

The Math and Science Teaching Workforce in the KC Metro Area

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Executive Summary

This study provides a descriptive statistical profile of the math and science teaching workforce in 22 school districts in Kansas City, Missouri region (Clay, Jackson and Platte counties). We also report separately tabulations for the Kansas City, Missouri school district (KC district), and independent charter schools operating within this district.

- During the 2004-05 school year there were 634 math and 596 science teachers in the traditional public schools in the Kansas City (MO) region. Roughly one-half (50 and 51 percent, respectively) are in high schools, with most of the remainder at the middle or junior high level. In addition there were 33 math and 32 science teachers in the 17 independent charter schools.
- The number of math and science teachers has increased between the 2000-01 and 2004-05 school years. For the KC district math and science teachers grew by 17 and 9 percent, respectively. For the entire region the growth rates for science and math were 9 and 5 percent respectively. The math growth tended to occur at the middle and secondary level, whereas the science growth was concentrated in the middle grades.
- The majority of math and science teachers in the region and in the KC district are white, but the share of minority teachers grew since 2001.
- Nearly all math and science teachers in 2005 devoted 100 percent of their teaching effort to their relevant field. This increased since 2001.
- The vast majority of the science and math teachers hold regular certification in their teaching field. Among the remainder, most hold Provisional or Temporary Authorization Certificates (TAC's).
- The out-of-field teachers in the Middle School / Junior High school tier are overwhelmingly in middle schools and hold elementary, as opposed to math or science, certification.
- There is substantial turnover of math and science teachers. In the region, only 65 percent of the math teachers in 2001 were still teaching math in the region in 2005. The retention rate for science teachers was 66 percent during this same time period.. These rates were lower still in the KC district, 52 and 54 percent, respectively.
- In the region the number of certified applicants per vacancy is generally lower in math and science than in other teaching fields, suggesting recruitment challenges.

1. Introduction

In this report we examine the math and science teaching workforce in the Kansas City, Missouri region (Clay, Jackson and Platte counties). Our study is limited to public school teachers and schools (including charter schools). Even though we will typically make abbreviated reference to “math teachers” or “science teachers,” what we really mean are public school teachers in either case. Unfortunately, teacher level records are not available for private and parochial school educators. The Missouri Department of Elementary and Secondary Education (DESE), the source of data for all of our analysis, maintains very little data on private schools, teachers, or students.

We make use of several data files maintained by DESE. Most of our educator data comes from the Core Data system, which provides administrative data on every teacher and school in the state. In particular, the Core Data system not only allows us to identify all teachers in the state, but it also allows us to identify all of their teaching assignments during the regular school day, and, in particular, assigned math and science courses. A second important administrator file is the Certification file. This file tells us about the certificates and endorsements held by teachers, with some limited data on their educational background.

We define a science teacher as an educator who teaches at least one science course during the day, regardless of his training or certification credentials. Similarly a math teacher is a teacher who teaches at least one math course. Clearly there are other ways to define a math or science teacher. One might set the bar higher and define a math teacher as an educator who devotes at least half or 75 percent of their daily teaching minutes to math. As we will see below, these different definitions make virtually no difference in our analysis. In the KC region, science and math teachers tend to concentrate their teaching effort almost entirely within their respective fields.

In nearly all of the tables, we divide the KC region math and science teaching workforce into three groups: the Kansas City region (less independent charter schools), the Kansas City (MO) school district (less independent charter schools), and independent charter schools operating within the geographic boundaries of the KC district. The following districts are defined as “KC region” in this report (with charters at the end):

KC Region School Districts (2005 data)

District Name	Number of Schools	Number of Students	Math Teachers	Science Teachers
Kansas City 33	71	29,618	120	105
North Kansas City 74	28	17,193	84	44
Lee's Summit R-VII	24	16,134	60	55
Blue Springs R-IV	21	13,434	59	60
Independence 30	21	11,512	36	35
Park Hill	15	9,498	48	81
Raytown C-2	15	8,837	39	35
Liberty 53	15	8,161	36	37
Hickman Mills C-1	16	7,094	30	28
Fort Osage R-I	9	4,946	15	16
Grandview C-4	9	4,184	20	17
Kearney R-I	7	3,374	12	12
Excelsior Springs 40	6	3,284	15	15
Platte Co. R-III	6	2,562	9	9
Center 58	7	2,500	15	13
Grain Valley R-V	5	2,344	9	9
Oak Grove R-VI	4	2,086	7	8
Smithville R-II	4	1,955	9	9
North Platte Co. R-I	4	705	4	3
West Platte Co. R-II	2	656	3	3
Lone Jack C-6	3	502	4	2
Missouri City 56	1	39	0	0
Subtotal "KC Region"	293	150,618	634	596
KC Charters	17	5,478	33	32

2. Profile of the Workforce

Figure 1 shows the number of Math teachers in the region. It is useful to get a general sense of the size of the relevant work forces. In the KC region, the number of math teachers grew by nine percent from 2001 to 2005 – from 584 to 634 teachers. Within the KC district, the number of math teachers grew at an even faster 17 percent -- from 103 to 120 teachers. In the KC charter school sector the number of math teachers declined slightly from 35 to 33.¹

(Figure 1)

¹ The number of math and science teachers is relatively low because the KC charter schools tend to be disproportionately concentrated in the elementary grades. However, the overall average of roughly two math and science teachers per building is similar across sectors.

Figures 2 and 3 break down these numbers by school level. Not surprisingly, the vast majority of math teachers are in the secondary grades, with the largest group in the high schools. In the region in 2005, there were 320 high school math teachers and 287 middle/junior high math teachers. The KC district employed 62 high school math teachers and 45 middle and junior high math teachers. These numbers have increased since 2001.

(Figures 2 and 3)

Figure 4 shows the number of science teachers in the region. In the KC region, the number of science teachers grew at a slower pace (five percent) from 2001 to 2005 – from 566 to 596 teachers. Within the KC district, the number of science teachers grew from 96 to 105 (nine percent). Finally, in the charter schools the number of science teachers grew slightly, from 28 to 32 teachers.

(Figure 4)

Figures 5 and 6 break down these science totals by school level. As with math, the vast majority of science teachers are in the secondary grades, with the largest group in the high schools. Interestingly, in contrast with math, where growth occurred at all school levels, the growth of the science teaching workforce was entirely due to substantial increases in middle/junior high growth, both in the region and the KC district. The number of high school science teachers actually fell slightly, from 304 to 298, over the period.

(Figures 5 and 6)

Tables 1-4 present data on the demographic composition of the math and science teaching workforce. In 2005 88 percent of math teachers in the region, and roughly 55 percent in the KC district, were white. In math, the minority share of teachers has increased slightly since 2001. Females constitute about two-thirds of the KC area math teachers and roughly one-half of the KC district math teachers. In science the share of minority teachers is slightly lower than in math, but increasing. The 2005 shares of male teachers were 43 and 46 percent, respectively, in the KC district and the region. In the KC region, substantially more science teachers are males (46 percent) as compared to math (36 percent).

(Tables 1-4)

Teacher Specialization and Credentials

Earlier in this paper we explained that our operational definition of a science or math teacher was a teacher who taught at least one science or math course. In fact, most science or math teachers spend the majority of the teaching day in their respective fields. Figure 7 shows the percent of math teachers who devote 100 percent of their teaching time to math. By 2005, 95 percent of high school math teachers in the region devoted their entire teaching day to math. The percentages were nearly as high in middle/junior high and elementary levels, 86 and 91 percent respectively. The specialization rates were nearly as high in the KC district. Specialization has tended to increase over time in the region and district. These rates are considerably lower in the charter schools. Similar specialization patterns are observed for science teachers in Figure 8.

(Figure 7 and 8)

We now turn to the credentials of these teachers. Tables 5 and 6 report data on the certification status of these teachers. Since teachers can hold multiple certificates and endorsements, we classify a teacher based on the “best” certificate they hold in relation to their math or teaching assignment. This hierarchy is indicated as we move down the rows. Turning first to Table 5, the “best” certificate a math teacher can hold is a regular math certificate. This is followed by a provisional certificate in math and then a temporary authorization certificate (TAC) in math. If a math teacher holds none of the first three, then we move to rows four through six – the same ordering but now outside of math. Finally, if the teacher holds none of these certificates, they are classified as “no certificate.”²

(Tables 5 and 6)

The vast majority of math teachers hold some type of certificate in math. Compliance rates are highest at the high school level and drop at the middle/junior high and elementary levels. The KC district has most or all of the TAC teachers in the region, depending on grade level. A similar pattern is observed for science teachers.

For purposes of this report we have grouped middle and junior high schools (JH/MS). However, separate tabulations on teacher certification show that the vast majority of math and science teachers who are “out-of-field” in the JH/MS grouping are in middle schools. In the KC region, of the 63 JH/MS math teachers

² We do not mean to imply research on teacher effectiveness provides a basis for this rank ordering. In fact, these certificate classifications tell us very little about average teaching effectiveness. We are merely ranking teachers by how far out of compliance they are in relation to certification regulations. Unfortunately, teacher-level data are not available on NCLB “highly qualified” status. In Missouri, teachers with regular and provisional certification would be classified as “highly qualified.” Most provisional and TAC’s would seem to satisfy “highly qualified” requirements as well.

lacking math certification, 55 are in middle schools and 8 are in junior high schools. Of those in middle schools, 80 percent hold elementary certification. For the KC district, all 11 of the out-of-field math teachers are in middle schools and 8 of these 11 hold elementary certification. A similar pattern holds for science teachers. In the region, of the 56 out-of-field MS/JH science teachers, 52 are in middle school. Of these 52 middle-school teachers, 43 hold elementary certification. In the KC district, all 13 out-of-field JH/MS teachers are in middle schools. Of these, 7 of 13 hold elementary certificates.

Finally, Table 7 and 8 report the higher education institution from which the teacher graduated. Note that this may not be the same institution that recommended the teacher for certification, for example, if the teacher entered the profession through a post-baccalaureate program. Unfortunately, the latter data are not easily recovered from DESE certification files. The first undergraduate degree is more tractable data. These are reported in Tables 7 and 8. Unlike earlier tables, we have, for simplicity, grouped both the KC area and KC district teachers together (charter school teachers are not included). Thus, in Table 7 we see that in 2001, 103 math teachers (17 percent of all math teachers) earned their undergraduate degrees from CMSU. By 2005 this number dropped to 92 teachers or 14 percent of all KC area math teachers.

(Tables 7 and 8)

Teacher Experience and Age

Figures 9 and 10 report the experience distribution of the 2005 math and science teaching workforce. The largest share of math teachers in the region and KC district workforces have 1-5 years teaching experience, 31 and 41 percent respectively. This reflects high turnover of new teachers, as well as the expansion of the teaching workforce between 2001 and 2005. Roughly 23 percent of math teachers are in the highest experience group (21 or more years), and thus can be expected to leave the workforce within the next 5-10 years. The share of the science workforce in the 1-5 year experience cell is much smaller in both the region and particularly the KC district as compared to math. For example, in the KC district 42 percent of math teachers, but just 18 percent of science teachers have fewer than six years of teaching experience. It is likely that the relatively more rapid growth in the math teaching work force contributed to this difference.

(Figures 9 and 10)

Tables 8 and 9 report the age distribution of the math and science teaching workforce in 2001 and 2005. Two patterns emerge. First, the KC district has an older teacher workforce than the region as a whole. The average math teacher in the region was 41 years of age in 2005 whereas in the KC district average age was 48. In science the average ages were 42 and 49 respectively. Second,

based on the age distribution, we can expect roughly one-quarter of the regional workforce and up to one-half of the KC district workforce to retire in the next decade. In 2005, 26 percent of the math teachers were aged fifty or older, down from 28 percent in 2001. The share of older math teachers is considerably higher in the KC district, where 46 percent of math teachers were fifty or older in 2005, down from 57 percent in 2001. Clearly the KC district had a significant number of retirements over the period. Turning to science teachers, 26 percent were fifty or older in 2005, up slightly from 24 percent in 2001. In the KC district, 51 percent of science teachers were fifty or older, down from 53 percent in 2001.

(Tables 8 and 9)

Teacher Turnover and Vacancies

Figures 11 and 12 report data on teacher turnover between 2001 and 2005. For both math and science teachers we tracked the 2001 workforce forward to 2005 and classified their status. For example, 65 percent of math teachers in the KC region in 2001 were still teaching math in the region in 2005. A small share continued their employment in the region teaching in another field (seven percent) or were employed in a school district in the region but in a non-teaching position (one percent). Another six percent were employed by public schools outside the region, and 20 percent were not employed in a Missouri public school (“left MO Education”). A large share of KC district teachers moved out of math or science teaching over this period. This may reflect “teaching out of field” in 2001. It certainly warrants further analysis.

(Figures 11 and 12)

Recently DESE began collecting data from school districts on vacancies and applicants.³ These data refer to spring or summer 2004 experience. Specifically, school districts are asked the number of FTE vacancies by field and the number of appropriately certified applicants. What we have done in this table is compute a weighted average ratio of certified applicants to FTE vacancy combining both the KC district and the region (these data are not available for the charter schools). This ratio can be taken as an indicator of the relative supply of teachers by field. The larger the ratio, presumably the easier it is to fill a vacancy.⁴

³ Reporting on this variable is voluntary. Only 15 of 22 KC regional districts reported these data.

⁴ In computing these ratios we converted FTE vacancies into a higher integer value (e.g., a .25 was converted into 1), since applicant data could only be integers. For example, if a district had a .25 vacancy in physics and one applicant, the ratio would equal four. However, there was but one applicant for a single vacancy. In fact, very few districts reported FTE vacancies less than one. Also, it is important to keep in mind that the applicant data includes multiple counts for individuals and thus gives an overly optimistic assessment of supply. If one applicant applied to five school district she would be counted five times, whereas each district’s vacancy would be counted only once. Unfortunately, in the absence of person-level applicant data, it is impossible to correct for multiple applications.

We report all the middle school and high school vacancies. For comparison, we also report several other large fields (elementary, social studies, physical ed). The ratio of certified applicants to vacancies ranges from a low of 4.0 in physics to a high of 13.7 for secondary biology. The average is roughly 9 applicants per vacancy. The chart shows a striking difference between science and math and some other major fields. Elementary education, the largest teaching area by far, has more applicants per vacancy than any science or math field. Social studies, in particular, has an exceptionally large applicant pool.

These data show that assertions of generalized “teacher shortages” are problematic. Even recognizing the problem of multiple counting of applicants, the applicant pools in most teaching fields seem to be more than adequate to staff classrooms with qualified teachers. However, in math and science applicant pools are much smaller in relation to vacancies, which suggests greater recruitment difficulties.

(Figure 13)

Conclusion

This report has provided a general statistical portrait of the math and science teaching workforce in the Kansas City Missouri metropolitan area. These simple tabulations, while informative, frequently raise even more questions. Rather than summarize our statistical findings, we will list some findings which may warrant more in depth analysis.

Possible topics for further study:

- Teacher mobility. Levels of teachers mobility between 2001 and 2005 were high (Tables 11 and 12). It would be useful to know more about the character of the teachers who left and possible reasons for their exits. For example, were the exiting teachers uncertified? Why did teachers switch teaching fields? Did pay of exiting teachers rise faster than it would have within the region? What percent of these teachers retired? What is the expected pattern of retirements for math and science teachers?
- Teacher qualifications. The only teacher quality variable analyzed in this study is teacher certification. It would be possible to examine in more detail the educational credentials of flows of new teachers from public higher education institutions, including major field, GPA, and ACT scores. Licensing exam scores may be available from DESE and ETS.
- Course assignments. The rich DESE core data files allow us to identify teachers assigned to particular courses. Thus, it would be possible to examine the teaching workforce delivering particular types of math or science courses, e.g. characteristics of algebra teachers, biology teachers.
- Teacher pay. What is the level of remuneration of these math and science teachers – both base pay and supplements? How does this level of pay compare to comparable math and science occupations in the KC area labor market?
- Kansas data. It would be most useful to collect similar data for the Kansas side of the metropolitan area. In addition, teacher records could be linked to examine teacher mobility. Some of the exiting teachers identified in our tables may have moved to Kansas.

Figure 1

**Math Teachers by Region and Sector:
2001 and 2005**

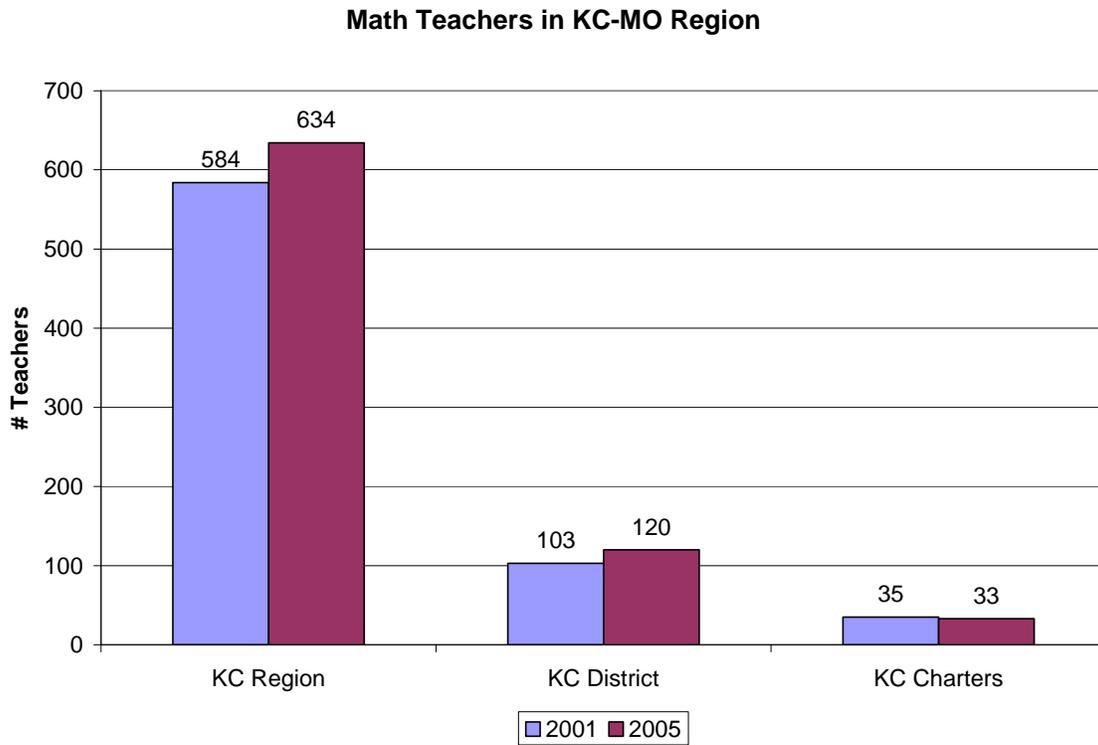


Figure 2

**Math Teachers by Teaching Level in 2001:
Elementary, Junior High/ Middle, High School**

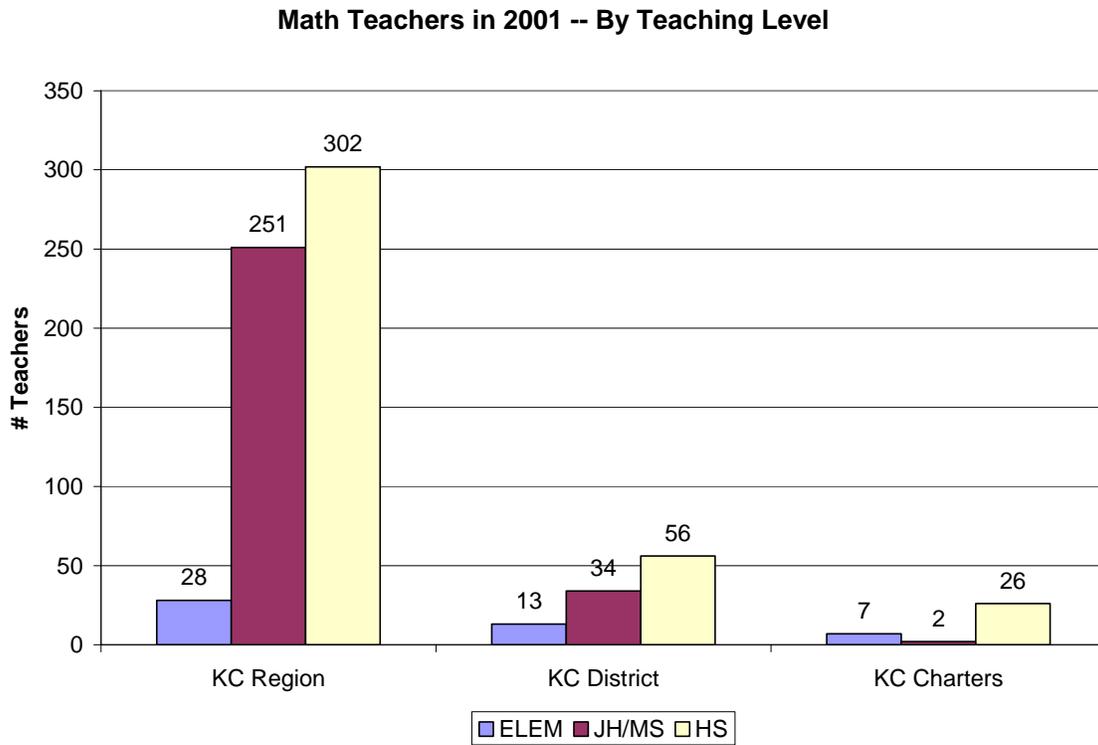


Figure 3

**Math Teachers by Teaching Level in 2005:
Elementary, Junior High/ Middle, High School**

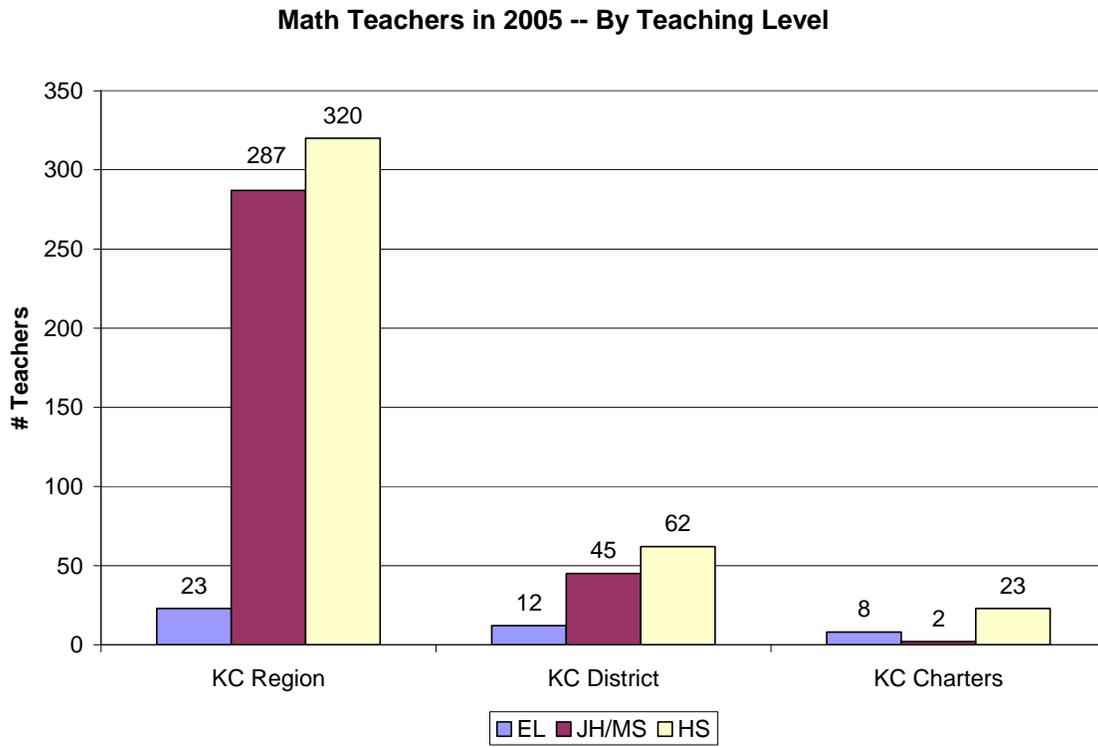


Figure 4

**Science Teachers by Region:
2001 and 2005**

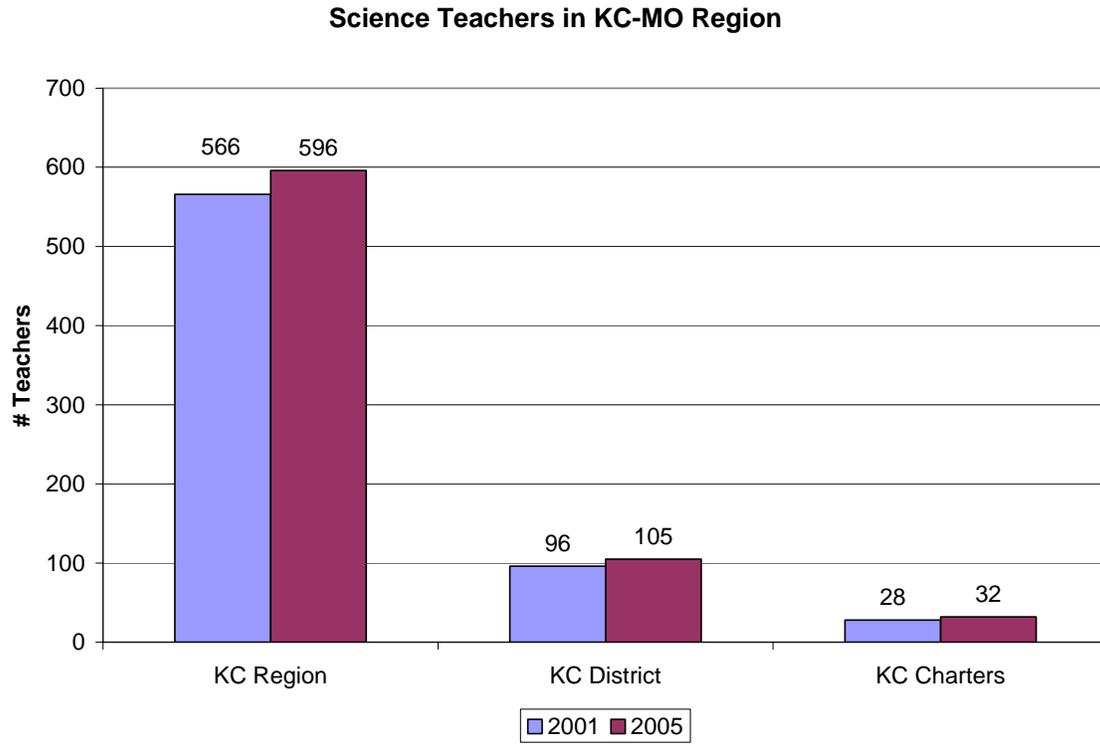


Figure 5

**Science Teachers by Teaching Level in 2001:
Elementary, Junior High/ Middle, High School**

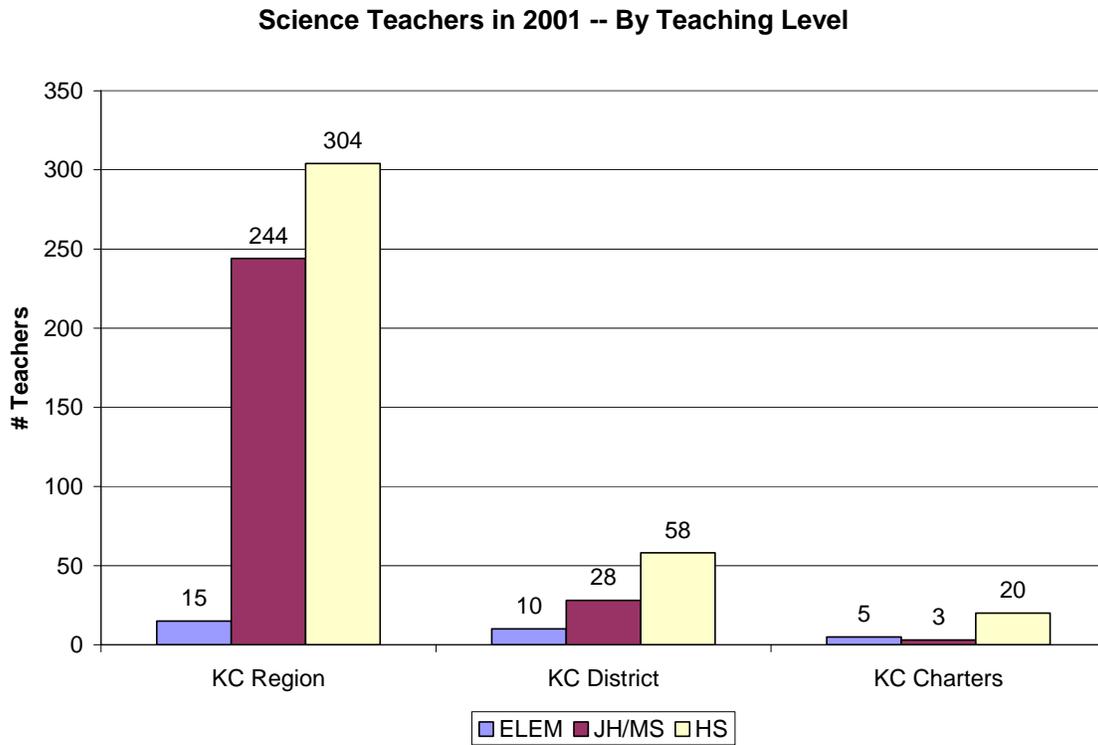


Figure 6

**Science Teachers by Teaching Level in 2005:
Elementary, Junior High/ Middle, High School**

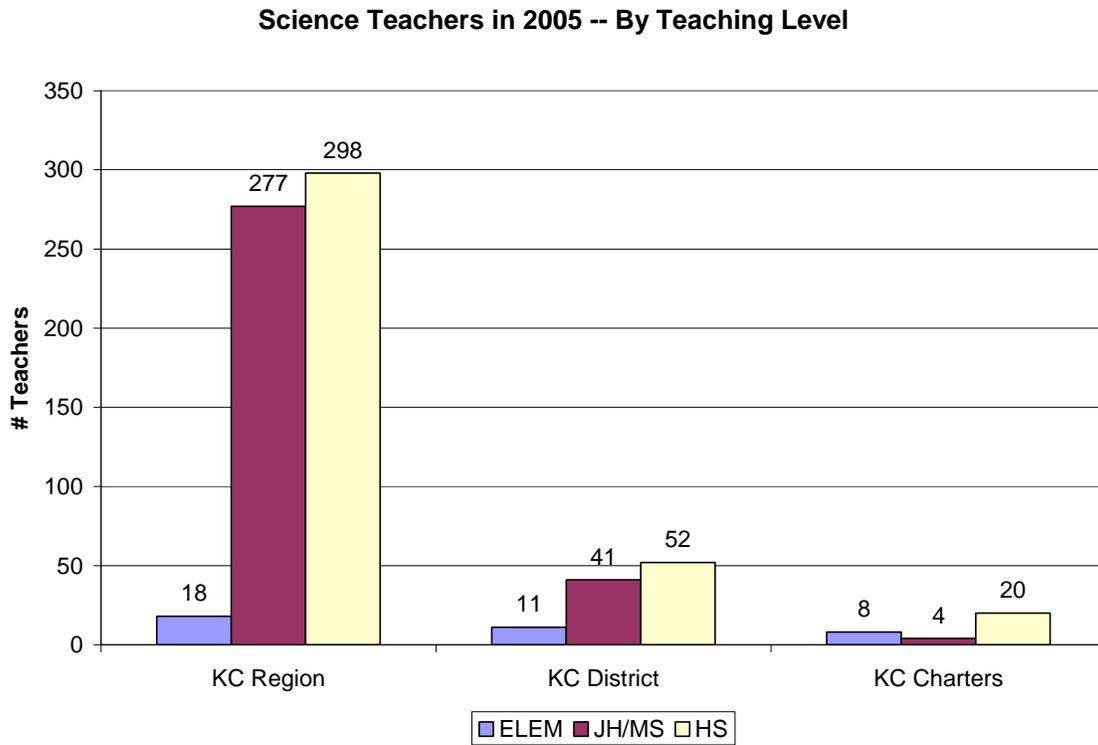


Figure 7

**Staffing Patterns:
Percent of Math Teachers with 100 Percent of Their
Teaching Effort in Math in 2001 and 2005**

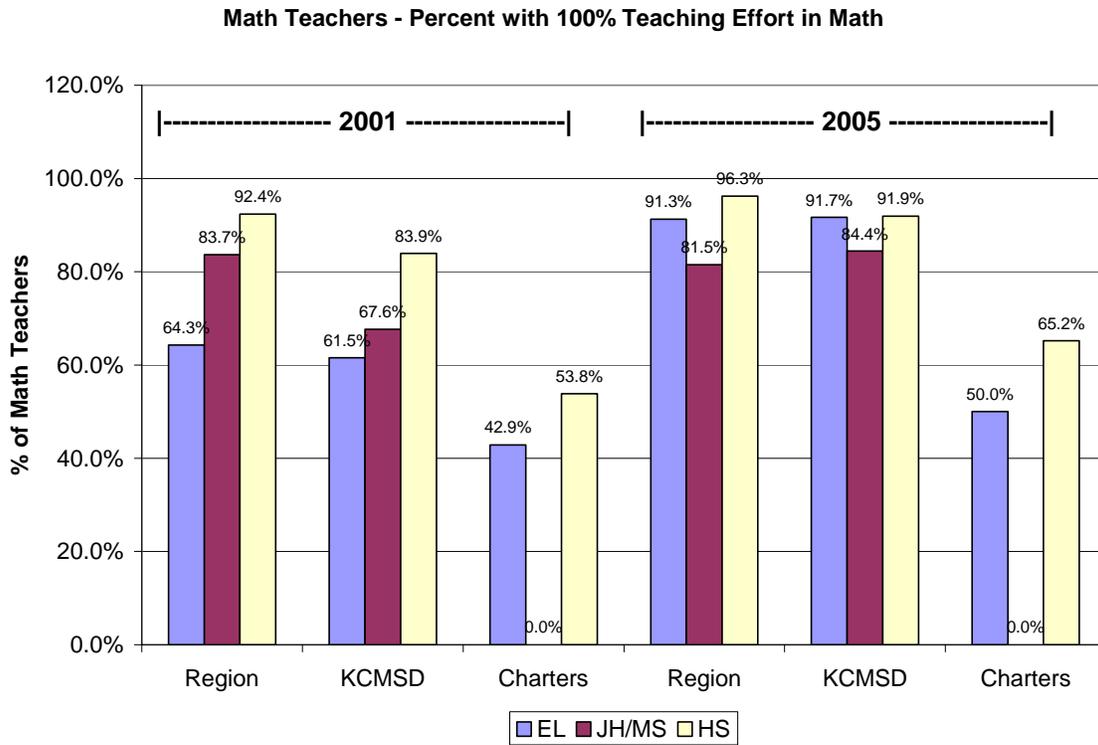


Figure 8

**Staffing Patterns:
Percent of Science Teachers with 100 Percent of Their
Teaching Effort in Science in 2001 and 2005**

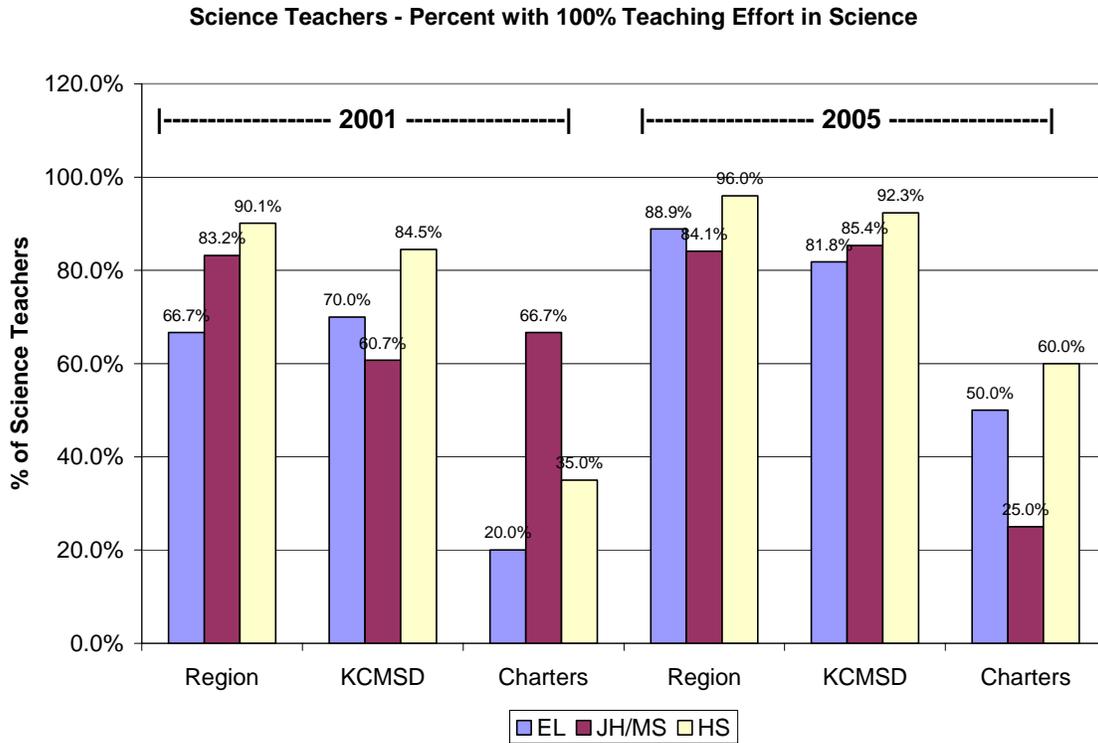


Figure 9

Teaching Experience of Math Teachers: 2005

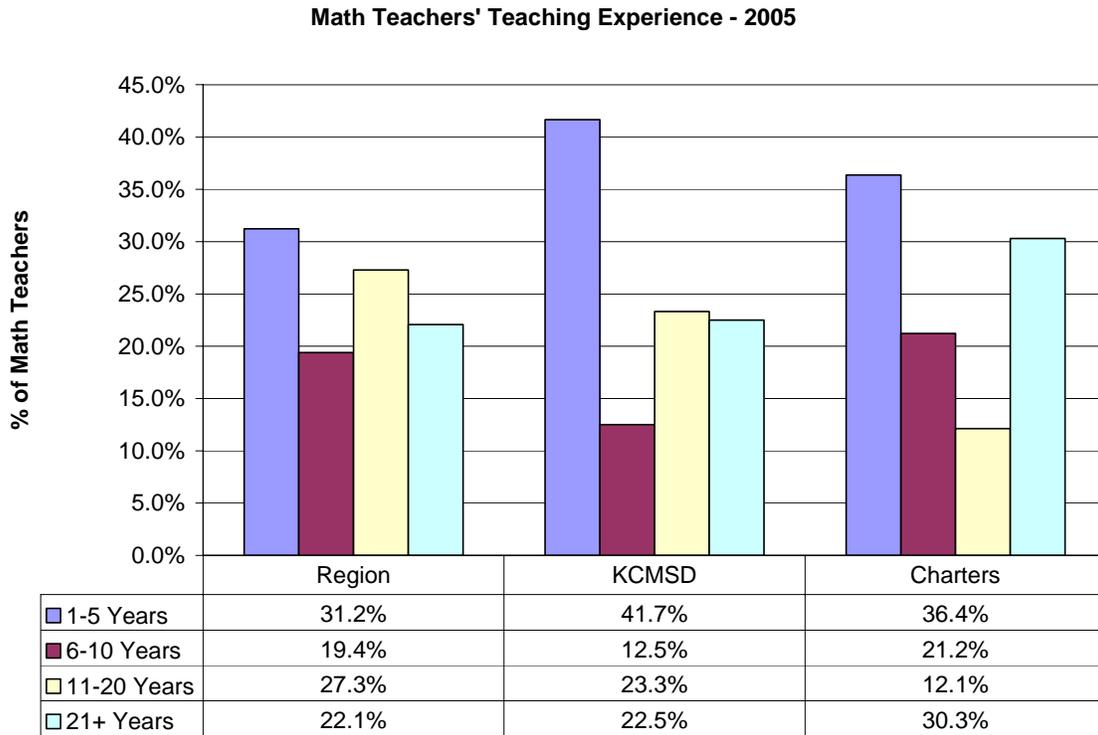


Figure 10

Teaching Experience of Science Teachers: 2005

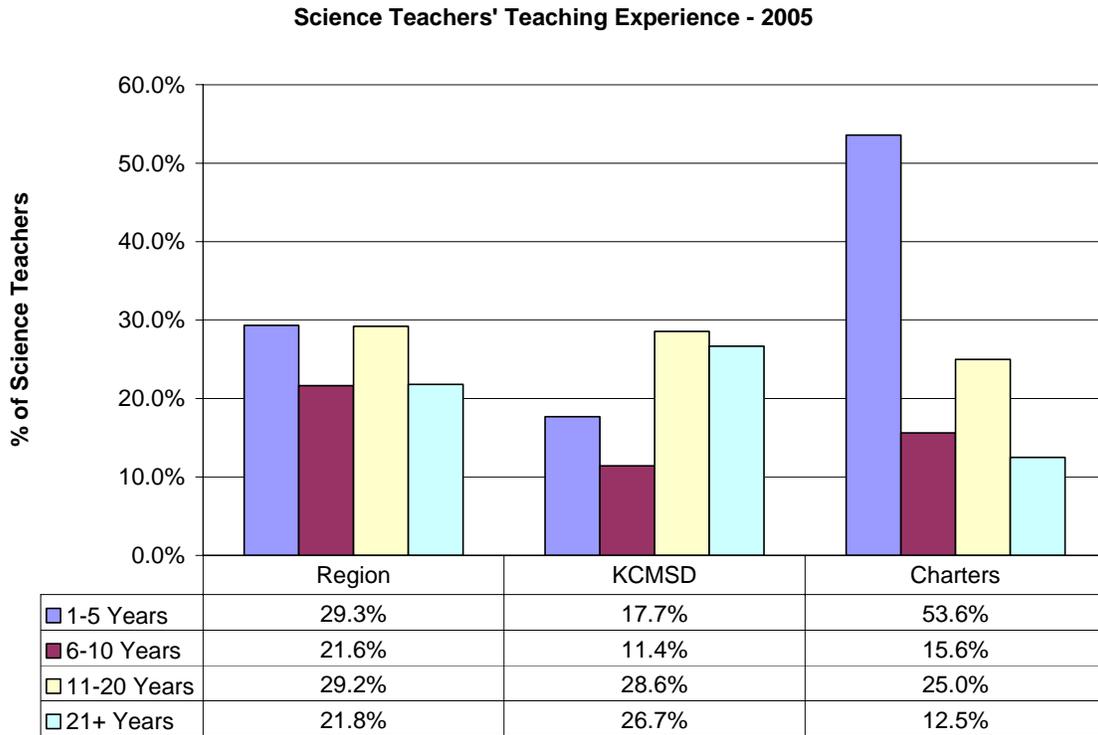


Figure 11

Mobility of Math Teachers: 2005 Status of 2001 Math Teachers

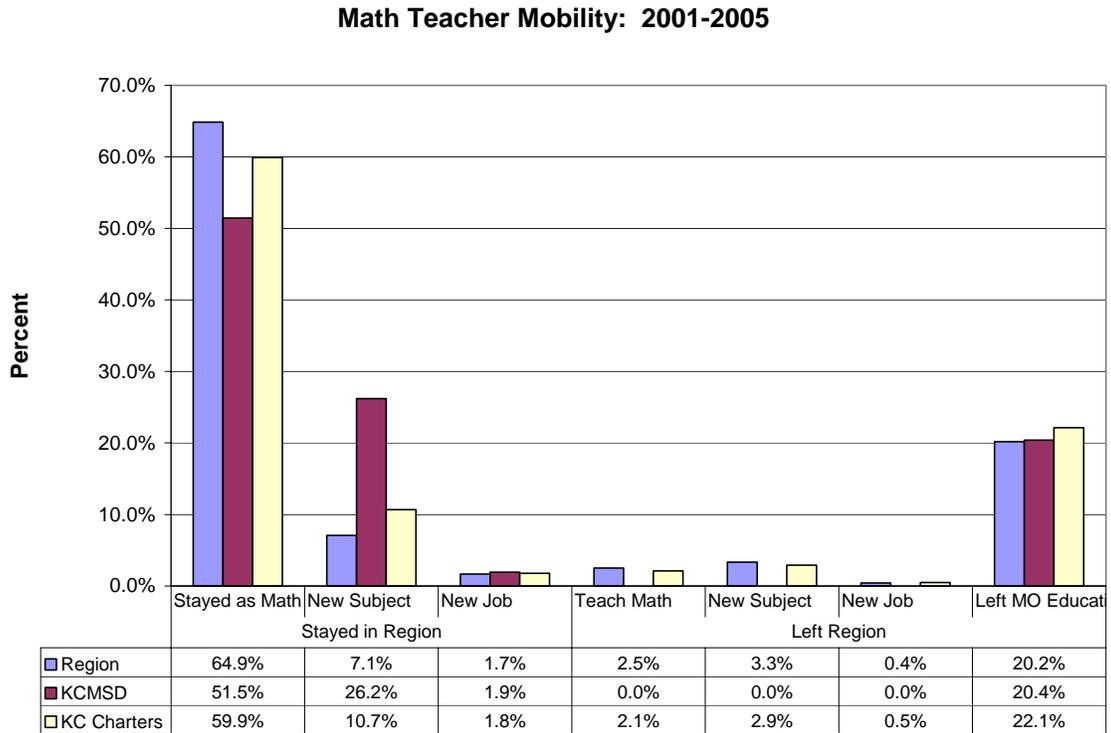


Figure 12

Mobility of Science Teachers: 2005 Status of 2001 Science Teachers

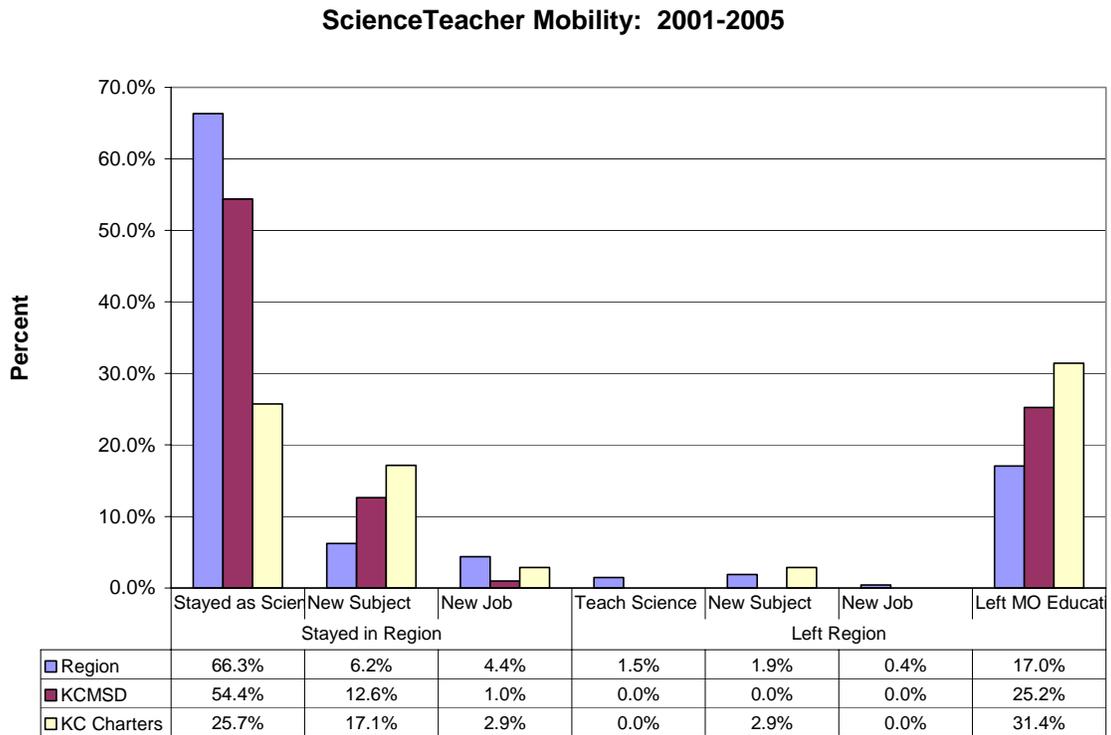


Figure 13

Applications Per Vacancy in Math, Science, and Other Fields

Kansas City Metropolitan Area

(Excluding Charter Schools)

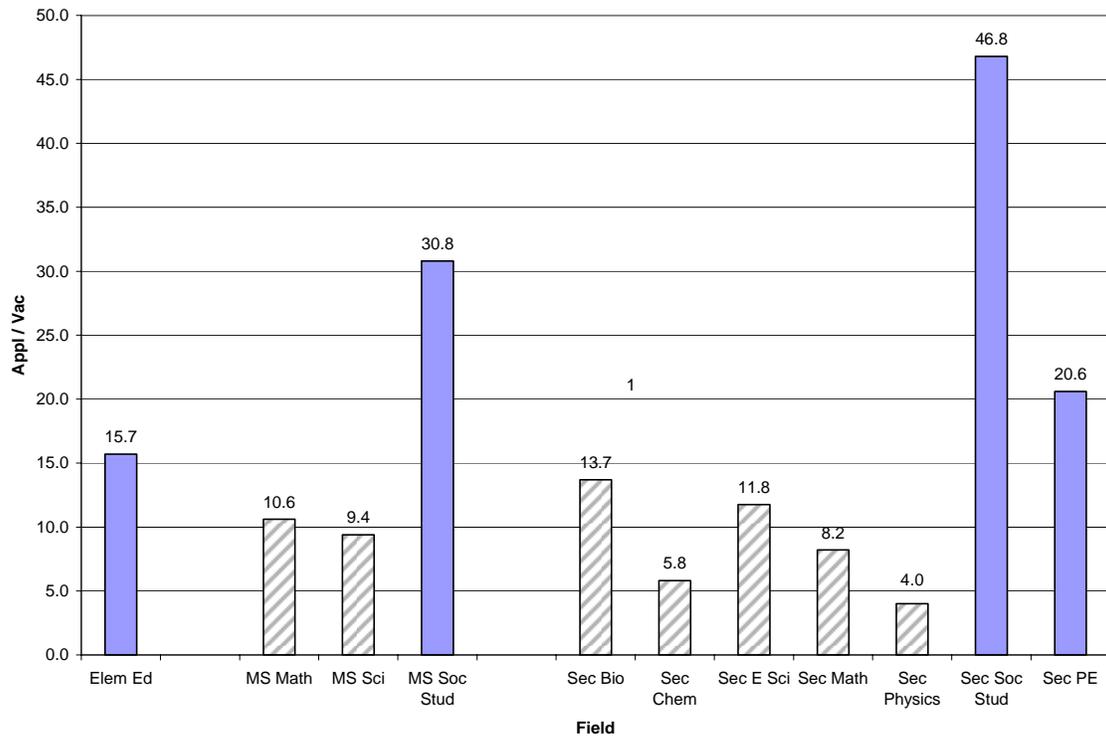


Table 1**Math Teachers by Race/Ethnicity: 2001 and 2005**

2001 Math teachers						
Race	KC Region	% of Region	KC District	% of KC Dist	KC Charters	% of KC Charters
Asian	5	0.9%	3	2.9%	0	0.0%
Black	46	7.9%	39	37.9%	7	20.0%
Hispanic	2	0.3%	1	1.0%	2	5.7%
Other	0	0.0%	0	0.0%	1	2.9%
White	531	90.9%	60	58.3%	25	71.4%
Total	584	100.0%	103	100.0%	35	100.0%
2005 Math teachers						
Race	KC Region	% of Region	KC District	% of KC Dist	KC Charters	% of KC Charters
Asian	9	1.4%	6	5.0%	1	3.0%
Black	61	9.6%	44	36.7%	10	30.3%
Hispanic	5	0.8%	3	2.5%	0	0.0%
Other	2	0.3%	1	0.8%	0	0.0%
White	557	87.9%	66	55.0%	22	66.7%
Total	634	100.0%	120	100.0%	33	100.0%

Table 2

**Math Teachers by Gender:
2001 and 2005**

	2001			2005		
	KC Region	KC District	KC Charters	KC Region	KC District	KC Charters
Male	34.2%	47.6%	40.0%	35.5%	47.5%	54.5%
Female	65.8%	52.4%	60.0%	64.5%	52.5%	45.5%

Table 3**Science Teachers by Race/Ethnicity: 2001 and 2005**

2001 Science teachers						
Race	KC Region	% of Region	KC District	% of KC Dist	KC Charters	% of KC Charters
Asian	4	0.7%	2	2.1%	0	0.0%
Black	36	6.4%	29	30.2%	3	10.7%
Hispanic	4	0.7%	2	2.1%	3	10.7%
Other	2	0.4%	2	2.1%	1	3.6%
White	520	91.9%	61	63.5%	21	75.0%
Total	566	100.0%	96	100.0%	28	100.0%
2005 Science teachers						
Race	KC Region	% of Region	KC District	% of KC Dist	KC Charters	% of KC Charters
Asian	5	0.8%	5	4.8%	0	0.0%
Black	48	8.1%	37	35.2%	11	34.4%
Hispanic	5	0.8%	1	1.0%	0	0.0%
Other	2	0.3%	1	1.0%	0	0.0%
White	536	89.9%	61	58.1%	21	65.6%
Total	596	100.0%	105	100.0%	32	100.0%

Table 4

**Science Teachers by Gender:
2001 and 2005**

	2001			2005		
	KC Region	KC District	KC Charters	KC Region	KC District	KC Charters
Male	48.9%	43.8%	35.7%	46.3%	42.9%	53.1%
Female	51.1%	56.3%	64.3%	53.7%	57.1%	46.9%

Table 5**Math Teachers By “Best” Certificate, 2005**

Kansas City Region

		EL		JH/MS		HS	
Certificate Type		#	%	#	%	#	%
In Math	Regular	16	69.6%	205	71.4%	296	92.5%
	Provisional	0	0.0%	7	2.4%	8	2.5%
	TAC	2	8.7%	12	4.2%	11	3.4%
Not Math	Regular	5	21.7%	61	21.3%	1	0.3%
	Provisional	0	0.0%	1	0.3%	0	0.0%
	TAC	0	0.0%	0	0.0%	0	0.0%
	No cert	0	0.0%	1	0.3%	4	1.3%
	Total	23	100.0%	287	100.0%	320	100.0%

KCMSD

		EL		JH/MS		HS	
Certificate Type		#	%	#	%	#	%
In Math	Regular	10	83.3%	20	44.4%	43	69.4%
	Provisional	0	0.0%	4	8.9%	6	9.7%
	TAC	2	16.7%	10	22.2%	9	14.5%
Not Math	Regular	0	0.0%	10	22.2%	1	1.6%
	Provisional	0	0.0%	1	2.2%	0	0.0%
	TAC	0	0.0%	0	0.0%	0	0.0%
	No cert	0	0.0%	0	0.0%	3	4.8%
	Total	12	100.0%	45	100.0%	62	100.0%

Table 6**Science Teachers by “Best” Certificate, 2005**

Kansas City Region

Certificate Type		EL		JH/MS		HS	
		#	%	#	%	#	%
In Science	Regular	12	66.7%	211	76.2%	274	91.9%
	Provisional	1	5.6%	4	1.4%	10	3.4%
	TAC	1	5.6%	6	2.2%	8	2.7%
Not Science	Regular	3	16.7%	52	18.8%	1	0.3%
	Provisional	0	0.0%	2	0.7%	0	0.0%
	TAC	0	0.0%	0	0.0%	0	0.0%
	No cert	1	5.6%	2	0.7%	5	1.7%
	Total	18	100.0%	277	100.0%	298	100.0%

KCMSD

Certificate Type		EL		JH/MS		HS	
		#	%	#	%	#	%
In Science	Regular	6	54.5%	23	56.1%	38	73.1%
	Provisional	1	9.1%	1	2.4%	3	5.8%
	TAC	1	9.1%	4	9.8%	6	11.5%
Not Science	Regular	2	18.2%	9	22.0%	0	0.0%
	Provisional	0	0.0%	2	4.9%	0	0.0%
	TAC	0	0.0%	0	0.0%	0	0.0%
	No cert	1	9.1%	2	4.9%	5	9.6%
	Total	11	100.0%	41	100.0%	52	100.0%

Table 7**Sources of Teacher Supply****A. Math**

Where KC Area Math Teachers Earned their First Bachelors Degrees

Institution	2001		New		Leavers	2005	
	#	%	#	%	#	#	%
Central Missouri State University	103	16.6%	29	9.6%	40	92	13.8%
University of Missouri, Kansas City	79	12.8%	22	7.3%	24	77	11.6%
Northwest Missouri State University	43	6.9%	20	6.6%	20	43	6.5%
University of Missouri, Columbia	35	5.7%	16	5.3%	14	37	5.6%
Missouri State University	27	4.4%	15	5.0%	10	32	4.8%
William Jewell College, Liberty	23	3.7%	8	2.6%	6	25	3.8%
University of Kansas, Lawrence	22	3.6%	12	4.0%	11	23	3.5%
Truman State University	18	2.9%	6	2.0%	8	16	2.4%
Kansas State University, Manhattan	17	2.7%	5	1.7%	10	12	1.8%
Park College, Parkville	16	2.6%	12	4.0%	7	21	3.2%
Missouri Western College, St. Joseph	15	2.4%	7	2.3%	2	20	3.0%
University of Iowa, Iowa City	10	1.6%	1	0.3%	3	8	1.2%
University of Arkansas, Pine Bluff	8	1.3%	2	0.7%	4	6	0.9%
Pittsburg State University, Pittsburg	7	1.1%	2	0.7%	3	6	0.9%
Southwest Baptist College, Bolivar	7	1.1%	6	2.0%	4	9	1.4%
All Foreign Countries	6	1.0%	4	1.3%	4	6	0.9%
Evangel College, Springfield	6	1.0%	0	0.0%	4	2	0.3%
Graceland College, Lamoni	6	1.0%	7	2.3%	5	8	1.2%
Rockhurst College, Kansas City	6	1.0%	6	2.0%	2	10	1.5%
University of Missouri, Rolla	6	1.0%	2	0.7%	3	5	0.8%
Iowa State University, Ames	5	0.8%	1	0.3%	3	3	0.5%
Others	154	24.9%	120	39.6%	69	205	30.8%
Total	619	100.0%	303	100.0%	256	666	100.0%

B. Science

Where KC Area Science Teachers Earned their First Bachelors Degrees

Institution	2001		New		Leavers	2005	
	#	%	#	%	#	#	%
Central Missouri State University	74	12.5%	30	11.0%	20	84	13.2%
University of Missouri, Kansas City	62	10.4%	28	10.3%	18	72	11.3%
Northwest Missouri State University	51	8.6%	24	8.8%	21	54	8.5%
University of Missouri, Columbia	45	7.6%	24	8.8%	16	53	8.3%
Missouri State University	33	5.6%	15	5.5%	12	36	5.7%
University of Kansas, Lawrence	33	5.6%	7	2.6%	10	30	4.7%
William Jewell College, Liberty	22	3.7%	6	2.2%	10	18	2.8%
Kansas State University, Manhattan	15	2.5%	10	3.7%	8	17	2.7%
Truman State University	13	2.2%	6	2.2%	5	14	2.2%
Missouri Western College, St. Joseph	12	2.0%	6	2.2%	6	12	1.9%
Park College, Parkville	12	2.0%	6	2.2%	7	11	1.7%
Graceland College, Lamoni	10	1.7%	3	1.1%	5	8	1.3%
University of Iowa, Iowa City	8	1.3%	0	0.0%	3	5	0.8%
Avila College, Kansas City	7	1.2%	3	1.1%	4	6	0.9%
Lincoln University, Jefferson City	7	1.2%	2	0.7%	4	5	0.8%
Rockhurst College, Kansas City	7	1.2%	2	0.7%	2	7	1.1%
All Foreign Countries	6	1.0%	5	1.8%	3	8	1.3%
Southwest Baptist College, Bolivar	6	1.0%	2	0.7%	2	6	0.9%
No Degree Found	4	0.7%	8	2.9%	4	8	1.3%
University of Arkansas, Pine Bluff	4	0.7%	3	1.1%	3	4	0.6%
University of Oklahoma, Norman	4	0.7%	0	0.0%	3	1	0.2%
Others	159	26.8%	82	30.1%	63	178	27.9%
Total	594	100.0%	272	100.0%	229	637	100.0%

Table 8**Math Teachers by Age: 2001 and 2005 a**

2001 Math teachers						
Age	KC Region	% of Region	KC District	% of KC Dist	KC Charters	% of KC Charters
20-30	134	22.9%	1	1.0%	10	28.6%
31-40	130	22.3%	7	6.8%	6	17.1%
41-50	154	26.4%	36	35.0%	8	22.9%
51-60	154	26.4%	55	53.4%	6	17.1%
60+	12	2.1%	4	3.9%	4	11.4%
Missing	0	0.0%	0	0.0%	1	0.2%
Total	584	100.0%	103	100.0%	35	100.0%
Av. Age	41.1		50.2		42.1	
2005 Math teachers						
Age	KC Region	% of Region	KC District	% of KC Dist	KC Charters	% of KC Charters
20-30	156	24.6%	17	14.2%	3	9.1%
31-40	159	25.1%	20	16.7%	8	24.2%
41-50	155	24.4%	27	22.5%	7	21.2%
51-60	136	21.5%	45	37.5%	9	27.3%
60+	25	3.9%	10	8.3%	4	12.1%
Missing	3	0.5%	1	0.8%	2	6.1%
Total	634	100.0%	120	100.0%	33	100.0%
Av. Age	41.1		47.6		47.5	

a. The average age of U.S. public school teachers in spring 2004, based on the 2003-04 Schools and Staffing Surveys, was 42.5 years.

<http://nces.ed.gov/pubs2006/2006313.pdf>

Table 9**Science Teachers by Age: 2001 and 2005 ^a**

2001 Science teachers						
Age	KC Region	% of Region	KC District	% of KC Dist	KC Charters	% of KC Charters
20-30	129	22.8%	1	1.0%	6	21.4%
31-40	125	22.1%	10	10.4%	5	17.9%
41-50	173	30.6%	34	35.4%	5	17.9%
51-60	120	21.2%	39	40.6%	9	32.1%
60+	19	3.4%	12	12.5%	3	10.7%
Missing	0	0.0%	0	0.0%	0	0.0%
Total	566	100.0%	96	100.0%	28	100.0%
Av. Age	41.7		50.9		45.0	
2005 Science teachers						
Age	KC Region	% of Region	KC District	% of KC Dist	KC Charters	% of KC Charters
20-30	119	20.0%	10	9.5%	5	15.6%
31-40	152	25.5%	17	16.2%	8	25.0%
41-50	164	27.5%	21	20.0%	7	21.9%
51-60	139	23.3%	43	41.0%	5	15.6%
60+	18	3.0%	10	9.5%	5	15.6%
Missing	4	0.7%	4	3.8%	2	6.3%
Total	596	100.0%	105	100.0%	32	100.0%
Av. Age	41.5		49.3		46.4	

a. The average age of U.S. public school teachers in spring 2004, based on the 2003-04 Schools and Staffing Surveys, was 42.5 years.

<http://nces.ed.gov/pubs2006/2006313.pdf>