by improving and increasing their effectiveness in skills necessary for high levels of student learning. This is founded on a belief that all educators can improve their skills and that this is a necessary factor for improving student learning.

**Root Cause**

Teaching is a high-intensity occupation. There are many factors and areas of stress with which teachers must contend as a part of their duties. Significant support and development is

necessary to build necessary teacher capacity. In addition, governance issues are sometimes a reason that ongoing support and development are not available. Beyond support and development, not enough opportunities exist to highlight exemplary practice that can be replicated in other school settings.

**Strategies**

a. Provide direction and support to high-poverty and high-minority schools in developing a comprehensive process for inducting and socializing new hires into the broader school system. This induction process would provide set structures and processes to ensure an adequate level of support.

b. Ensure high-poverty, high minority and rural schools implement evaluation systems that are founded on a theory of action based on growth and improvement. Evaluation systems that do this are built on current research on the importance of a growth mindset and use of student growth measures. This is accomplished by ensuring there is intentional and deliberate alignment of the local evaluation process, particularly in high-poverty, high-minority and rural schools, to the Essential Principles of Effective Evaluation. Provide guidance and support to the leadership and governance so they ensure a process of effective evaluation across the system.

c. Assist the governance structure of high-poverty, high-minority and rural schools in developing policies for the efficient and effective education of all students. Include a review and revision of policies to ensure none result in populations of students being disproportionately represented in various school programs (i.e. special education, suspension, expulsion, extracurricular activities, etc.). Also, ensure any policies related to student placement emphasize that struggling students be taught by the best teachers.

d. Provide direction and support on how professional learning opportunities can address the areas of need identified through the evaluation process. The evaluation process should identify the needs of the teachers and a strategy is developed and implemented for providing professional development to address these needs.

e. Provide expanded opportunities to enhance skills related to quality instruction. Teacher leaders play an important role in the most critical factor in improving student learning: instruction. When successful teachers reach out and share excellent instructional practice, all students learn at higher levels

f. Provide direction and support to build teacher leadership opportunities. Teacher leadership can have a significant impact on student learning, teacher retention, school culture, school improvement efforts, and education policy creation. This type

of impact can address many areas of education inequity. Practicing teachers can play a vital role in addressing educational inequities in schools.

g. Develop teacher exit surveys to be made available for all district use and in particular for teachers exiting high-minority, high-poverty and rural schools to determine causes for teachers leaving

h. As a support structure for schools, engage community partners to assist in developing strategies to address the challenges urban/diverse students face.

i. The Department will utilize an intentional process for recognizing excellence and supporting growth for educators and students. It includes a structure and protocol for identifying and recognizing exemplary performance.

**Area of Concentration #5: Ensure Teachers are Supported and Developed**

| Equity Strategy Outcome | Action Steps | Target Date |
|---|---|---|
| a. Induction supports new teachers | Revise mentor standards | 1-1-16 |
| | Publicize mentor standards | 3-1-16 |
| | Support school improvement in induction using standards | 6-1-16 |
| b. Evaluation systems promote growth and improvement | Gather data on alignment to Essential Principles | 7-1-16 |
| | Target schools with misalignment | 8-1-16 |
| | Provide support to increase alignment | 9-1-16 |
| c. Governance of poor and rural schools supports learning | Partner with Board associations to discuss training needs | 10-1-16 |
| | Refine and/or design training needed | 12-1-16 |
| | Provide training to boards of poor and rural schools | Spring 2016 |
| d. Professional learning addresses needs of teachers | Support districts to use data to identify areas of need | 8-1-15 |
| | Use growth plans to target areas of need | 5-1-16 |
| e. Training opportunities promote quality instruction | Host a Teacher Academy to focus on teacher training | 9-1-15 |
| | Establish strategies to improve instruction | 10-1-15 |
| | Highlight teacher leadership and improvement | 5-1-16 |

| | | |
|---|---|---|
| f. Teacher leadership opportunities are available | Partner with teacher unions to discuss teacher leadership | 10-1-15 |
| | Develop strategies highlighting teacher leadership | 3-1-16 |
| g. Teacher Exit Surveys | Establish teacher exit surveys | 1-15-16 |
| | Specifically distribute to high-minority, poverty, rural schools | 3-1-16 |
| h. Community support | Convene community partners to address student challenges | 3-1-16 |
| | Determine areas of support for teachers of these students | 6-1-16 |
| i. Excellent educators are recognized and celebrated | Establish strategies to recognize excellent educators | 8-1-15 |
| | Ensure poor and rural schools are highlighted | 8-1-15 |
| | Engage campaign | Spring 2016 |

**Effective School Leaders**

**Gaps**

Every root cause involving teachers in some way is influenced as well by school leadership. It is not surprising, then, that the single, consistent and unanimous feedback received through the focus groups was that a system to develop and improve leaders must be included.

Effective school leaders must be developed and supported if they are to have the necessary skills in supporting and developing their teachers. In addition, principal retention, particularly in high-poverty, high-minority and rural schools, is an important part of building and maintaining a culture conducive to student learning.

More affluent schools had a relatively low percentage of first-year principals (seven of the 110 schools – 6.4 percent) as compared with the rural schools (43 of the 315 schools – 13.7 percent). Both high-poverty and high-minority schools had a much higher rate of first-year principals (18 of the 110 schools – 16.4 percent). This means that first-year principals are leading 10 percent more high-poverty and high-minority schools than low-poverty schools.

One measure of a positive school culture, which is established by effective principals, is the overall discipline rate. This is the number of incidents divided by the number of students (incident is when a student is removed from the regular classroom half (1/2) a day or more).

Overall, there was very little difference in discipline incident rates between rural and low-poverty schools; just less than two percent difference between high-poverty and low-poverty schools; and a three percent difference between high-minority and low-poverty schools. When

breaking that down further and looking at only elementary schools, there is just over a 2 percent difference between low-poverty and high-minority schools, and less between low-poverty and high-poverty or rural schools. However, when looking only at secondary schools, there was a much bigger gap. There was a more than three percent difference between low-poverty secondary schools and high-poverty secondary schools and a nearly seven percent difference between high-minority secondary schools and low-poverty secondary schools.

The Leadership Development System is designed to support and develop leaders through the preparation phase, into and through induction, through continued refinement, and resulting in a transformational principal. The system provides a network of support throughout the leader's career. A unique feature is that the system is being created and supported by all major stakeholders in the state (i.e. the Department, professional organizations, higher education, and K-12 practitioners).

**Root Cause**

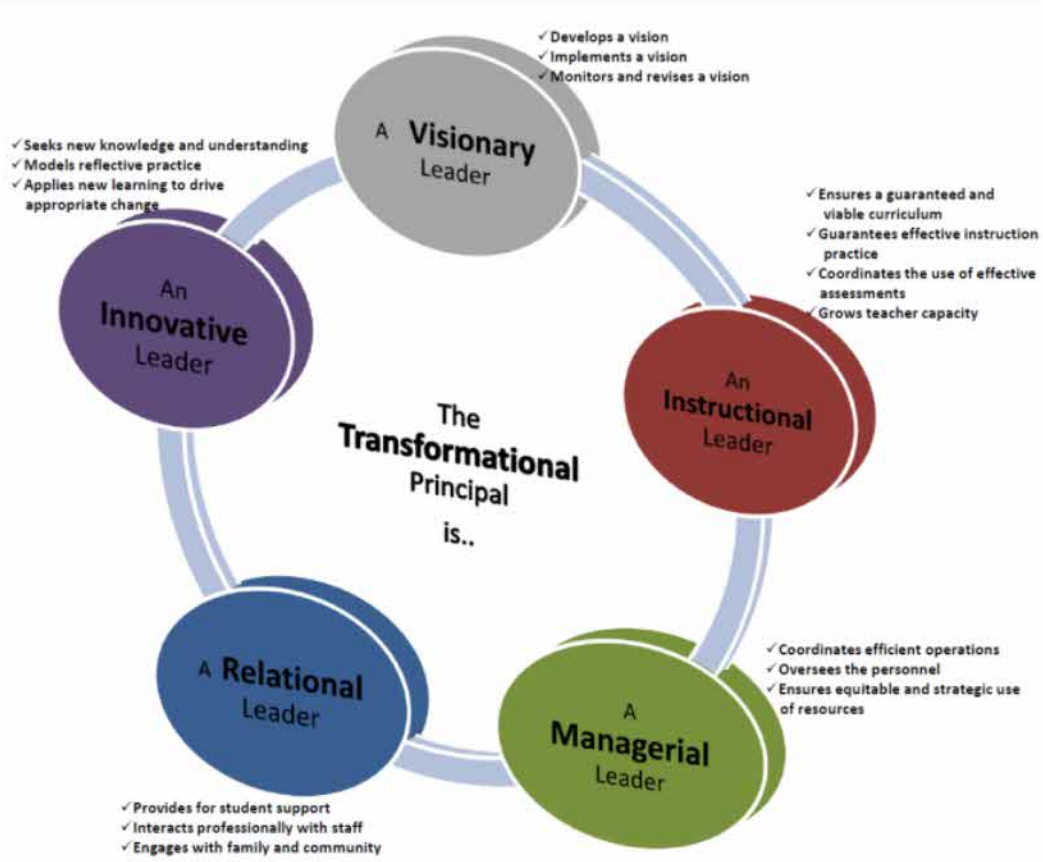
Effective leaders in schools, specifically in the 477 schools included in the comparative analysis, are necessary for implementation of a number of the strategies offered in this plan. School leaders set the tone and establish the culture; they ensure a focus on excellence in academic achievement; they implement discipline policies; and they are essential to ensuring that any necessary reform efforts are implemented with fidelity.

**Strategies**

a. The school culture, as established by an effective school leader, has a focus on academics, opportunities for professional collaboration, and shared accountability for student learning. There is a clear vision of learning and effective leadership to implement the vision, including effectively communicating the vision to staff and building staff support.

b. Leaders are effective because they establish a culture of learning and build consensus and ownership in all members of the staff to work collaboratively to achieve learning for all students. There is a comprehensive system for developing leadership skills, including a plan to address leadership turnover.

c. The Department, in collaboration with professional organizations, higher education and practitioners, is developing and will implement the Leadership Development System. This develops leadership competencies in five general characteristics of the transformational principal:




1. The Visionary Leader develops a vision for the school. As an effective visionary leader, they implement the vision and monitor and revise it as necessary.
2. The Instructional Leader ensures that the school has a culture for learning. As an effective instructional leader, they ensure a guaranteed and viable curriculum, guarantee effective instructional practice, coordinate the use of effective assessments and grow the capacity of their teachers.
3. The Managerial Leader efficiently and effectively oversees the operations of the organization and facility. As an effective managerial leader, they coordinate efficient operations, oversee personnel and ensure equitable and strategic use of resources.
4. The Relational Leader communicates and engages with all school personnel, community members and key stakeholders in an open transparent manner. As a effective relational leader, they provide for student support, interact professionally with staff and engage with families and the community.
5. The Innovative Learner continuously works to improve their own practice. As an effective innovative leader, they seek new knowledge and understanding, model reflective practice and apply new learning to drive appropriate change.

### Area of Concentration #6: Effective School Leaders

| Equity Strategy Outcome | Action Steps | Target Date |
|---|---|---|
| a. A Leadership Development System supports school leaders | Develop a program of study for the system | 7-1-15 |
| | Engage key stakeholders to support the system | 7-1-15 |
| | Engage the first cohort | 8-1-15 |
| b. The Leadership Development System is effective | Create a study to determine system effectiveness | 8-1-15 |
| | Gather data and analyzed | 5-1-16 |
| | Produce a white paper on system outcomes | 8-1-16 |
| c. The Leadership Development System is taken to scale | Produce recruitment materials for leaders | 2-1-16 |
| | Target leaders in poor and rural schools | 3-1-16 |
| | Engage additional cohorts into the System | 8-1-16 |

### Section 5: Ongoing Monitoring and Support

The strategies identified, developed and formulated into a plan of action are monitored by a mechanism to determine impact. The Six Areas of Concentration are supported by 22 separate outcomes. Action steps have been identified to support each outcome. The outcomes are subdivided and listed into an overall 90-day, six-month, 12-month, 18-month and 24-month Plan of Action. This provides an accurate way to monitor and publicly report progress on the outcomes identified in the Equity Plan. The Plan of Action is provided:

| **Equity Strategy Outcomes – 90 Day Plan**<br>**(June 1, 2015 to September 1, 2015)** | |
|---|---|
| 2a. Teacher candidates have content knowledge | 8-1-15 |
| 6a. A Leadership Development System supports school leaders | 8-1-15 |
| **Equity Strategy Outcomes – Six Month Plan**<br>**(June 1, 2015 to December 1, 2015)** | |
| 3a. Content & geographic areas of need are identified | 10-1-15 |
| 4a. Incentives are identified | 11-1-15 |

| | |
|---|---|
| 1a. High-quality individuals enter the teacher education pipeline | 12-1-15 |
| **Equity Strategy Outcomes – 12 Month Plan**<br>**(June 1, 2015 to June 1, 2016)** | |
| 3b. Strategies address areas of highest need | 2-1-15 |
| 5f. Teacher leadership opportunities are available | 3-1-16 |
| 5g. Use of teacher exit surveys | 3-1-16 |
| 1b. Diverse individuals enter the teacher education pipeline | Spring 2016 |
| 2c. Teacher candidates understand urban education | Spring 2016 |
| 4b. Incentives attract candidates | Spring 2016 |
| 5c. Governance of poor and rural schools supports learning | Spring 2016 |
| 5i. Excellent educators are recognized and celebrated | Spring 2016 |
| 5d. Professional learning addresses needs of teachers | 5-1-16 |
| 5e. Training opportunities promote quality instruction | 5-1-16 |
| 5a. Induction supports new teachers | 6-1-16 |
| 5h. Engage community partners in supporting education of urban/diverse students | 6-1-16 |
| **Equity Strategy Outcomes – 18 Month Plan**<br>**(June 1, 2015 to December 1, 2016)** | |
| 2b. Teacher candidates have pedagogy skills | 8-1-16 |
| 6b. The Leadership Development System is effective | 8-1-16 |
| 6c. The Leadership Development System is taken to scale | 8-1-16 |
| 5b. Evaluation systems promote growth and improvement | 9-1-16 |
| **Equity Strategy Outcomes – 24 Month Plan**<br>**(June 1, 2015 to June 1, 2017)** | |
| 2d. Preparation programs continuously improve | 2-2-17 |

Three classes of data will be monitored in conjunction with this plan of action:

1) Progress toward calendar milestones
2) Outcomes and evidence of impact
3) The extent to which the main issues of inequity are being addressed

*Progress toward Calendar Milestones*

As detailed in Section 4, action steps have been identified for each of the Six Areas of Concentration. To the extent practicable, specific tasks will be developed for each action step along with target dates for task completion. As tasks are completed, the task list will be updated to reflect this progress. During regularly scheduled office planning meetings, progress will be reviewed and any necessary course corrections will be identified to ensure timely completion of tasks and the corresponding equity gaps.

After 90 days, a summary of progress on all action steps associated with the "90 Day Plan" will be developed and publicly reported. That summary will include a simple "Yes/No" indicator for each action step to communicate which steps have been completed and which steps remain in progress, including copies of any artifacts or work products that would demonstrate completion of, or substantive progress toward, the applicable action steps. A brief summary of progress toward interim benchmarks associated with longer-term action steps will also be included in the progress report.

For each of the subsequent plan phases (i.e., six months, 12 months, 18 months, and 24 months), a similar report will be generated and publicly reported that includes detailed information about progress toward those action steps particular to the scope of the plan phase in question, along with a brief summary of progress toward longer-term goals. The 12-month report will include analysis of impact evidence and a "dashboard" data report presenting a quick summary of progress toward reducing equity gaps. The 24-month report will include an in-depth analysis of impact evidence, an updated data dashboard, and a narrative summary reflecting on the state of equitable access for all students.

*Outcomes and Evidence of Impact*

Each of the Six Areas of Concentration suggests metrics that would be expected to change as strategies are implemented. As strategies are implemented, the equity gaps are monitored for change to indicate the impact of the strategies on the corresponding equity gaps. These metrics and gaps, by area of concentration, are as follows:

| Area of Concentration | Metrics | | | |
|---|---|---|---|---|
| **1. Recruit High-quality and Diverse Individuals** | If high-quality and diverse individuals are being recruited into teaching, then:<br>• The percentage of candidates admitted to teacher preparation programs who are minorities will increase;<br>• Scores on assessments of general content knowledge used for entry into teacher preparation programs will increase;<br>• Scores on work styles assessments for candidates admitted to teacher preparation programs will begin to better resemble those of effective teachers. | | | |
| **Monitored Gaps Area #1** | **High Minority** | **High Poverty** | **Rural Remote** | **Low Poverty** |
| *% Less than fully Qualified | 15.1% | 16.3% | 13.0% | 5.7% |
| • Elementary | 12.4% | 14.7% | 8.7% | 4.3% |
| • Secondary | 27.9% | 27.7% | 19.8% | 10.5% |
| % Minority (students) | 98.5% | 86.4% | 3.6% | 16.6% |
| % Minority (teachers) | 52.0% | 41.9% | 0.9% | 4.5% |
| **2. Ensure Relevant and Effective Preparation** | If candidates are receiving relevant and effective preparation, then:<br>• Surveys will indicate that employers increasingly believe that new teachers are well-prepared;<br>• Pass rates on content assessments used for teacher licensure will improve;<br>• Surveys will indicate that employers increasingly believe that new teachers are prepared to promote respect for diverse cultures, genders, and intellectual / physical abilities;<br>• Preparation programs with identified areas of concern will move from "not met" to "met" on metrics initially indicating inadequate program performance after program improvement plans have been fully implemented. | | | |
| **Monitored Gaps Area #2** | **High Minority** | **High Poverty** | **Rural Remote** | **Low Poverty** |
| *% Less than fully Qualified | 15.1% | 16.3% | 13.0% | 5.7% |
| • Elementary | 12.4% | 14.7% | 8.7% | 4.3% |
| • Secondary | 27.9% | 27.7% | 19.8% | 10.5% |
| Preparation 1st yr Teacher Response 1-5 scale (percent) | 3.94 (90.8%) | 3.87 (90.1%) | 4.24 (97.8%) | 4.45 (99.2%) |
| Preparation Principal Response 1-5 scale(percent) | 3.56 (87%) | 3.66 (87%) | 3.94 (93.4%) | 4.30 (97.6%) |

| | | | | |
|---|---|---|---|---|
| **3. Provide an Adequate Quantity of Qualified Candidates** | If there is an adequate quantity of qualified candidates, then:<br>• Severity of shortages, as defined in the Shortage Predictor Model, will decrease;<br>• *Surveys of administrators in the state's most rural and high-poverty, high-minority schools will show that perceived hiring difficulties are lessening.* | | | |
| **Monitored Gaps Area #3** | **High Minority** | **High Poverty** | **Rural Remote** | **Low Poverty** |
| *% Less than fully Qualified | 15.1% | 16.3% | 13.0% | 5.7% |
| • Elementary | 12.4% | 14.7% | 8.7% | 4.3% |
| • Secondary | 27.9% | 27.7% | 19.8% | 10.5% |
| *% Teaching Out-of-Field | 5.6% | 5.0% | 6.6% | 2.5% |
| • Elementary | 4.2% | 4.2% | 4.1% | 1.4% |
| • Secondary | 12.2% | 10.6% | 10.3% | 6.4% |
| **4. Attract Candidates to Hard-To-Staff Areas and Locations** | If candidates are being attracted to hard-to-staff areas and locations, then:<br>• Severity of shortages, as defined in the Shortage Predictor Model, will decrease;<br>• *Surveys of administrators in the state's most rural and high-poverty, high-minority schools will show that perceived hiring difficulties are lessening;*<br>• *Educator job listing databases (e.g., MO REAP) will have increased traffic to postings made by the most rural and high-poverty, high-minority schools;*<br>• *Surveys of high school juniors and seniors will show increasing interest in pursuing teaching particularly in hard-to-staff disciplines;*<br>• *Incentives (once identified and made available) will be increasingly utilized.* | | | |
| **Monitored Gaps Area #4** | **High Minority** | **High Poverty** | **Rural Remote** | **Low Poverty** |
| *% Teaching Out-of-Field | 5.6% | 5.0% | 6.6% | 2.5% |
| • Elementary | 4.2% | 4.2% | 4.1% | 1.4% |
| • Secondary | 12.2% | 10.6% | 10.3% | 6.4% |

| | | | | |
|---|---|---|---|---|
| **5. Ensure Teachers are Supported and Developed by Effective Principals** | If teachers are being effectively supported and developed, then:<br>• Evaluation ratings of teachers will improve;<br>• *Surveys of beginning teachers will show increased satisfaction with the mentorship and induction experience;*<br>• *Compliance audits of effective evaluation implementation will yield fewer corrective actions (i.e., citations);*<br>• *Participation in Teacher Academy program will increase;*<br>• *Surveys show teachers are increasingly engaged in high-quality professional learning.* | | | |
| **Monitored Gaps Area #5** | **High Minority** | **High Poverty** | **Rural Remote** | **Low Poverty** |
| * Discipline Incident Rate | 3.4% | 2.2% | 0.6% | 0.4% |
| • Elementary | 2.4% | 2.0% | 0.2% | 0.2% |
| • Secondary | 7.9% | 4.4% | 1.4% | 1.1% |
| * Retention Rate 1 yr (2013-2014) | 69.2% | 68.9% | 81.2% | 85.5% |
| * Retention Rate 3 yr (2011-2014) | 44.6% | 44.8% | 60.1% | 68.5% |
| Avg. Years of Experience | 10.7 | 9.97 | 12.1 | 13.72 |
| % First-year Teachers | 13.0% | 15.4% | 13.9% | 6.8% |
| First-year Teachers w/ Mentor | 82.5% | 78.6% | 97.5% | 92.4% |
| *Absent 10 days or more | 32.9% | 30.2% | 17.5% | 31.5% |
| **6. Develop Effective School Leaders** | If effective school leaders are being developed, then:<br>• Evaluation ratings of principals will improve;<br>• *Surveys of principals will show increased development of characteristics associated with transformational principals after completing Leadership Development System program of study.* | | | |
| **Monitored Gaps Area #6** | **High Minority** | **High Poverty** | **Rural Remote** | **Low Poverty** |
| % First-year Principals | 18 schools (16.4%) | 18 schools (16.4%) | 43 schools(13.7%) | 7 schools (6.4%) |
| *. Discipline Incident Rate | 3.4% | 2.2% | 0.6% | 0.4% |
| • Elementary | 2.4% | 2.0% | 0.2% | 0.2% |
| • Secondary | 7.9% | 4.4% | 1.4% | 1.1% |

*Metrics that appear in *italics* are to be developed

Several of the metrics described above are not yet available and will require new data collections. As a result, full implementation of a robust monitoring system encompassing these metrics will coincide with the conclusion of the "24 Month Plan." In the interim, all available metrics will be compiled and reported at 12 months.

It should be noted that many of the outcome metrics identified above may show improvement even without introducing new strategies. As a result, while positive change may suggest policy impact, methodologically rigorous evaluation studies will be needed to gather more convincing evidence. Missouri will reach out to reputable and impartial research organizations, such as REL

Central, to conduct these studies. An initial set of studies will be identified by early 2016, with a plan for carrying out those studies by the third quarter of 2016. A summary of these plans will be provided in the 12-month report.

*Movement on the Main Issues of Inequity*

As identified in Section 3 of this Educator Equity Plan, there are a number of problematic equity gaps that disadvantage students in the state's most rural, high-poverty and high-minority schools. Even if the outcome measures associated with the Six Areas of Concentration demonstrate positive change over the next several months, the ultimate measure of success will be the extent to which Missouri's equity gaps have closed.

Over time, the following gaps are expected to close:

- **Inexperienced teachers**: The percentage of teachers who are in their first year will decrease in Missouri's most rural, high-poverty, and high-minority schools until parity is achieved with low-poverty schools.
- **Less-than-fully qualified teachers**: The percentage of teachers who are a) teaching on a provisional certificate; and/or b) teaching on a temporary authorization certificate; and/or c) lacking the necessary credential to be considered appropriately certificated for at least one teaching assignment, will decrease in Missouri's most rural, high-poverty, and high-minority schools until parity is achieved with low-poverty schools.
- **Out-of-field teachers:** The percentage of teachers who are considered inappropriately certificated by virtue of teaching a subject that does not correspond to one or more of the teacher's active certifications will decrease in Missouri's most rural, high-poverty, and high-minority schools until parity is achieved with low-poverty schools.

The rate of inexperienced teachers, less-than-fully qualified teachers, and out-of-field teachers in the state's most rural, high-poverty, high-minority, and low-poverty schools will be reviewed annually to evaluate progress toward eliminating the above-mentioned gaps. This information will be publicly reported in a data "dashboard."

**Section 6: Conclusion**

As students progress through Missouri's PK-12 public education system, they have a right to learn under the direction of effective teachers at every grade level and in every content area. Along every student's education experience, there is reason to believe that virtually all students, at some point, learn from less-than-effective teachers. However, current Missouri data and conversations with practitioners suggest that high-poverty, high-minority and rural students experience less effective teachers at a higher rate than do students in low-poverty schools.

Representatives from education associations and the Missouri Department of Elementary and Secondary Education have met on several occasions to discuss possible root causes for why students born or who have moved into high-poverty, high-minority and rural schools do not receive an equitable education experience as do students in more affluent, urbanized schools.

These same conversations have occurred with numerous practitioners across the state. Additional feedback was collected from participants of regional focus groups, who represented a sampling of the 110 high-poverty schools, 110 high-minority schools and the 315 schools classified as Rural Remote. The focus groups represented equal parts of both districts with high-poverty and high-minority schools and districts with schools classified as Rural Remote. Overall, of the 477 schools statewide that fall into these two categories, 34 percent participated in the focus groups or attended the equity conference. This represented nearly 12,000 teachers (18 percent) of the overall teacher population and nearly 130,000 students (14.4 percent) of the overall student population. From this analysis of data and extensive conversations with practitioners, a theory of action was developed to address inequity. The theory of action highlights Six Areas of Concentration that include:

- Recruiting high-quality , diverse individuals
- Providing high-quality preparation
- Ensuring all areas of content have an adequate supply
- Attracting candidates to work with all types of students, particularly those in high-poverty, high-minority and rural schools
- Supporting and developing all teachers in those settings
- Ensuring there is a highly effective principal in all high-poverty, high-minority and rural schools

The outcomes and action steps that have been developed for each of the Areas of Concentration will be regularly monitored and reported. Additional Educational Equity Conferences will be planned and hosted in different parts of the state to continue the conversation on how to overcome the challenges of providing equitable education to all students. As action steps are implemented, the original data set will be analyzed to determine their impact on the equity gaps identified in Missouri's Equity Plan.

**Appendix A: Stakeholder Meeting Agendas**

## Missouri Equitable Access Planning Meeting

## Missouri Department of Education

## 205 Jefferson Street

## Jefferson City, Missouri

## Meeting Agenda

| | |
|---|---|
| 10:00-10:30 a.m. | **Introductions and Context-Setting** |
| 10:30-11:15 a.m. | **Root Cause Analysis Discussion** |
| 11:15-11:25 a.m. | **Break** |
| 11:25–12:25 p.m. | **Working Lunch to Continue Discussion of Strategies** |
| 12:25-1:45 pm | **Stakeholder Engagement** |
| 1:45-2:00 pm | **Recap and Next Steps/Timeline for Completion** |
| 2:00 p.m. | **Adjourn** |

## Appendix B: Equity Plan Development Timeline

| Target date | Activity Description | Responsibility of… |
|---|---|---|
| 10/20/14 | Develop a work plan to direct the development of the Equity Plan | Educator Quality<br>MO Dept. of Ed. |
| 10/31/14 | Gather input on logic model/work plan from development team at convening | Members D.C. convening<br>National researchers |
| | Gather input from national facilitators (Ila Deshmukh Towery, Ellen Sherratt) | |
| | | |
| 11/15/14 | Incorporate input from the panel of experts/team into logic model/work plan | Educator Quality<br>MO Dept. of Ed. |
| | Draft an initial data set to identify educational inequity | |
| | Finalize edited parts to be reviewed by the Department's Education Partners | |
| 11/24/14 | Convene the Department's Education Partners group | MO Dept. of Ed.<br>Professional Organizations |
| | Share initial draft of the data set, root causes, strategies; solicit input | |
| | Gather input from education partners to clarify sections V and VI | |
| 11/24/14 to 12/3/14 | Compile responses from Education partners group | Educator Quality<br>MO Stakeholders<br>State Board of Ed |
| | Begin initial draft of sections II, III and IV | |
| | Prepare presentation for the State Board of Education | |
| | | |
| 12/4/14 | Present overview and gather initial input from the State Board of Education | Educator Quality |
| 12/11/14 | Second convening of the Education Partners | Dept, Prof Orgs |
| | Meeting is facilitated by Ila Deshmukh Towery and Ellen Sherratt | National Facilitators |
| 12/18/14 | With Area Supervisors: overview, data set and root causes and strategies | Educator Quality<br>Area Supervisors |
| | Prepare for Dec 19 submission to US ED | |
| 12/19/14 | Submit initial draft to the US Department of Education | Educator Quality |
| | | |
| By 4/1/15 | Host focus groups with districts that experience educational inequity | Dept, Area Supervisors<br>school personnel |
| | Continue to gather input from the Education Partners group | |
| 4/30/15 | Reconvene Education Partner group to share input from school districts | MO Dept. of Ed.<br>Prof Organizations |
| | Incorporate input from constituents of each Education Partner group | |
| 4/27/15 | Post draft of Equity Plan for a 2 week public comment period | Dept, public |
| | | |
| 5/11/15 | Begin final draft of all sections using input from all stakeholders | Educator Quality |
| 5/20/15 | Present draft to the State Board of Education | Dept, Educator Quality<br>State Board of Education |
| | | |
| 6/1/15 | Submit final Equity Plan to the US Department of Education | Educator Quality |
| | | |

# Appendix C: Protocol for Focus Groups

## Data Chart for Missouri's Equity Plan

| Measure | Highest 5 percent Minority schools (110 schools) Non-white students and Hispanics of any race | Highest 5 percent FRPL schools (110 schools) Students eligible for Free and Reduced Lunch | Most Rural School Buildings (315 schools) NCES Urbanicity Classification *"Rural: Remote" | Lowest 5 percent FRPL schools (110 schools) Students eligible for Free and Reduced Lunch |
|---|---|---|---|---|
| FRPL rate | 88.3% (average) | 91.9%-100% | 60.4% (average) | 0%-16.4% |
| Avg. Poverty Rate of Community | 30.1% | 30.7% | 18.4% | 7.1% |
| * Percent Minority (Students) | 98.5% | 86.4% | 3.6% | 16.6% |
| * Percent Minority (Teachers) | 52.0% | 41.9% | 0.9% | 4.5% |
| * Discipline Incident Rate | 3.4% | 2.2% | 0.6% | 0.4% |
| • Elementary | 2.4% | 2.0% | 0.2% | 0.2% |
| • Secondary | 7.9% | 4.4% | 1.4% | 1.1% |
| Avg. Years of Experience | 10.7 | 9.97 | 12.1 | 13.72 |
| *Adjusted Average Salary | $52,282.42 | $49,951.79 | $48,225.08 | $60,115.89 |
| • 1st yr. Teachers w/ Bacc. | $39,031.83 | $38,868.87 | $38,488.02 | $39,343.84 |
| • 1st yr. Teachers w/ Mast. | $44,689.04 | $43,603.59 | $43,443.01 | $44,498.51 |
| • Teachers w/ 5 years Experience or Less | $41,949.93 | $42,138.66 | $42,343.00 | $46,920.98 |
| • Teachers w/ 6-10 Years Experience | $49,031.10 | $48,804.28 | $47,072.14 | $53,653.01 |
| • Teachers w/ 11+ Years Experience | $62,678.20 | $60,512.59 | $53,667.07 | $70,430.06 |
| * Retention Rate 1 yr (2013-2014) | 69.2% | 68.9% | 81.2% | 85.5% |
| * Retention Rate 3 yr. (2011-2014) | 44.6% | 44.8% | 60.1% | 68.5% |
| *Absent 10 Days or More | 32.9% | 30.2% | 17.5% | 31.5% |
| Percent First-year Teachers | 13.0% | 15.4% | 13.9% | 6.8% |
| Percent Teachers with less than 3 yrs Experience | 24.4% | 26.9% | 15.0% | 8.9% |
| 1st Yr. Teachers Assigned a Mentor | 82.5% | 78.6% | 97.5% | 92.4% |
| Percent First Year Principals | 18 schools (16.4%) | 18 schools (16.4%) | 43 schools (13.7%) | 7 schools (6.4%) |
| Avg. Overall Preparation 1st yr Teacher Response 1-5 scale (percent) | 3.94 (90.8%) | 3.87 (90.1%) | 4.24 (97.8%) | 4.45 (99.2%) |
| Avg. Overall Preparation Principal Response 1-5 scale(percent) | 3.56 (87%) | 3.66 (87%) | 3.94 (93.4%) | 4.30 (97.6%) |
| *Percent Less than Fully Qualified | 15.1% | 16.3% | 13.0% | 5.7% |
| • Elementary | 12.4% | 14.7% | 8.7% | 4.3% |
| • Secondary | 27.9% | 27.7% | 19.8% | 10.5% |
| *Percent Teaching Out-of-Field | 5.6% | 5.0% | 6.6% | 2.5% |
| • Elementary | 4.2% | 4.2% | 4.1% | 1.4% |
| • Secondary | 12.2% | 10.6% | 10.3% | 6.4% |
| *Effectiveness Index Overall teacher impact | 78.5% | 78.8% | 81.2% | 84.7% |
| Student Performance: ELA Proficiency | 24.0% | 24.2% | 54.1% | 68.8% |
| Student Performance: Math Proficiency | 22.0% | 26.5% | 50.7% | 66.0% |

According to federal definition, Missouri's Equity Plan must ***"describe the steps that will be taken to ensure that poor and minority (and rural) children are not taught at higher rates than other children by inexperienced, unqualified, or out-of-field teachers."***

1. What challenges do you have in hiring experienced, qualified and effective teachers for all of your students (at all grades levels and in all content areas)?

2. What challenges do you have in retaining experienced, qualified and effective teachers for all of your students (at all grades levels and in all content areas)?

3. What strategies around building the capacity of effective administrator leadership might positively address equity issues?

4. What suggestions or strategies could assist you in addressing these challenges?

5. What role could the Department (and this equity plan) play in helping you address these challenges?

## Appendix D: State Board of Education Presentation in December

| **MISSOURI STATE BOARD OF EDUCATION AGENDA ITEM:** REPORT ON MISSOURI'S EQUITY PLAN UPDATE | **December 2014** |
|---|---|
| STATUTORY AUTHORITY:<br><br>Section 161.092, RSMo | ☐ Consent Item ☐ Action Item ☒ Report Item |

DEPARTMENT GOAL NO. 3:
Missouri will prepare, develop, and support effective educators.

SUMMARY:
In a July 2014 letter from Secretary of Education Arne Duncan, the U.S. Department of Education asked each state education agency to submit a plan that describes the steps it will take to ensure that "poor and minority children are not taught at higher rates than other children by inexperienced, unqualified, or out-of-field teachers" as required by section 1111 (b)(8)(C) of the *Elementary and Secondary Education Act* of 1965 (ESEA).

In October, a team from Missouri was invited to attend a special convening entitled *Moving Towards More Equitable Access to Effective Teachers*. The meeting was hosted by the U.S. Department of Education and the Reform Support Network. Also included were the states of Kentucky, New Jersey, New York, Tennessee, the Dallas Independent School District and the Ohio Appalachian Collaborative. The purpose of the convening was to work collaboratively with a select number of states and districts who would then serve as models to other states. Additionally, these initial states and districts gathered to assist the U.S. Department of Education and their research partners in designing technical assistance and support to be provided throughout the submission process.

This report item will provide a general overview of the components included in an equity plan and Missouri's timeline for development and submission.

PRESENTER(S):
Paul Katnik, Assistant Commissioner, Office of Educator Quality, will assist with the presentation and discussion of this agenda item.

## Appendix E: State Board of Education Presentation in March

| **MISSOURI STATE BOARD OF EDUCATION AGENDA ITEM:** REPORT ON MISSOURI'S EQUITY PLAN UPDATE | **March 2015** |
|---|---|
| STATUTORY AUTHORITY:<br><br>Section 161.092, RSMo | ☐ Consent Item ☐ Action Item ☒ Report Item |

DEPARTMENT GOAL NO. 3:
Missouri will prepare, develop, and support effective educators.

SUMMARY:
The U.S. Department of Education is requesting each state education agency to submit an Equity Plan that describes the steps it will take to ensure that "poor and minority children are not taught at higher rates than other children by inexperienced, unqualified, or out-of-field teachers" as required by section 1111 (b)(8)(C) of the *Elementary and Secondary Education Act* of 1965 (ESEA). Along with all other states, Missouri will be submitting its Equity Plan in June 2015.

This presentation is an update on the progress being made in drafting Missouri's plan. It includes a review of the feedback being collected through focus groups hosted across the state with educators. The information gathered will be used to articulate the root causes of inequity in our state and potential strategies that could be identified for addressing these causes.

PRESENTER(S):
Paul Katnik, Assistant Commissioner, Office of Educator Quality, will assist with the presentation and discussion of this agenda item.

## Appendix F: State Board of Education Presentation in March

| **MISSOURI STATE BOARD OF EDUCATION AGENDA ITEM:** CONSIDERATION OF MISSOURI'S EQUITY PLAN | **May 2015** |
|---|---|
| STATUTORY AUTHORITY:<br><br>Section 161.092, RSMo | ☐ Consent Item ☒ Action Item ☐ Report Item |

DEPARTMENT GOAL NO. 3:
Missouri will prepare, develop, and support effective educators.

SUMMARY:
The U.S. Department of Education is requesting each state education agency to submit an Equity Plan that describes the steps it will take to ensure that "poor and minority children are not taught at higher rates than other children by inexperienced, unqualified, or out-of-field teachers" as required by section 1111 (b)(8)(C) of the *Elementary and Secondary Education Act* of 1965 (ESEA). Along with all other states, Missouri will be submitting its Equity Plan in June 2015.

This presentation is a final update on the draft of Missouri's Equity Plan. It includes a review of the stakeholder engagement that has been collected; the equity gaps that have been identified; potential strategies to address the gaps; and the process for monitoring the progress of the strategies.

PRESENTER(S):
Paul Katnik, Assistant Commissioner, and Timothy Wittmann, Director of Educator Accountability, of the Office of Educator Quality, will assist with the presentation and discussion of this agenda item.

RECOMMENDATION:
The Department recommends that the State Board of Education approve the Equity Plan as presented and authorize the Commissioner to submit this plan on behalf of the State of Missouri.

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