

A Statistical Profile of the KCMSD Teaching Workforce

With a Special Emphasis on Teacher Training

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Executive Summary

In this report we present a statistical profile of the teaching workforce in the Kansas City, Missouri school district, paying particular attention to training received by these teachers. Our key findings are:

- The percent minority teachers is much higher in the Kansas City school district as compared to other Jackson County school districts or the rest of Missouri.
- Sources of undergraduate training for the Kansas City teachers are highly diverse, with no single institution or small set of institutions accounting for a majority of the training. The concentration of training in the Kansas City district is lower than other urban districts in the state. The ten most important higher education institutions for Kansas City account for 51 percent of teacher undergraduate degrees, whereas the ten most important institutions for the St. Louis district account for 65 percent of degrees.
- The share of teachers in Kansas City with a Masters degree or higher (36 percent), is lower than in public schools in the rest of Jackson County (56 percent) and the rest of Missouri (45 percent). The share of Kansas City teachers with advanced degrees is similar for black and white teachers.
- At the graduate level, training is more concentrated than at the undergraduate level, with UMKC, CMSU and Webster College accounting for roughly one-half of the awarded Master's degrees. The remaining half of degrees are distributed among a large number of institutions.
- Patterns of teacher training at the undergraduate and graduate level for blacks and whites differ somewhat, with colleges in larger metropolitan areas or Lincoln University accounting for a larger share of degrees for black teachers, and colleges in more rural locations such as CMSU or Northwest Missouri State accounting for a larger share of degrees for white teachers.
- Another source of training diversity occurs at the individual level. Among Kansas City teachers who earn Master's degrees, 70 percent receive their degree from a different institution than that awarding their bachelors degree.

I. Introduction

This study provides a statistical portrait of teachers employed by the Kansas City Missouri school district (KCMSD). The first set of tables provides comparative demographic and other background information on the Kansas City teachers. The primary focus of the report, however, is on the training received by the teachers. As we will see below, the Kansas City teachers receive their training from a wide range of higher education institutions. Not only have the teachers attended a wide variety of teacher training institutions, but the same teacher will often hold degrees from two or more different institutions.

We begin with a brief discussion of the data used for this study. All of the data come from administrative data files maintained by the Department of Elementary and Secondary Education (DESE). The first file is the Certification file (which is, in fact, several files). It contains information on all individuals who hold a Missouri certificate or endorsement to teach in a public school in Missouri and includes records for over 370,000 individuals. It includes not only current teachers but also many individuals who no longer teach in a public school, as well as individuals who never taught in a Missouri public school. In addition, many teachers hold multiple certificates and endorsements. Along with information on field and type of certificate or endorsement, the certification file contains information on the higher education institutions that have awarded degrees to teachers. However, it does not tell us if a teacher is actually employed in KCMSD or any other Missouri school district; in order to determine that we must turn to another file.

The second data source used in this study is a set of files that comprise the DESE “Core Data system.” The Core Data system is a set of linked files containing information on teachers, classes, schools, and school districts. These data are regularly collected by DESE from

Missouri’s 525 school districts. Core data includes various data on teachers, in particular, information on demographics, pay, and teaching assignment. Teacher records in the certification and educator files were matched in order to conduct the analysis for this report.¹

As will be noted below, a small number of records of teachers employed in KCMSD could not be matched to the certification file, meaning that they do not hold any type of Missouri teaching certificate or endorsement. While we know many things about these unmatched teachers, including their level of educational attainment, we will not know the name of the institutions that awarded their degrees. For example, we may know from the Core Data files that teacher X earned a masters degree but we will not know what university awarded that degree.

Unless otherwise indicated when we refer to “KCMSD teachers” we mean all public school teachers who teach in public schools in the geographic boundaries of the school district. This includes teachers who work for the Kansas City school district as well as teachers in the 17 independent charter schools operating in the school district. Appendix B provides descriptive tabulations of charter versus non-charter teachers within KCMSD.

KCMSD Teachers

	Total Teachers (Full and Part-Time)	
	Number	Percent
Employed by KCMSD	2305	86.3
Independent Charter Schools (17)	368	13.8
Total KCMSD Teachers	2673	100.0

¹ In this report we focus on teachers only (i.e., DESE position code 60). We exclude school administrators, counselors, teacher aides, and long-term substitute teachers.

Several tables compare KCMSD teachers to teachers in the rest of Jackson County and to the rest of the state of Missouri. We will use the acronyms in the following chart to refer to those reporting groups.

KCMSD	Kansas City Missouri School District Includes teachers in charter and non-charter schools
ROJC	Rest of Jackson County. This refers to the 11 other school districts in Jackson County: 048066 Fort Osage R-I 048068 Blue Springs R-IV 048069 Grain Valley R-V 048070 Oak Grove R-VI 048071 Lee's Summit R-VII 048072 Hickman Mills C-1 048073 Raytown C-2 048074 Grandview C-4 048075 Lone Jack C-6 048077 Independence 30 048080 Center 58
ROS	Rest of state. All other public school districts in the state, excluding those in Jackson County

II. Background Characteristics of KCMSD Teachers

This first set of charts and tables presents data on experience levels, demographics (race and sex), and educational attainment of teachers in our reporting groups.

Teacher Experience

Table 1 and Chart 1 report a breakdown of teaching experience for KCMSD teachers. Thirty one percent of KCMSD teachers have five or fewer years of teaching experience. This is slightly higher than in the 11 other school districts in the rest of Jackson County (ROJC), but virtually identical to the rest of the state (ROS). On the other hand, the average years of teaching experience in KCMSD (13.9 years) is higher than ROJC (13.0 years) or ROS (12.7 years).

Chart 1: Experience Distribution of KCMSD, ROJC, and ROS Teachers: 2002-03.

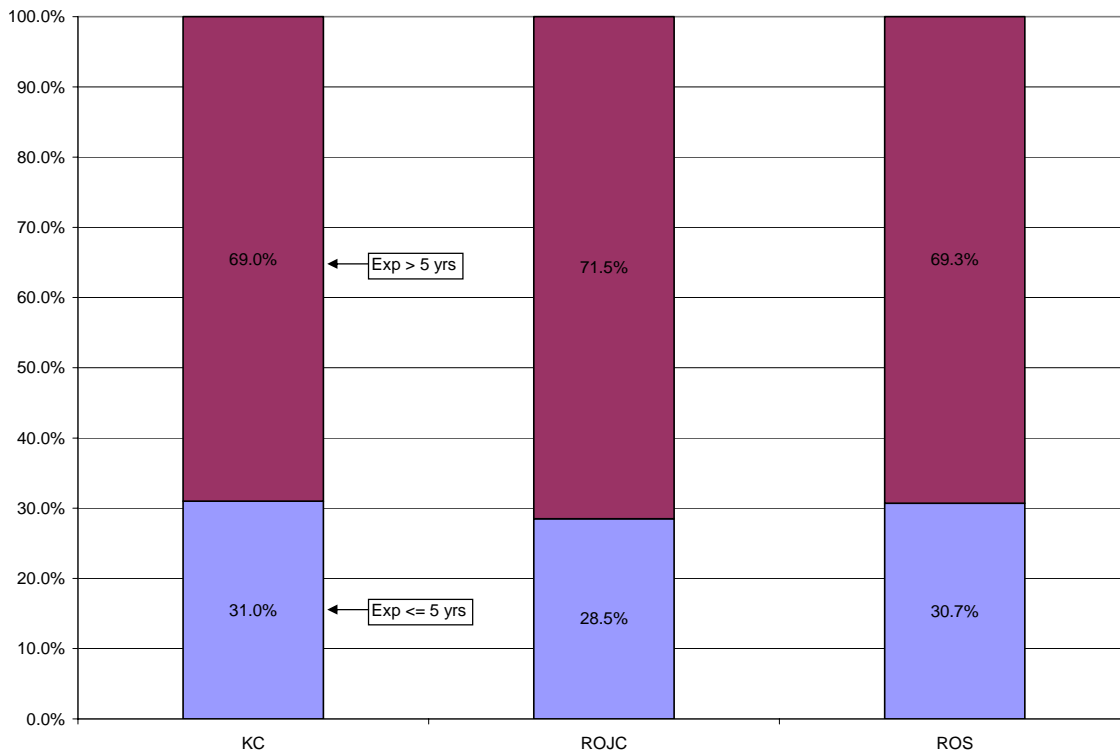


Table 1

Experience of KCMSD, Rest of Jackson County (ROJC), and Rest of State (ROS) Public School Teachers: 2002-03

	KCMSD		ROJC		ROS	
	Number	Percent	Number	Percent	Number	Percent
Experience Five Years Or Less	829	31.0	1,409	28.5	18,462	30.7
Experience Greater Than Five Years	1,844	69.0	3,536	71.5	41,611	69.3
Total Teachers	2,673	100.0	4,945	100.0	60,073	100.0
Average Experience	13.9 years		13.0 years		12.7 years	

Teacher Demographics

Data presented in Table 2 and Chart 2 show that KCMSD has a much larger share of black teachers than ROJC or ROS. White female teachers comprise 43.1 percent of teachers in KCMSD, as compared to 75.3 in ROJC and 73.2 percent in ROS. This difference is largely accounted for by black female teachers, who are 29.3 percent of KCMSD teachers but only 2.9 percent of ROJC and 4.6 percent of ROS teachers. In recent decades the number of black male teachers in public school classrooms has dwindled. In KCMSD black males comprise 8.7 percent of the teaching workforce, but only .7 percent in ROJC and 1.3 percent in ROS. To illustrate this in a different way, while KCMSD employs only 4 percent of Missouri’s public school teachers, it employs 22 percent of Missouri’s black male teachers. Female teachers overall comprise a slightly smaller share of the workforce in KCMSD (75.2 percent), versus ROJC (78.8 percent) and ROS (78.4 percent).

Table 3 reports a breakdown of KCMSD teachers by grade level. White teachers tend to be a bit more concentrated at the elementary grade levels and at high school, where they comprise roughly 60 percent of teachers. In the middle grades roughly one-half of the teachers are white. Table 4 reports demographic breakdowns by primary teaching field. Note that many elementary level teachers in KCMSD are reported in subject-specific groups in Table 4, such as Special Education, Science, etc.

Chart 2: Demographic Profile of KCMSD, ROJC, and ROS Teachers: 2002-03

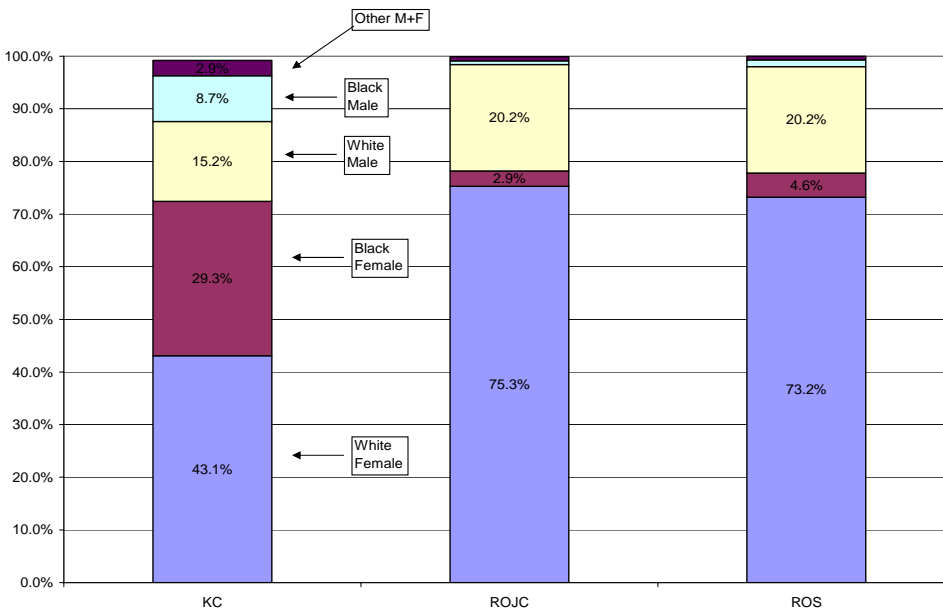


Table 2

Race and Gender of KCMSD, Rest of Jackson County (ROJC), and Rest of State (ROS) Public School Teachers: 2002-03

	KCMSD		ROJC		ROS	
Female	Number	Percent	Number	Percent	Number	Percent
White	1,151	43.1	3,725	75.3	44,003	73.2
Black	784	29.3	143	2.9	2,768	4.6
Other	74	2.8	30	0.6	306	0.5
Total Female	2,009	75.2	3,898	78.8	47,077	78.4
Male	Number	Percent	Number	Percent	Number	Percent
White	405	15.2	1,000	20.2	12,123	20.2
Black	232	8.7	36	0.7	768	1.3
Other	27	1.0	11	0.2	103	0.2
Total Male	664	24.8	1,047	21.2	12,995	21.6
Total Teachers	2,673	100.0	4,945	100.0	60,072	100.0

Table 3

Teacher Demographics by Grade Level:
KCMSD Teachers, 2002-03

	White		Black		Other		Total
	M	F	M	F	M	F	
Elementary							
Number	143	796	58	490	9	50	1,546
Percent	9.2	51.5	3.8	31.7	0.6	3.2	100.0
Middle/JH							
Number	68	122	59	122	5	6	375
Percent	18.1	32.5	15.7	32.5	1.3	1.6	100.0
High School							
Number	183	200	108	149	13	17	670
Percent	27.3	29.9	16.1	22.2	1.9	2.5	100.0
Pre Kindergarten							
Number	1	18	0	10	0	0	29
Percent	3.4	62.1	0.0	34.5	0.0	0.0	100.0
Other Assignments							
Number	10	15	7	20	0	1	53
Percent	18.9	28.3	13.2	37.7	0.0	1.9	100.0

Table 4

KCMSD Teacher Demographics by Teaching Field, 2002-03

	White		Black		Other		Total
	M	F	M	F	M	F	
Elementary							
Number	55	425	27	273	3	32	815
Percent	6.7	52.1	3.3	33.5	0.4	3.9	100.0
PreKindergarten							
Number	1	45	0	18	0	0	64
Percent	1.6	70.3	0.0	28.1	0.0	0.0	100.0
Mathematics							
Number	38	32	26	40	2	1	139
Percent	27.3	23.0	18.7	28.8	1.4	0.7	100.0
Science							
Number	45	37	16	24	3	4	129
Percent	34.9	28.7	12.4	18.6	2.3	3.1	100.0
English							
Number	40	120	18	83	4	12	277
Percent	14.4	43.3	6.5	30.0	1.4	4.3	100.0
Social Studies							
Number	52	33	24	22	2	1	134
Percent	38.8	24.6	17.9	16.4	1.5	0.7	100.0
Special Education							
Number	41	170	15	121	1	4	352
Percent	11.6	48.3	4.3	34.4	0.3	1.1	100.0
Vocational Subjects							
Number	17	21	13	22	0	2	75
Percent	22.7	28.0	17.3	29.3	0.0	2.7	100.0
Miscellaneous Subjects							
Number	76	124	55	63	7	10	335
Percent	22.7	37.0	16.4	18.8	2.1	3.0	100.0
Other Assignments							
Number	39	143	37	117	5	8	349
Percent	11.2	41.0	10.6	33.5	1.4	2.3	100.0

Educational Attainment

Table 5 and Chart 3 report overall levels of educational attainment for KCMSD and comparison teachers. The share of teachers in KCMSD with MA degrees (33 percent) is substantially below ROJC (54.4 percent) and ROS (53.9 percent). Tables 6a and 6b break down the KCMSD attainment by race and gender. Male and female shares of teachers with MA's are very similar (32.8 percent and 33.1 percent, respectively). Relatively more men (4.0 percent) have education specialist or higher degrees than women (2.0 percent). Slightly more white teachers (33.9 percent) have MA's than black teachers (32.3 percent) or other race teachers (27.7 percent). On the other hand, a larger percentage of black teachers and other race teachers have education specialist or higher degrees.

Chart 3: Teacher Educational Attainment in KCMSD, ROJC, and ROS: 2002-03

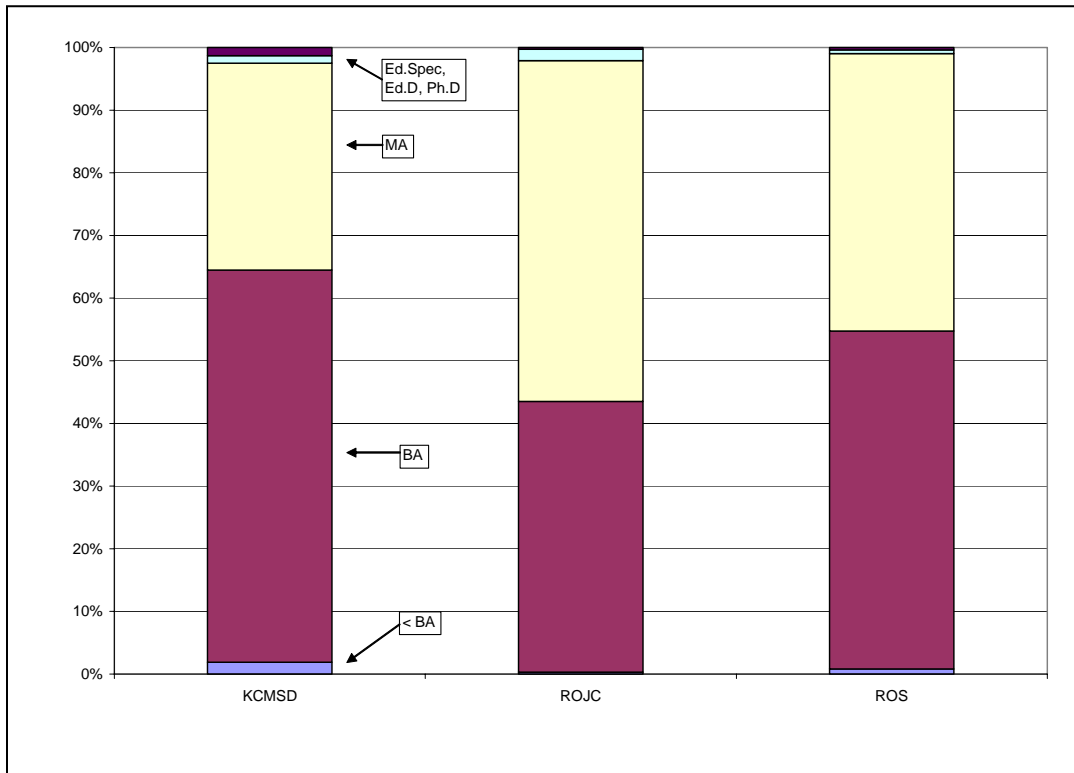


Table 5

Educational Attainment of Teachers in KCMSD, Rest of Jackson County (ROJC), and Rest of Missouri (ROS)

	KCMSD		ROJC		ROS	
	Number	Percent	Number	Percent	Number	Percent
Less Than BA	52	1.9	15	0.3	509	0.8
BA	1,670	62.5	2,135	43.2	32,405	53.9
MA	883	33.0	2,690	54.4	26,567	44.2
Ed. Spec	32	1.2	90	1.8	368	0.6
PhD/EdD	36	1.3	15	0.3	224	0.4
Total Teachers	2,673	100.0	4,945	100.0	60,073	100.0

Table 6a

Educational Attainment of KCMSD Teachers by Sex

	Male		Female	
	Number	Percent	Number	Percent
Less Than BA	15	2.3	37	1.8
BA	405	61.0	1,265	63.0
MA	218	32.8	665	33.1
Ed. Spec	7	1.1	25	1.2
PhD	19	2.9	17	0.8
Total Teachers	664	100.0	2,009	100.0

Table 6b

Educational Attainment of KCMSD Teachers by Race

	White		Black		Other	
	Number	Percent	Number	Percent	Number	Percent
Less Than BA	17	1.1	35	3.4	0	0.0
BA	977	62.8	624	61.4	69	68.3
MA	527	33.9	328	32.3	28	27.7
Ed. Spec	21	1.3	11	1.1	0	0.0
PhD	14	0.9	18	1.8	4	4.0
Total Teachers	1,556	100.0	1,016	100.0	101	100.0

III. Training Profile of KCMSD Teachers

The next set of charts and tables focuses on the training of KCMSD teachers. The key finding that emerges from this examination is that the source of training for teachers in KCMSD is highly diverse – even compared to other urban districts in Missouri. This holds for both the bachelors and MA degrees. By “diverse” we mean that the training is not highly concentrated in a small number of institutions.

Bachelors Degrees

Chart 4 and Table 7 show the distribution of institutions awarding bachelors degrees for all teachers in KCMSD.² In this and all subsequent pie charts we report only the top 10 institutions and group all remaining institutions together. As is seen from Chart 4 the top ten institutions account for the bachelors degrees of only about one-half of the teachers in KCMSD. UMKC is the most common source of bachelors degrees (13.3 percent) followed by CMSU (11.7 percent) and Lincoln University (4.0 percent).

² If a teacher’s records in the certification files included information on multiple bachelors degrees, only the institution for the most recent is counted. Also note that the totals for the charts and tables in this section include teachers who were not found in the certification file: KCMSD (226), ROJC (88).

Chart 4: Distribution of KCMUSD Teacher Training in KCMUSD: Institution Granting Bachelors Degree, All Teachers

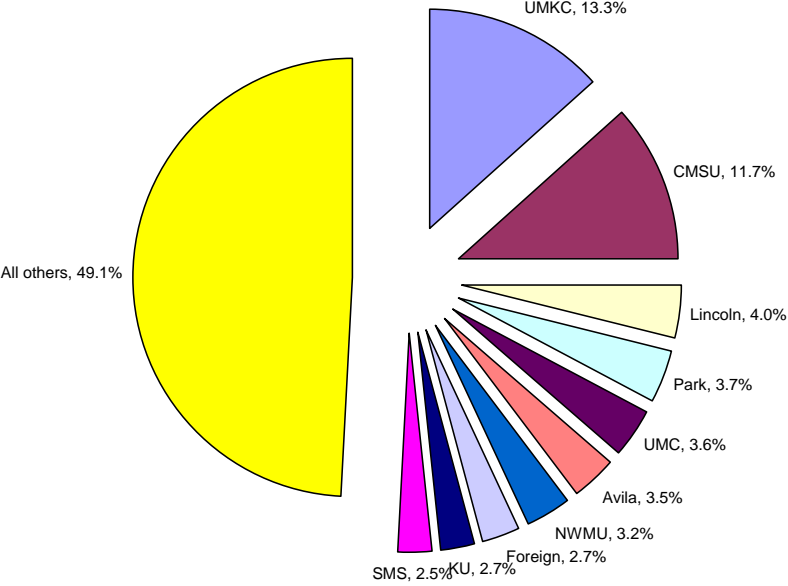


Table 7

Education Institutions Granting Baccalaureate Degree:
 KCMSD and Rest of Jackson County (ROJC) Public School Teachers, 2002-03

Name of Institution	KCMSD		ROJC	
	Number of Teachers	Percent of Teachers	Number of Teachers	Percent of Teachers
University of Missouri-Kansas City	335	13.3	545	11.2
Central Missouri State University	295	11.7	1,280	26.2
Lincoln University	100	4.0	18	0.4
Park College	94	3.7	51	1.0
University of Missouri-Columbia	90	3.6	394	8.1
Avila College	89	3.5	130	2.7
Northwest Missouri State University	80	3.2	282	5.8
All Foreign Countries	69	2.7	13	0.3
University of Kansas	67	2.7	94	1.9
Southwest Missouri State University	63	2.5	253	5.2
KANSAS (unspecified)	60	2.4	83	1.7
University of Arkansas, Pine Bluff	49	1.9	9	0.2
Kansas State University	38	1.5	57	1.2
William Jewell College	36	1.4	141	2.9
Rockhurst College	34	1.3	31	0.6
Missouri Western College	31	1.2	67	1.4
Truman State University	29	1.2	105	2.1
Sub Total	1,559	61.9	3,553	72.7
All Other Institutions	961	38.1	1,333	27.3
Total	2,520	100.0	4,886	100.0

In order to see whether this pattern has persisted over time, Chart 5 and Table 8 report the same top 10 breakdown for KCMSD teachers with five or fewer years of teaching experience. UMKC and CMSU retained the top two positions but Lincoln now falls out of the top 10 altogether. Table 9 reports bachelors degree institutions for teachers with more than five years experience. Perhaps the most notable difference between the younger and older cohorts is the rise of Park College and the decline of Lincoln University.

Chart 5: Distribution of Teacher Training: Institutions Granting Bachelors Degree, Teachers with Five or Fewer Years of Teaching Experience

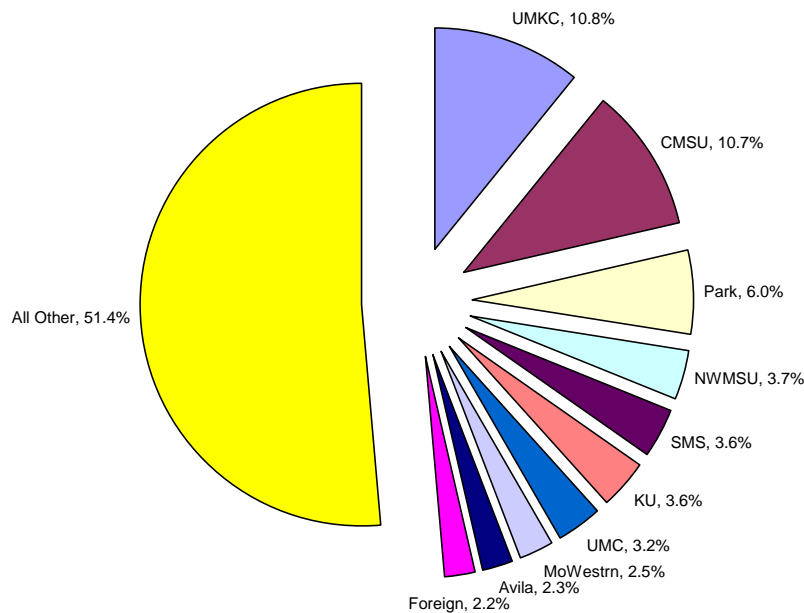


Table 8

Education Institutions Granting Baccalaureate Degree:
Experience Five Years or Less
KCMSD Public School Teachers, 2002-03

Name of Institution	Number of Teachers	Percent of Teachers
University of Missouri-Kansas City	79	10.8
Central Missouri State University	78	10.7
Park College, Parkville	44	6.0
Northwest Missouri State University	27	3.7
Southwest Missouri State University	26	3.6
University of Kansas	26	3.6
University of Missouri-Columbia	23	3.2
Missouri Western College	18	2.5
Avila College	17	2.3
All Foreign Countries	16	2.2
Rockhurst College	16	2.2
Kansas State University	15	2.1
Lincoln University	15	2.1
William Jewell College	12	1.6
Emporia State University	11	1.5
Southwest Baptist College, Bolivar MO	9	1.2
University of Arkansas, Pine Bluff	9	1.2
Mid-America Nazarene College Olathe, KS	8	1.1
Sub Total	449	61.5
All Other Institutions	281	38.5
Total	730	100.0

Table 9

Education Institutions Granting Baccalaureate Degree:
Experience Greater Than Five Years
KCMSD Public School Teachers, 2002-03

Name of Institution	Number of Teachers	Percent of Teachers
University of Missouri-Kansas City	256	14.3
Central Missouri State University	217	12.1
Lincoln University	85	4.7
Avila College, Kansas City	72	4.0
University of Missouri-Columbia	67	3.7
KANSAS (unspecified)	59	3.3
All Foreign Countries	53	3.0
Northwest Missouri State University	53	3.0
Park College, Parkville	50	2.8
University of Kansas	41	2.3
University of Arkansas, Pine Bluff	40	2.2
Southwest Missouri State University	37	2.1
TEXAS (unspecified)	24	1.3
William Jewell College	24	1.3
Kansas State University	23	1.3
Truman State University	22	1.2
Rockhurst College	18	1.0
Sub Total	1141	613.7
All Other Institutions	649	36.3
Total	1,790	100.0

Charts 6 and 7 and Tables 10 and 11 report the same top 10 breakdown for white and black teachers. Some different patterns emerge. For white teachers, CMSU holds the top spot (13.2 percent), followed by UMKC (13.1 percent), and Northwest Missouri State University (NWMSU, 4.7 percent). Note that the top 10 institutions account for 53 percent of white teachers but only 41 percent of black teachers indicating that KCMSD is drawing from an even broader range of higher education institutions for its black teachers.

Chart 6: Distribution of Teacher Training: Institution Granting Bachelors Degree, White Teachers

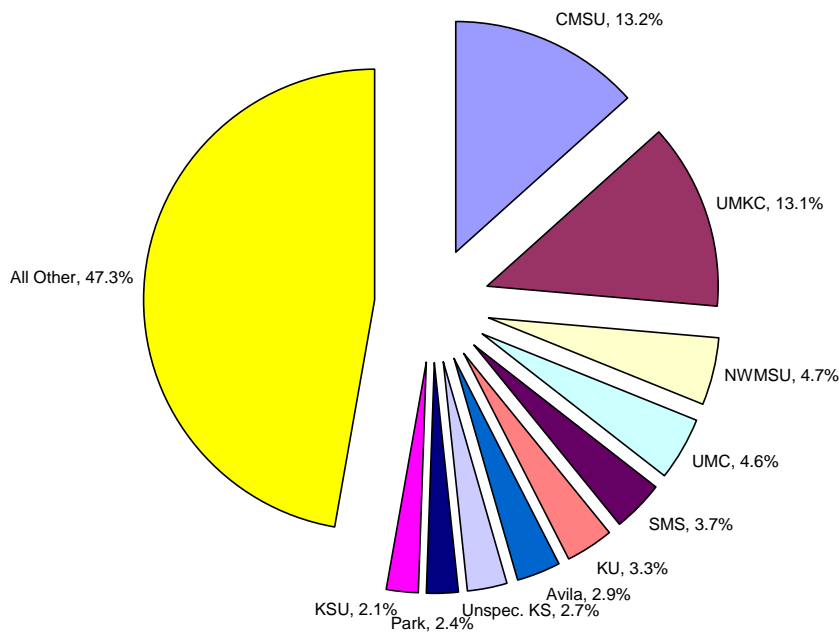


Chart 7: Distribution of Teacher Training: Institution Granting Bachelors Degree, Black Teachers

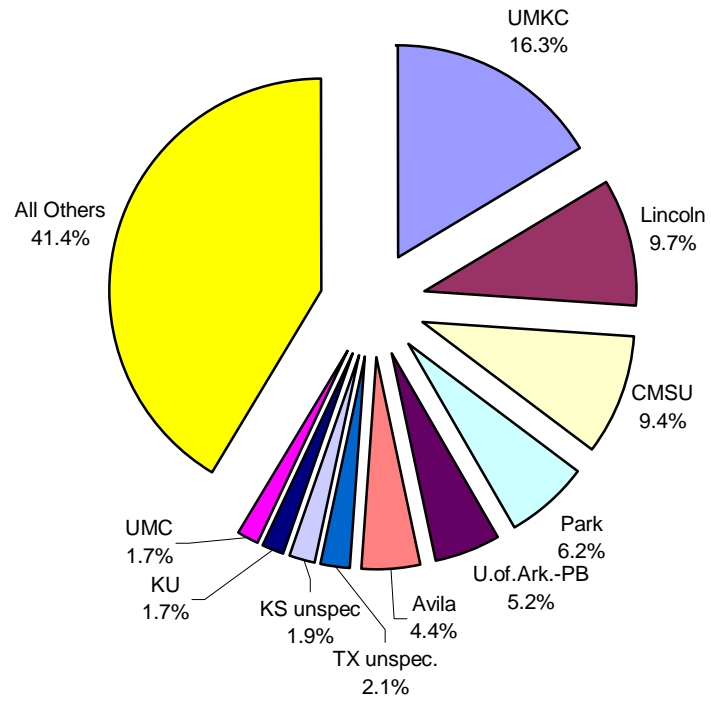


Table 10

Education Institutions Granting Baccalaureate Degree:
 White Teachers, KCMSD Public School Teachers, 2002-03

Name of Institution	Number of Teachers	Percent of Teachers
Central Missouri State University	198	13.2
University of Missouri-Kansas City	197	13.1
Northwest Missouri State University	70	4.7
University of Missouri-Columbia	69	4.6
Southwest Missouri State University	55	3.7
University of Kansas, Lawrence	49	3.3
Avila College, Kansas City	44	2.9
KANSAS (unspecified)	41	2.7
Park College, Parkville	36	2.4
Kansas State University	32	2.1
William Jewell College	32	2.1
All Foreign Countries	24	1.6
Truman State University	22	1.5
Missouri Western College, St.	21	1.4
Southwest Baptist College	19	1.3
Rockhurst College, Kansas City	18	1.2
Pittsburg State University	13	0.9
Sub Total	940	62.6
All Other Institutions	562	37.4
Total	1,502	100.0

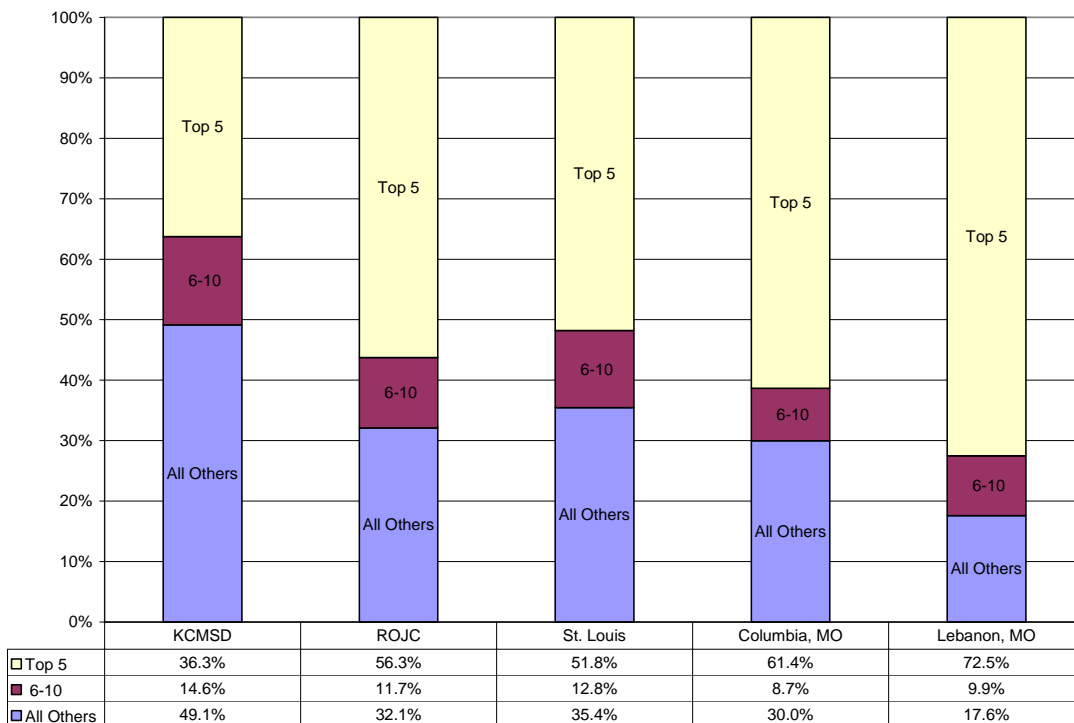
Table 11

Education Institutions Granting Baccalaureate Degree:
Black Teachers, KCMSD Public School Teachers, 2002-03

Name of Institution	Number of Teachers	Percent of Teachers
University of Missouri-Kansas City	151	16.3
Lincoln University	90	9.7
Central Missouri State University	87	9.4
Park College, Parkville	57	6.2
University of Arkansas, Pine Bluff	48	5.2
Avila College, Kansas City	41	4.4
TEXAS (unspecified)	19	2.1
KANSAS (unspecified)	18	1.9
University of Kansas, Lawrence	16	1.7
University of Missouri-Columbia	16	1.7
Langston University, Langston	14	1.5
Rockhurst College, Kansas City	14	1.5
All Foreign Countries	13	1.4
St. Mary College, Leavenworth	11	1.2
Northwest Missouri State University	10	1.1
Ottawa University, Ottawa	10	1.1
Grambling State University	9	1.0
Missouri Western College, St. Joseph	9	1.0
Sub Total	633	68.4
All Other Institutions	293	31.6
Total	926	100.0

Finally, in Chart 8 we find that the institutional training diversity is higher in KCMSD than in other urban school districts in the state. We report a measure of training concentration for KCMSD and several other school districts in the state. The top 5 institutions account for 36.3 percent of teachers in KCMSD, but 56.3 percent in ROJC. The concentration rate is also higher in St. Louis and Columbia, Missouri. The Lebanon Missouri school district illustrates the very high level of training concentration found in the typical rural school district.

Chart 8: Concentration of Undergraduate Teacher Training in KCMSD and Other Missouri School Districts: 2002-03 Teachers



MA Degrees

The concentration rate is higher for MA degrees than for bachelors degrees. This is perhaps not surprising since most teachers earn their MA after taking a teaching job. Thus, while KCMSD is attracting teachers who earned bachelors degrees all over the world, most of the Masters degrees are earned locally. Chart 9 and Table 12 show that the top 5 institutions account for 55.7 percent of all MA degrees in KCMSD. Nearly 30 percent of KCMSD teachers who hold MA degrees earned their degrees at UMKC. As with bachelors degrees, the concentration rate is somewhat lower in KCMSD than ROJC.³ The statistics in Tables 13 and 14 reveal somewhat different patterns for white and black teachers, but the differences are not as great as with undergraduate training. For both whites and blacks, UMKC and CMSU hold the top two spots. However, relatively more black teachers earned MA's from Webster College.

³ Our only source of data on the institutions that awarded degrees are the certification files. Thus, the data in Chart 10 and Table 12 pertain to teachers whose MA is recorded in the certification file. However, the MA totals in Chart 10 and Table 12 are roughly 200 fewer than the actual number of KCMSD teachers reported in Core Data to have MA degrees. Nearly all of the difference is accounted for by older teachers with twenty five or more years of teaching experience who hold lifetime teaching certificates (which were not awarded between 1988 and 2003). These teachers did not need to earn MA degrees for continued certification, hence their records were not updated in the certification file.

Chart 9: Distribution of Teacher Training: Institution Granting MA Degree,
All KCMSD Teachers

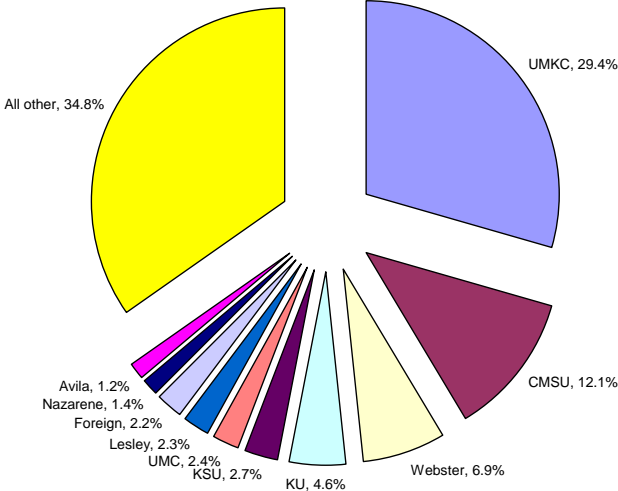


Table 12

Education Institutions Granting Masters Degree:
 KCMSD and Rest of Jackson County (ROJC) Public School Teachers, 2002-03

Name of Institution	KCMSD		ROJC	
	Number of Teachers	Percent of Teachers	Number of Teachers	Percent of Teachers
University of Missouri-Kansas City	216	29.4	316	21.6
Central Missouri State University	89	12.1	402	27.5
Webster College, Webster Grove	51	6.9	153	10.5
University of Kansas	34	4.6	78	5.3
Kansas State University	20	2.7	16	1.1
University of Missouri-Columbia	18	2.4	65	4.4
Lesley College, Cambridge MA	17	2.3	23	1.6
All Foreign Countries	16	2.2	4	0.3
Mid-America Nazarene College, Olathe KS	10	1.4	15	1.0
Avila College, Kansas City	9	1.2	15	1.0
Emporia State University	9	1.2	5	0.3
Northwest Missouri State University	9	1.2	42	2.9
Baker University, Baldwin City, KS	7	1.0	18	1.2
KANSAS (unspecified)	7	1.0	19	1.3
TEXAS (unspecified)	7	1.0	19	1.3
Sub Total	519	70.6	1,171	80.0
All Other Institutions	216	29.4	293	20.0
Total	735	100.0	1,464	100.0

Table 13

Education Institutions Granting MA or Higher Degree:
White Teachers, KCMSD Public School Teachers, 2002-03

Name of Institution	Number of Teachers	Percent of Teachers
University of Missouri-Kansa City	129	29.6
Central Missouri State University	61	14.0
University of Kansas, Lawrence	24	5.5
Webster College, Webster Grove	18	4.1
University of Missouri-Columbia	14	3.2
Lesley College, Cambridge, MA	12	2.8
Northwest Missouri State University	9	2.1
Emporia State University	6	1.4
KANSAS (unspecified)	6	1.4
All Foreign Countries	5	1.1
Kansas State University	5	1.1
Southwest Missouri State University	5	1.1
Sub Total	294	67.4
All Other Institutions	142	32.6
Total	436	100.0

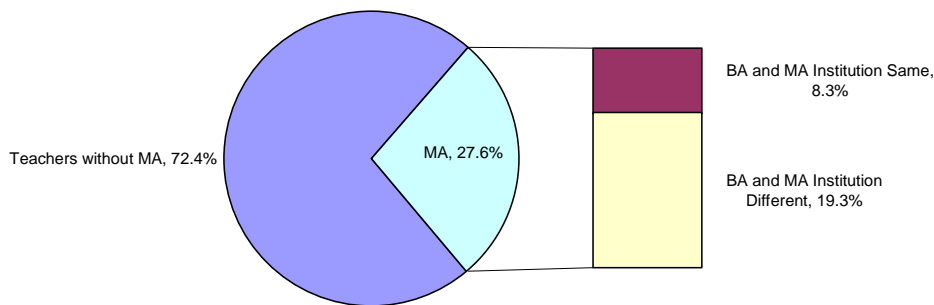
Table 14

Education Institutions Granting MA or Higher Degree:
 Black Teachers, KCMSD Public School Teachers, 2002-03

Name of Institution	Number of Teachers	Percent of Teachers
University of Missouri-Kansas City	79	30.0
Webster College, Webster Grove	33	12.5
Central Missouri State University	24	9.1
Kansas State University	14	5.3
University of Kansas, Lawrence	8	3.0
Avila College, Kansas City	6	2.3
All Foreign Countries	5	1.9
Lesley College, Cambridge, MA	4	1.5
Lincoln University, Jefferson City	4	1.5
Mid-America Nazarene College	4	1.5
Rockhurst College, Kansas City	4	1.5
University of Missouri-Columbia	4	1.5
Emporia State University	3	1.1
Jackson State University	3	1.1
Southern University & A&M	3	1.1
TEXAS (unspecified)	3	1.1
Sub Total	201	76.4
All Other Institutions	62	23.6
Total	263	100.0

Finally, Chart 10 illustrates another aspect of training heterogeneity – institution-switching by individuals. Not only do the institutions providing the training vary widely between teachers, but the same teachers frequently receive training from more than one institution. Of the 27.6 percent of teachers reporting an MA in the certification file, 70 percent reported different institutions for the MA and BA, and only 30 percent reported receiving a BA and MA from the same institution.

Chart 10: Institution Switching: Teachers with Bachelors and MA From Same and Different Institutions



IV. Teacher Turnover By Institution

In this section we report turnover of teachers between 2001-02 and 2002-03 in KCMSD by teacher training institution. We focus on teachers with ten or fewer years of teaching experience and report two measures of turnover: exit from KCMSD and exit from all Missouri public schools. The former means that the teacher in question exited KCMSD but may have been working in another Missouri public school. The latter means that the teacher in question is no longer working in KCMSD nor any other Missouri public school. Since we are working with Missouri administrative data, we cannot determine whether exiting teachers are teaching in another state. The obvious example for KCMSD would be teachers leaving for jobs in a Kansas public school.

Simple tabulations of teacher turnover overall and by teacher training institution are presented in Charts 11 and 12 and Table 15. The first of these pairs reports exit rates from KCMSD and the second reports exit rates from all Missouri public schools. The difference between the two rates represents teachers who quit KCMSD schools and who are reemployed in another Missouri public school. We report the top ten bachelors institutions for all teachers (Table 7). Since the number of teachers from any single institution is relatively small, possibly as few as fifty teachers, we report the average turnover rate and a 95 percent confidence interval for the average rate. Taking into account sampling error associated with the small number of teachers, we find few significant differences between the teacher training institutions.

It may be, however, that statistically significant differences are masked by differences in the composition of teachers we are comparing in this single two-year interval. A consistent finding in the research literature on teacher turnover is a negative relationship between teacher experience and the probability that a teacher exits a district or the profession during the first

decade or so of a teacher's career. Research has also identified differences in exit rates by gender. Young females are more likely to quit teaching than men, however often these are temporary spells out of the workforce for childrearing. There is little evidence of black-white differences in exit behavior (Murnane, et.al., 1991).

This means that if we are comparing turnover rates by teacher training institutions for purposes of assessing the characteristics of program graduates (e.g., commitment to teaching in an urban school district), then it is important to statistically control for experience and demographic characteristics of teachers in making the comparisons. For example, it may be that graduates from college A had a higher turnover rate than from college B between the two years we are examining. That may tell us something about the graduates of college B. However, it may simply reflect differences in average experience of teachers in the KCMSD workforce. In the 2001-02 KCMSD teaching workforce, it may be that there are relatively more new teachers who matriculated from College B than from College A. Thus, even if A and B teachers were identical in the propensity to quit, we would expect to see higher average turnover of College B teachers simply because the share of new teacher is higher for B than for A.

Thus, we need to statistically control for teacher experience and teacher demographics when making the program comparisons if we are to draw any inferences about the programs themselves. In order to do this, we fit the following linear probability model:

$$\text{Pr}(\text{turnover}=1) = B_0 + B_1 X + B_2 \text{EXP} + B_3 \text{PROGRAM} + e$$

The unit of observation is a teacher employed in KCMSD during the 2001-2002 school year. X denotes a vector of teacher demographic characteristics (gender, race), EXP is the years of teaching experience, and PROGRAM is a vector of variables indicating undergraduate college. The estimates of our model are presented in Tables 16 and 17 below. In Table 16 the

dependent variable is the probability of exit from the KCMSD school system and in Table 17 the dependent variable is probability of exit from all public schools in Missouri.

The regression model in the column labeled (1) includes only the teacher covariates (experience, gender, race). Here we find that the only statistically significant variable is teaching experience. Over the range of experience in our sample (1-10 years), each additional year of teaching experience lowers the average exit rate from KCMSD by .011 (1.1 percent) and the exit rate from Missouri public schools by .008 (.8 percent). The estimates in column (2) include dummy variables indicating the college attended. We have included dummy variables for the top ten bachelors institutions and a dummy variable for “all other institutions.” The sign on these institution dummy variables tells us how the institution compares to the overall mean.⁴ A negative sign means the turnover rate is below average and a positive sign indicates that it is above average. If the coefficient has an asterisk next to it (*) then it is statistically significant, with the level of significance given by the number of asterisks.

Most of the institution coefficients are not statistically significant (meaning that we cannot reject the null hypothesis that the coefficient is actually zero). There are a couple of exceptions. Graduates from CMSU have a significantly lower exit rate from KCMSD and from Missouri public school teaching overall, and KU graduates, perhaps not surprisingly, are more likely to quit Missouri public schools than are other young teachers.

⁴ For the technical reader we note that the models in column (2) are linearly constrained OLS estimates. The linear constraint we impose forces the coefficients of all the institution dummy variables to sum to zero. This means: a) we do not need to omit one dummy variable in estimation, and b) the coefficient measures the difference between a graduate from the indicated institution and the sample average of all institutions.

Chart 11

Percent KCMSD Teachers With Ten or Fewer Years Experience Who Exited KCMSD Public Schools By Bachelors Degree Institution: 2001-02 to 2002-03
(95 percent confidence interval on institution rates)

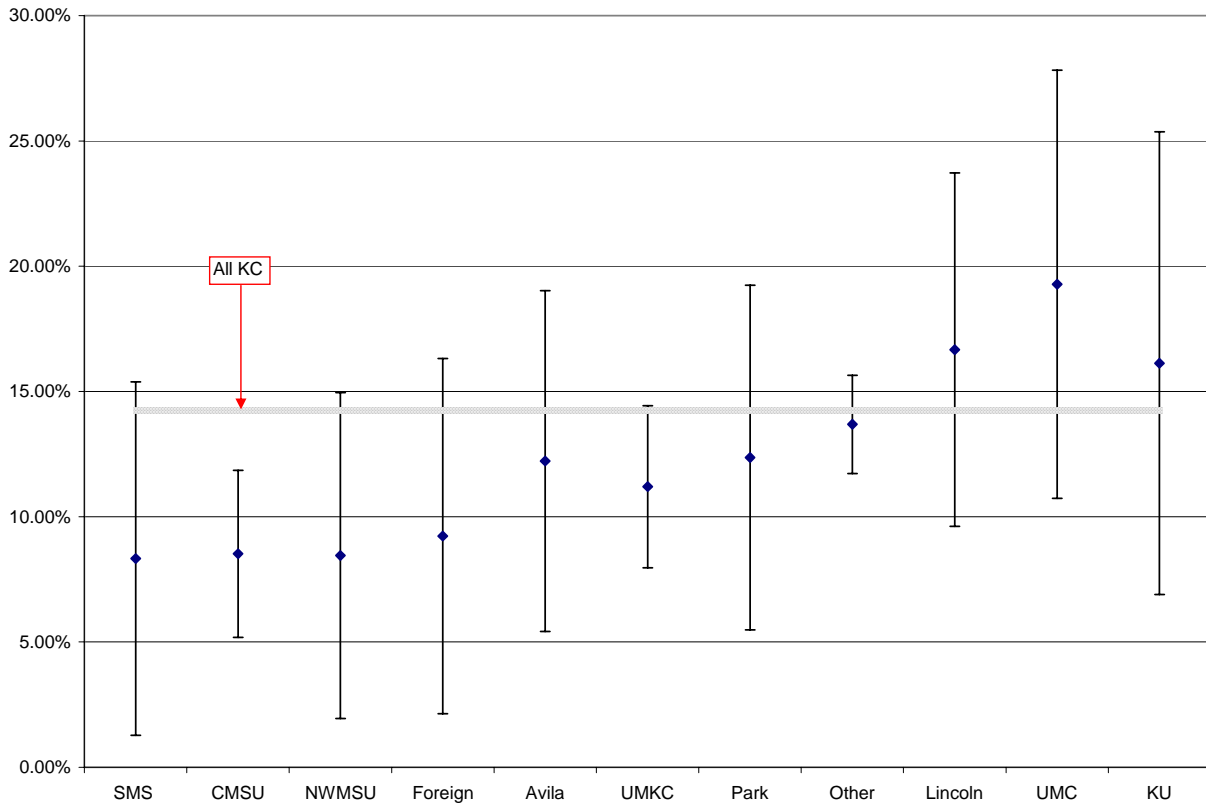


Chart 12

Percent of KCMSD Teachers With Ten or Fewer Years Experience Exiting Missouri Public Schools By Bachelors Degree Institution: 2001-02 to 2002-03
(95 percent confidence interval on institution rates)

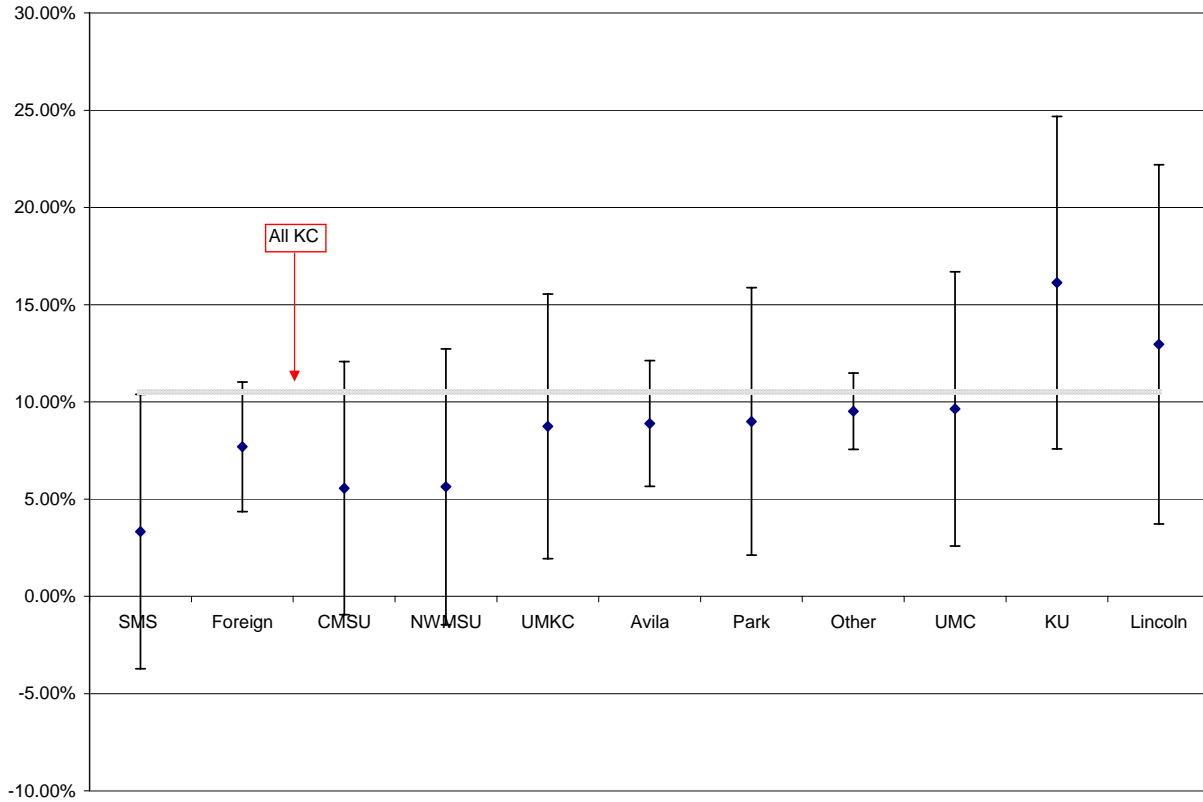


Table 15

Percent of KCMSD Teachers with Ten or Fewer Years Experience Exiting KCMSD and Missouri Public Schools By Bachelors Degree Institution: 2001-02 to 2002-03

	Left KC	Standard Error	Left MO	Standard Error
All KC	14.24%	.69%	10.50%	0.61%
SMS	8.33%	3.60%	3.33%	2.34%
CMSU	8.52%	1.70%	5.55%	1.40%
NWMSU	8.45%	3.32%	5.63%	2.76%
Foreign	9.23%	3.62%	7.69%	3.33%
Avila	12.22%	3.47%	8.88%	3.02%
UMKC	11.20%	1.65%	8.74%	1.48%
Park	12.36%	3.51%	8.99%	3.05%
Lincoln	16.67%	3.60%	12.96%	3.25%
UMC	19.28%	4.36%	9.64%	3.26%
KU	16.13%	4.71%	16.13%	4.71%
All Other	13.69%	1.00%	9.52%	0.86%

Table 16

OLS Estimates of Teacher Turnover Model

Dependent Variable = Left KCMSD Between Fall 2002 and Fall 2003

Teachers with 10 or Fewer Years Teaching Experience in Fall 2002

	(1) Estimated Coefficient	Standard Error	(2) Estimated Coefficient	Standard Error
Experience	-.011***	0.004	-.011***	0.004
Male	-.016	0.254	-.017	0.025
White	-.021	0.058	-.019	0.061
Black	-.064	0.062	-.064	0.062
Other Race	---	---	---	---
University of Missouri- Kansas City	---	---	.006	.031
Central Missouri State University	---	---	-.087**	.036
Lincoln University	---	---	.062	.066
Park College	---	---	-.048	.045
University of Missouri- Columbia	---	---	.053	.063
Avila College	---	---	-.001	.065
Northwest Missouri State University	---	---	-.017	.065
All Foreign Countries	---	---	-.015	.058
University of Kansas	---	---	.086	.063
Southwest Missouri State University	---	---	-.037	.061
All Other Institutions	---	---	-.001	.023
N	998	998	998	998

Asterisks indicate level of statistical significance: * 10 percent, ** 5 percent, *** 1 percent.

Table 17

OLS Estimates of Teacher Turnover Model

Dependent Variable = Left MO Public School Teaching Between Fall 2002 and Fall 2003
 Teachers with 10 or Fewer Years Teaching Experience in Fall 2002

	(1) Estimated Coefficient	Standard Error	(2) Estimated Coefficient	Standard Error
Experience	-.009***	0.004	-.011***	0.004
Male	.006	0.022	-.006	0.226
White	-.033	0.051	-.025	0.054
Black	-.062	0.053	-.060	0.055
Other Race	---	---	---	---
University of Missouri- Kansas City	---	---	.022	.028
Central Missouri State University	---	---	-.088***	.032
Lincoln University	---	---	.095	.059
Park College	---	---	-.044	.040
University of Missouri- Columbia	---	---	.019	.056
Avila College	---	---	.001	.058
Northwest Missouri State University	---	---	-.057	.058
All Foreign Countries	---	---	-.013	.052
University of Kansas	---	---	.125**	.056
Southwest Missouri State University	---	---	-.061	.054
All Other Institutions	---	---	-.000	.020
N	998	998	998	998

Asterisks indicate level of statistical significance: * 10 percent, ** 5 percent, *** 1 percent.

References

Murnane, Richard J., Judith D. Singer, John B. Willett, James J. Kemple, Randall J. Olsen.
1991. Who Will Teach? Policies That Matter. Cambridge, MA: Harvard University Press.

Appendix A

Table A1

Rest of Jackson Country School Districts

048066	Fort Osage R-I
048068	Blue Springs R-IV
048069	Grain Valley R-V
048070	Oak Grove R-VI
048071	Lee's Summit R-VII
048072	Hickman Mills C-1
048073	Raytown C-2
048074	Grandview C-4
048075	Lone Jack C-6
048077	Independence 30
048078	Kansas City 33
048080	Center 58

Total Degrees:

The degrees received by the teachers in the Missouri teacher workforce were obtained from an administrative file (tc_educator_degrees) that is developed and maintained by DESE. A total of 301,577 teachers with 392,874 degrees are recorded in this file. The degree types with their descriptive titles are presented in the following table.

Table A2

Degree Types in DESE Certification Files

BAG	AGRICULTURE
BAJ	B ARTS IN JOURNALISM
BAM	BACH OF MUSIC OR MATH
BBA	BACHELOR OF BUS ADMIN
BED	BACH OF EDUCATION
BFA	BACH FINE ARTS
BLS	LIBRARY SCIENCE
BM	BACHELOR OF MUSIC
BME	B OF ARTS IN MUSIC ED
BS	BACHELOR OF SCIENCE
BSA	BACH SC IN AGRICULTURE
BSE	BACH SC IN EDUCATION
MA	MASTER OF ARTS
MAE	MASTER OF ARTS IN ED
MAM	MASTER OF ARTS - MUSIC
MAT	MASTER OF ARTS - TEACHING
MBA	MASTER OF BUS ADMIN
MED	MASTER OF EDUCATION
MFA	MASTER OF FINE ARTS
MLS	MASTER OF LIBRARY SCIENCE
MM	MASTER OF MUSIC
MME	MASTER OF MUSIC ED
MS	MASTER OF SCIENCE
MSE	MASTER OF SCIENCE ED
AME	MASTERS OF ART IN ED
AM	MASTER OF ARTS
DA	DOCTOR OF ARTS
DM	DOCTOR OF MUSIC
DMA	DOCTOR OF MUSICAL ARTS
EDD	DOCTOR OF EDUCATION
PHD	DOCTOR OF PHILOSOPHY
EDS	EDUCATION SPECIALISTS

Appendix B

Tabulations for Teachers Employed in Independent Charter Schools and in KCMSD Schools

Table B1

Independent Charter Schools Operating In KCMSD:
2002-2003 Teacher Employment

School Name	Number of Teachers	Percent of Teachers
ACADEMIE LAFAYETTE	26	7.5
ACADEMY OF KANSAS CITY	24	6.9
ALTA VISTA CHARTER SCH.	12	3.5
B. BANNEKER CHARTER ACADEMY	14	4.0
BROOKSIDE CHARTER SCH.	11	3.2
DELLA LAMB ELEM.	26	7.5
DERRICK THOMAS ACADEMY	26	7.5
DON BOSCO EDUCATION CTR.	12	3.5
EDISON EDUCATIONAL VILLAGE	19	5.5
GENESIS SCHOOL INC.	8	2.3
GORDON PARKS ELEM.	17	4.9
HOGAN PREPARATORY ACADEMY	30	8.7
LEE A. TOLBERT COM. ACADEMY	35	10.1
SCUOLA VITA NUOVA	17	4.9
SOUTHWEST CHARTER SCH.	36	10.4
UNIVERSITY LEADERSHIP ACADEMY	19	5.5
URBAN COM. LEADERSHIP ACADEMY	14	4.0
Total Teachers	346	100.0

Table B2

KCMSD Teachers by Level of School

	KC (n=2,327)		Charter (n=346)	
	Number	Percent	Number	Percent
Elementary	1,352	76.7	215	62.1
Middle School	358	20.3	14	4.0
High School	564	32.0	117	33.8
Other	53	3.0	0	0.0
Total Teachers	2,327	100.0	346	100.0

Table B3

KCMSD and Independent Charter School Teacher Demographics

	Teachers in KCMSD Schools		Teachers in Independent Charter Schools		Totals for all KCMSD Schools	
	Number	Percent	Number	Percent	Number	Percent
Female						
White	995	56.2	156	65.5	1,151	57.3
Black	710	40.1	74	31.1	784	39.0
Other	66	3.7	8	3.4	74	3.7
Total Female	1,771	100.0	238	100.0	2,009	100.0
Male						
White	334	60.1	71	65.7	405	61.0
Black	202	36.3	30	27.8	232	34.9
Other	20	3.6	7	6.5	27	4.1
Total Male	556	100.0	108	100.0	664	100.0
Total Teachers	2,327	87.1	346	12.9	2,673	100.0

Table B4

Experience of Teachers in KCMSD Schools and Independent Charter Schools

	Teachers in KCMSD Schools		Teachers in Independent Charter Schools	
	Number	Percent	Number	Percent
Experience Five Years Or Less	641	27.6	188	54.3
Experience Greater Than Five Years	1,686	72.5	158	45.7
Total All Teachers	2,327	100.0	346	100.0
Average Experience	14.6 years		13.0 years	

Table B5

Educational Attainment of Teachers in KCMSD Schools and Independent Charter Schools

	Teachers in KCMSD Schools		Teachers in Independent Charter Schools	
	Number	Percent	Number	Percent
Less Than BA	43	1.8	9	2.6
BA	1,433	61.6	237	68.5
MA	785	33.7	98	28.3
Ed. Spec	31	1.3	1	0.3
PhD	35	1.5	1	0.3
Total Teachers	2,327	100.0	346	100.0

Appendix C

Each teacher from the Core Data files was matched to the Certification file to determine which type of certificates he or she held. It is possible for an individual teacher to simultaneously hold multiple certificates. Table C1 shows the number of certificates held by the teachers in our reporting groups. State-wide, there were 1,817 teachers who did not have a certificate record in the data set. The nearly 66,000 teachers who did have certificate records held more than 130,000 certificates.

Table C1

Certificates Held by Teachers in KCMSD, ROJC, and ROS

	KCMSD (n=2,327)		KC Charters (n=346)		ROJC (n=4,945)		ROS (n=60,073)	
	Number of Certificates	Percent of Certificates	Number of Certificates	Percent of Certificates	Number of Certificates	Percent of Certificates	Number of Certificates	Percent of Certificates
ADMIN I	20	0.5	2	0.4	46	0.5	848	0.7
ADMIN II	19	0.5	1	0.2	26	0.3	213	0.2
ADULT ED/LIT	8	0.2	8	1.8	10	0.1	208	0.2
CPC	320	8.2	14	3.1	744	8.2	9,080	7.7
GUID I	7	0.2	---	0.0	14	0.2	295	.3
GUID II	---	0.0	---	0.0	---	0.0	1	0.0
LIFETIME	2,148	55.0	164	36.6	4,027	44.5	52,162	44.3
PC I	196	5.0	82	18.3	866	9.6	11,002	9.3
PC II	675	17.3	103	23.0	2,729	30.2	34,916	29.6
PC III	2	0.1	1	0.2	6	0.1	64	0.05
PC IV	2	0.1	50	11.2	2	0.0	26	0.02
PROVISIONAL	240	6.1	19	4.2	355	3.9	5,202	4.4
TEMP AUTH	158	4.0	4	0.9	63	0.7	1,154	1.0
VOC I	63	1.6	---	0.0	56	0.6	1,133	1.0
VOC II	47	1.2	---	0.0	98	1.1	1,473	1.3
VOC III (10Yrs)	---	0.0	---	0.0	---	0.0	2	0.0
Total Certificates	3,905	100.0	448	100.0	9,042	100.0	117,779	100.0

We determined the type of teaching certificate(s) held by each individual coded as a teacher in Core Data. We retrieved up to four certificates for each teacher and categorized it as a regular teaching certificate (CPC, LIFETIME, PC I – PC IV, and VOC certificates), a non-regular teaching certificate (PROVISIONAL and TEMP AUTH certificates), or some other certificate (ADMIN, ADULT ED, and GUID certificates). We then examined how many of the teachers in Missouri held each type of certificate. Those results are reported in table C2.

Again, it is possible for an individual teacher to be represented multiple times in Table C2. However, the data indicate that a smaller percentage of the teachers in the KCMSD work force hold a regular teaching certificate. The district has larger proportions with non-regular teaching certificates or no certificates at all than do the other districts in ROJC and ROS.

Table C2

Number of Teachers Holding Various Types of Certificates

	KCMSD (n=2,327)		KC Charters (n=346)		ROJC (n=4,945)		ROS (n=60,073)	
	Number of Teachers	^a Percent of Teachers	Number of Teachers	^a Percent of Teachers	Number of Teachers	^a Percent of Teachers	Number of Teachers	^a Percent of Teachers
Teachers Holding Regular Teaching Certificates	1,913	82.2	217	62.7	4,647	94.0	56,046	93.3
Teachers Holding Non-Regular Teaching Certificates	315	13.5	54	15.6	330	6.7	4,417	7.4
Teachers Holding Other Certificates	36	1.5	11	3.2	77	1.6	1,173	2.0
Teachers with No Certificates in the Data Set	143	6.1	83	24.0	88	1.8	1,503	2.5

^a Percents do not add to 100% because teachers with multiple types of certificates are counted multiple times.

Table C3

Teachers with Combinations of Certificate Types

	KCMSD (n=2,327)		KC Charters (n=346)		ROJC (n=4,945)		ROS (n=60,073)	
	Number of Teachers	Percent of Teachers	Number of Teachers	Percent of Teachers	Number of Teachers	Percent of Teachers	Number of Teachers	Percent of Teachers
Holding both Regular and Non-Regular Teaching Certificates	48	2.1	11	3.2	124	2.5	1,963	3.3
Holding a Regular Teaching and Other Certificates	31	1.3	7	2.0	71	1.4	1,071	1.8
Holding both Non-Regular and Other Certificates	1	0.04	1	0.3	2	0.04	32	0.05
Holding ONLY an Other Certificate	4	0.2	3	0.9	4	0.09	70	0.1

The data in Table C3 reflect that many public school employees wear multiple hats and often teach multiple subjects. There are very few individuals who are teaching with only an Administrative or Guidance certificate. It is likely teachers with regular and non-regular teaching credentials have been assigned to teach courses for which they do not hold regular teaching certificates and have been granted either Temporary Authorization or Provisional certifications in those other subject areas. Finally, teachers who hold both regular teaching certificates and other certificates could represent teachers who have completed requirements for job changes, but who have elected to remain in the classroom.