

RESEARCH

MISSOURI STATE UNIVERSITY
COLLEGE OF EDUCATION

July 2018

Vicki Schmitt, Ph.D.
Stephen Kleinsmith Ed.D

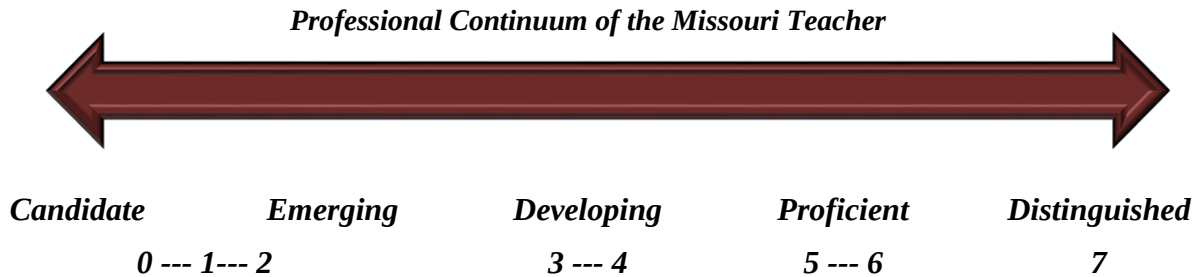
Brief

The Impact of Missouri State University Teacher Education Graduates As Measured by Missouri Educator Evaluation System Data: A Comparison to “Other” Educator Preparation Programs

Despite overwhelming criticism of the methodology employed by the National Council on Teacher Quality (NCTQ) report *Teacher Prep Review* (2013), a national debate and media frenzy over the quality of teacher education preparation programs across the United States has exploded with many asking the question, “How much work needs to be done to give teachers the training they need to be classroom-ready upon graduation?” In addition, there has been the merger of the National Council for the Accreditation of Teacher Education (NCATE) and the Teacher Education Accreditation Council (TEAC) into the Council for the Accreditation of Educator Preparation (CAEP) in the spring 2014. With many calling on institutions of higher education to transform their teacher preparation programs by reforming curriculum, structure and pedagogy (Strieker, Shaleen, Hubbard, Digiovanni and Lim; 2014), CAEP is demanding “urgent changes in educator preparation” and has unveiled a complex system evaluation and a call for a national model of teacher education (Bullough, 2014).

As a result, the topic of teacher preparation has become an important focus for state school boards and legislatures, with 33 states (Missouri included) passing significant policy changes targeting improvements that include: (1) Addressing screening methods for entry into teacher preparation programs, (2) Increasing the amount of testing, with a focus on content knowledge, (3) Ensuring that pre-service teachers understand effective reading instruction, and (4) Making the student teaching experience matter. These changes are designed to make teacher preparation more rigorous and accountable for the effectiveness of graduates as measured by the achievement of students they teach. Yet the question still remains, how do universities “measure” the impact of their teacher preparation programs on student achievement in P-12 classrooms? Moreover, how do universities work collaboratively with local school districts to collect evaluation data in an effort to determine program effectiveness? And, can different educator preparation programs be compared based on the data collected regarding teacher effectiveness?

In May 2013, the State Board of Education approved the new Missouri Educator Evaluation System (MEES) which includes nine standards on which both pre-service and practicing teachers are to be evaluated. School districts were given the 2013-2014 school year to adopt the new evaluation system or align their current evaluation system to the state model. Based on a 7-point scale that spans “candidate” to “distinguished,” evaluations begin during pre-service teaching for interns and student teachers and is carried forward throughout their careers. All summative evaluation scores which are reported to the state must include some indication of the teacher’s impact on student learning.



Purpose

The purpose of this study was to determine if collaborative data sharing between institutions of higher education and P-12 public schools throughout Missouri might be possible in order to examine more precisely the impact of educator preparation programs on effective classroom teaching and student learning. While districts utilize varying data tools and systems to collect evaluation data on their teachers, all districts must adhere to the *Missouri Educator Evaluation Standards*. These are the same *Standards* that all educator preparation programs must also utilize when evaluating pre-service teacher candidates during their student-teaching or internship experience. Sharing these data across both systems while focusing on a teacher's impact within the first two years of teaching would allow universities to better understand the impact of their programs and provide public schools with information regarding the professional development needs of the first-year teacher.

Data Collection

During the fall 2017, researcher visited school districts in southwest Missouri known to provide pre-service teacher education field experiences as well as hire many teacher education graduates from Missouri State University's College of Education. Meetings with each district's superintendent were held November 2017 through 2018. In total, eleven area school districts agreed to participate and to share the evaluation data of certified personnel hired during the fall of 2014, 2015 and 2016 for both MSU graduates as well as non-MSU graduates. In total, these districts serve 34,348 students and ranged in size from less than 1,000 students to nearly 6,000 (M = 3,123). On average, these districts serve a somewhat diverse population with 9.49% of students' racial background identified as non-white and 46.62% qualifying for either free or reduced.

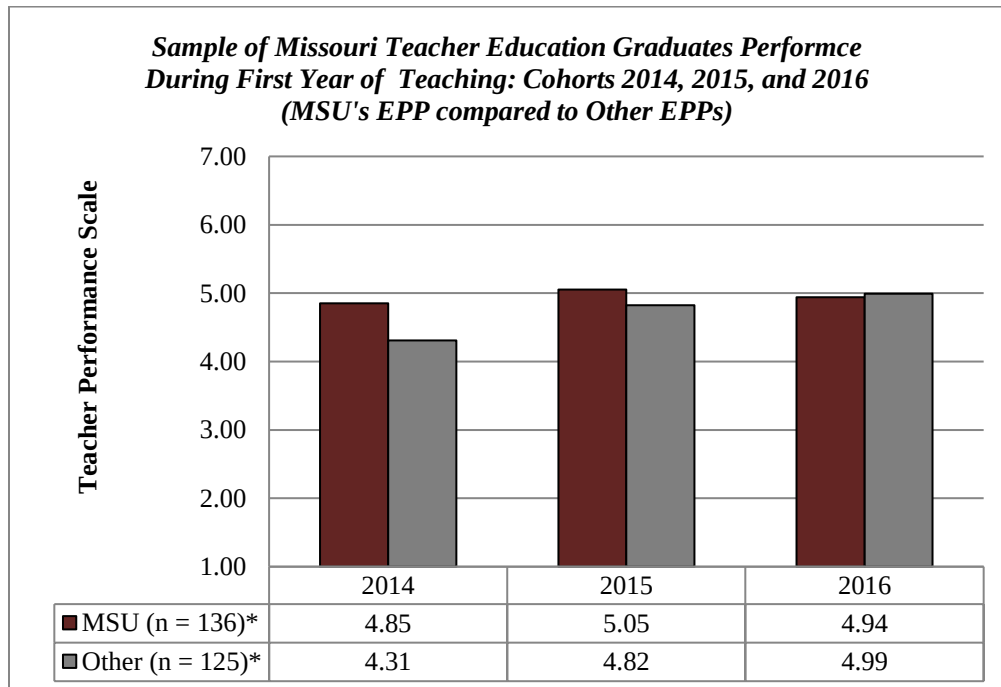
	Enrollment	%Free/Reduced	%Non-White
District A	1,312	66.50%	12.90%
District B	2,226	36.70%	5.90%
District C	2,885	50.40%	7.20%
District D	5,919	32.70%	12.80%
District E	5,579	35.40%	10.50%
District F	4,720	42.30%	8.90%
District G	735	58.70%	4.10%
District H	696	46.80%	5.30%
District I	1,173	42.70%	4.20%
District J	4,638	57.40%	21.10%
District K	4,465	43.20%	11.50%
Average	3,123	46.62%	9.49%

While the majority of districts use a 7-point scale (1 = Emerging to 7 = Distinguished) one district provided data on a 4-point scale. Researchers converted the 4-point scale to a 7-point scale based on the theory that the mid-points of both scales were equivalent. This brief reports evaluation data based on the 7-point scale defined by the state and illustrated above. In total the eleven districts provided teacher evaluation data to university researchers on 261 of their new hires (MSU EPP = 136; Other EPPs = 125). By examining new teachers' year-end evaluation summative data, difference in average effectiveness across first year teachers prepared by MSU and by other institutions are reported.

	2014-2015	2015-2016	2016-2017	Total by EPP
MSU	50	37	49	136
Other	35	41	49	125
Total	85	78	98	261

First Year Performance

Generally speaking, teachers entering their first year of teaching tend to score within the “Developing” to “Proficient” category according to the state’s evaluation system. New teacher graduates prepared by MSU hired during the 2014-2015 school year scored significantly higher than graduates from other educator preparation programs, $t_{(83)} = 2.537, p < .05$ [MSU = 4.85 (.79); Other = 4.31(.03)]. The effect of preparation program for these two groups was moderate to large ($d = .59$). While MSU graduates hired for the 2015-2016 school year did score slightly higher than graduates from other educator preparation programs and there appears to be a moderate effect ($d = .29$), the differences in these teachers’ summative evaluation scores are not significant, $t_{(76)} = 1.255, p > .05$ [MSU = 5.05 (.76); Other = 4.82 (.80)]. Summative evaluation scores for 2016-2017 new hires are relatively the same with little difference between preparation programs [MSU = 4.94 (.85); Other = 4.99 (.68)].

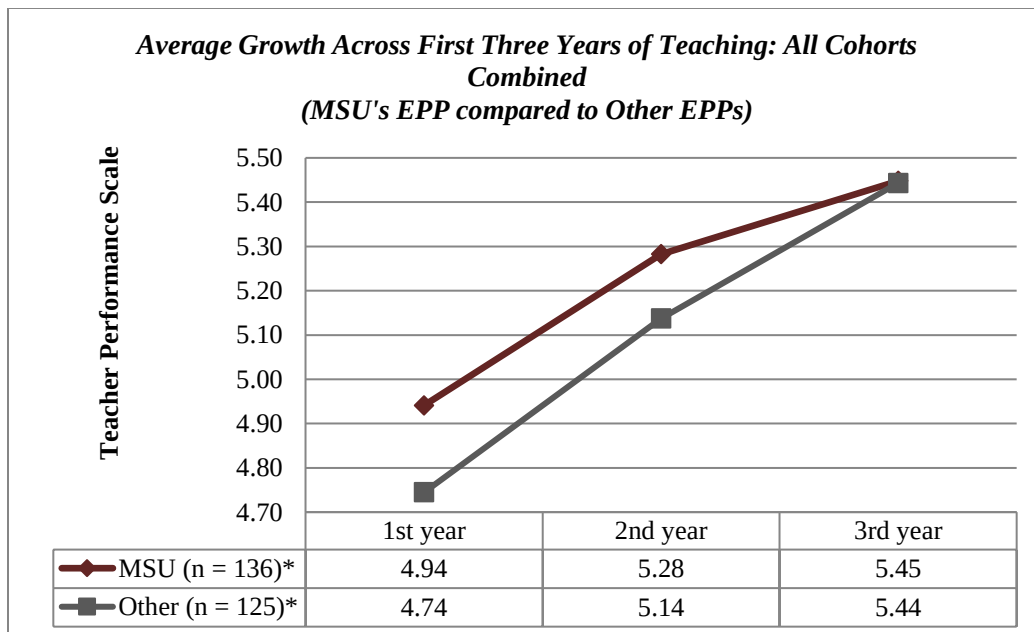


*(Note: 2014 Sample - MSU = 50, Other = 35; 2015 Sample - MSU = 37, Other = 41; 2016 Sample - MSU = 49, Other = 49)

Preparation Program Impact – First Three Years

In addition to examining each cohort separately, researchers analyzed the overall impact of educator preparation by combining across all cohorts to determine the average impact of first-year teachers regardless of graduation/date of hire. When cohort data were combined across the three groups, the sample provided evaluation data for 261 first years teachers (MSU = 136; Other = 125), 163 teachers who had two years in the classrooms (MSU = 87; Other = 76), and 85 teachers who were in the classroom for three years (MSU = 50; Other = 35). [Note: Teachers with three years of experience were hired during the fall 2014 for the 2014-2015 school year.]

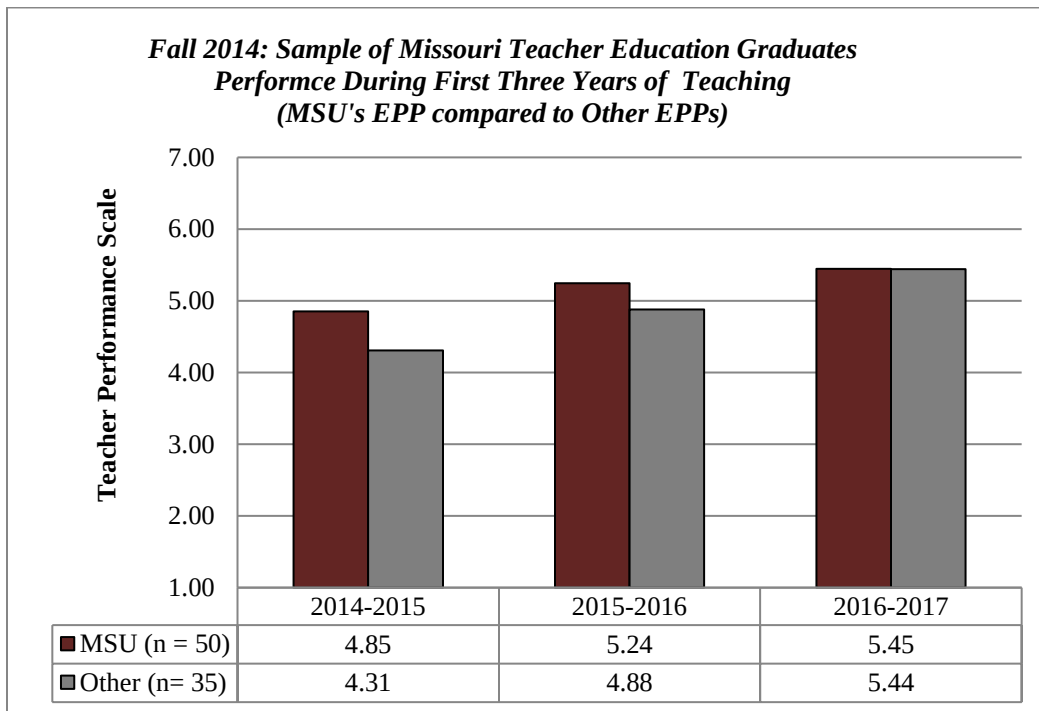
Over time, the impact of preparation program appears to diminish. While not significant, the greatest difference occurs during the first year of teaching [MSU = 4.94 (.80); Other = 4.74 (.84)] where this a small-moderate effect based on preparation program ($d = .2340$). In year two, this difference as well as the effect size for preparation program is reduced [MSU = 5.28 (.76); Other = 5.14 (.81); $d = .19$]. Then, by teachers' third year of teaching experience, the difference in their evaluation scores based on preparation program is basically non-existent with both groups scoring at approximately the same level on the districts' teacher evaluation scales [MSU = 5.45 (.52); Other = 5.44 (.63); $d = .01$]. Mentoring programs are required for teachers in their first two years of teaching. These programs are intended to provide ongoing support for the development of highly qualified teaching staff. Based on these data, one might theorize that by the third year of teaching, the impact of the school district professional learning opportunities through the state required mentoring program is realized and the effect of the institution from which teachers graduated no longer is a determining factor in the overall effectiveness of the classroom teacher. Given this finding, perhaps it would be wise to suggest that if institutions producing teacher candidates are to be judged on the impact on their graduates are having on students learning outcomes, data must be collected and examined during graduates first two years of teaching.



*(Note: 1st Year - MSU = 136, Other = 125; 2nd Year - MSU = 87, Other = 76; 3rd Year - MSU = 50, Other = 35)

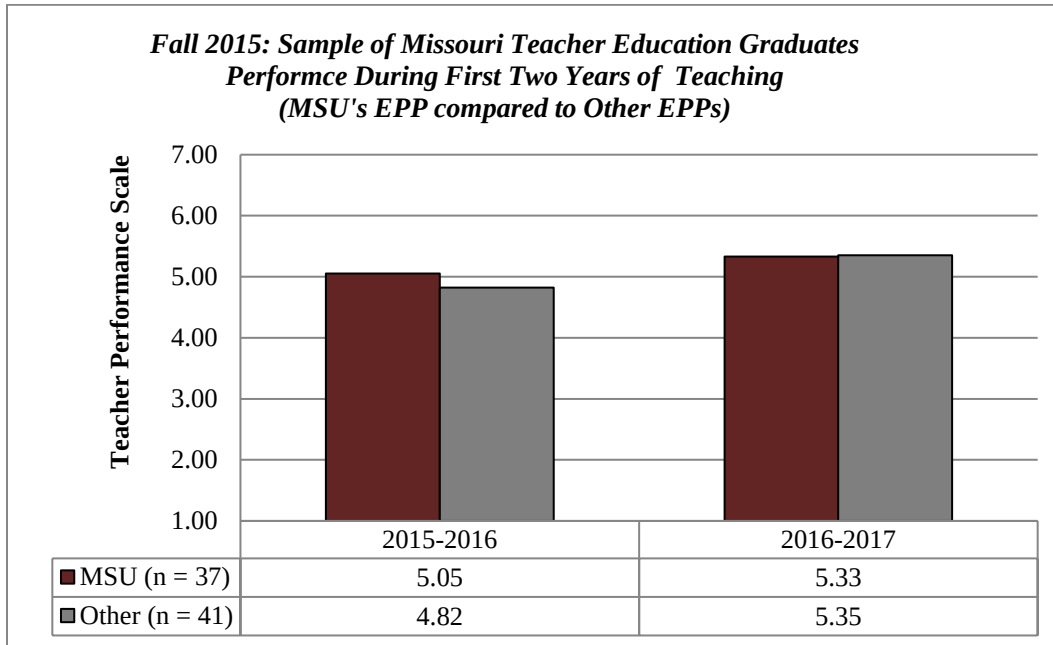
Cohort 2014-2015 Growth

Teacher education graduates hired during the fall 2014 provided three years of evaluation data for researchers to examine. As was noted previously, teacher graduates prepared by MSU hired during the 2014-2015 school year scored significantly higher than graduates from other educator preparation programs during their first year of teaching, $t_{(83)} = 2.537$, $p < .05$ [MSU = 4.85 (.79); Other = 4.88 (1.03)]. The effect of preparation program during the first year for these two groups was also noted to be moderate to large ($d = .59$). While the effect of educator preparation program continues to be moderate at year two ($d = .44$), with MSU graduates continuing to perform better, on average, than teacher education graduates from other programs teaching [MSU = 5.24 (.66); Other = 4.88 (.99)] this difference is not significant. By year three, the difference between groups is null [MSU = 5.45 (.52); Other = 5.44 (.63)] there is little to no effect based on preparation program ($d = .01$).



Cohort 2015-2016 Growth

Two years of evaluation data were provided for those teachers entering the profession during the fall 2015. Again, MSU education graduates scored higher than graduates from other programs [MSU = 5.05 (.76); Other = 4.82 (.80)]. While this difference is not significant, the effect of preparation program is still noted to be within a small to moderate range ($d = .29$). However, by year two in the classroom, there are no differences noted between MSU and other programs for this cohort [MSU = 5.33 (.88); Other = 5.35 (.59)] the effect size is close to zero ($d = -.03$). What is interesting about this group is that the average teacher evaluation rating during their first year of teaching was higher than the previous cohort. Yet, the amount of growth across time is about the same. (See chart on page 6 for these data.)

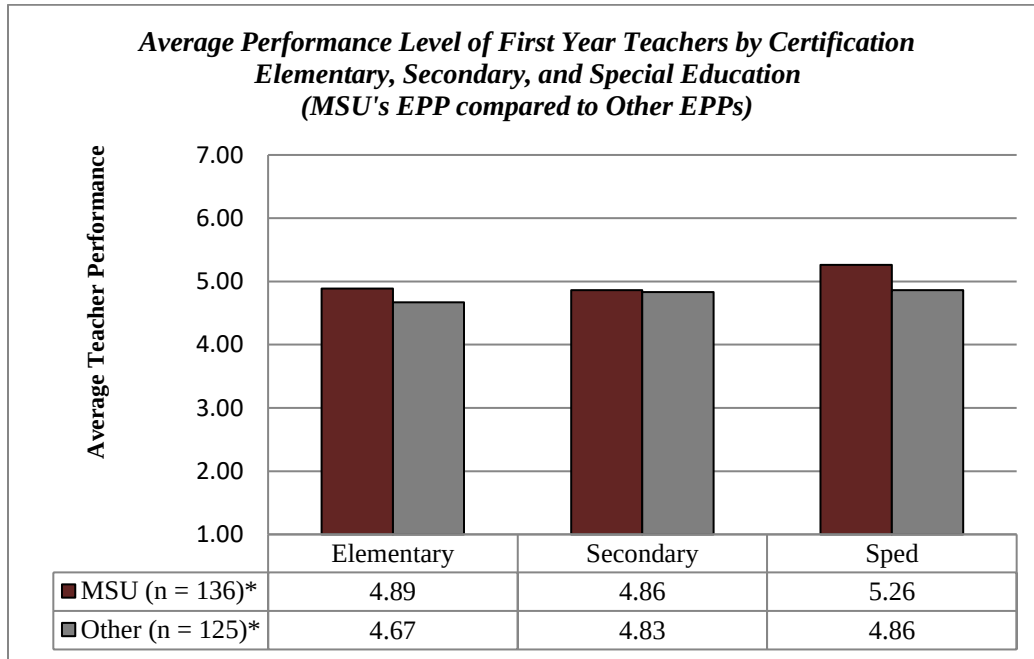


Performance by Certification – First Year of Teaching

Districts also provided university researchers with the certification area and current teaching assignment for the different cohorts of new teachers. Due to the lack of a large enough sample, these certification areas were grouped into three categories, (1) Elementary, (2) Secondary, and (3) Special Education. In total, 51.3% (n = 134) of the 261 new teachers are teaching in the elementary setting, 63.0% (n = 94) are in secondary (middle-high school) settings, and 12.6% (n = 33) hold a degree in special education.

	<i>Elementary</i>	<i>Secondary</i>	<i>Special Education</i>	<i>Total by EPP</i>
MSU	64	50	22	136
Other	70	44	11	125
Total	134	94	33	261

Performance during graduates' first year of teaching was again examined, but this time disaggregated by area of certification. Findings suggest that MSU graduates outperform graduates from other preparation programs in all three categories: [Elementary: MSU = 4.89 (.91), Other = 4.67 (.84); Secondary: MSU = 4.86 (.67), Other = 4.83 (.87); Special Education: MSU = 5.26 (.66), Other = 4.86 (1.19)]. Effect size estimates were also calculated for each of the three groups with difference between elementary teachers noting a small to moderate effect ($d = .25$) based on preparation program. There appears to be a negligible program effect for secondary graduates ($d = .04$). And while the differences in the performance level of special education teachers are moderate ($d = .43$), one should use caution when interpreting these data given the small sample size. The chart that follows on page 7 display these data.



*(Note: Elementary - MSU = 64, Other = 70; Secondary - MSU = 50, Other= 44; Special Education - MSU = 22, Other = 11)

Problems & Limitations

While these data are promising in terms of outcomes, there are several limitations that must be address. Frist, the sampling methods employed did not include randomization which may impact the generalizability of these results to future cohorts of students. In addition, researchers found that school district utilize both different models as well as different types of scales in the evaluation of their teachers. The reliability of the data provided are assumed based on the state's recommendation that all evaluation models must demonstrate reliable scoring. There is also no way to know which institutions comprise the comparison group of "other" which makes it difficult to know if the various institutions within this group are evenly distributed across districts.

Next Steps for Studying Teacher Effectiveness

Given the fact that the state collects these data in aggregate, researchers recommend that the Missouri Department of Elementary and Secondary Education (MO DESE) add fields to the screen 18a data collection file that would allow districts to report their new teacher data by the institution from which those teachers received their degrees. While there has been some concern as to the anonymity of collecting these data, researchers recommend that there are ways to collect this information in aggregate as to not identify individual teachers and specific educator preparation programs across institutions.

(Note: An additional school district provided data for researchers, however, the information provided was for only on cohort of teachers hired in fall 2014 and included MSU graduates only. While data for this one cohort was provided across three years, varying scales were used each year. When these data were transformed, the lack of variability inflated the overall mean scores for MSU graduates which led researchers to exclude these data at this time.)