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A Comparative Statistical Profile of Kansas City Teaching Fellows

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KCTF Compared to Other New Teachers in the KC-Area

In this memo we compare Kansas City Teaching Fellows (KCTF) teachers with new public school teachers in the Kansas City Missouri School District (KCMSD) and the rest of Jackson County (ROJC). We make two types of comparisons: a) characteristics of teachers employed in academic year 2003-2004, including demographics, teaching field, and academic background, and b) the teacher retention from academic year 2002-2003 to academic year 2003-2004. What follows is a description of the data used in each analysis as well as a summary of some of the key findings.

Methodology

A list of all teachers who participated in the KCTF program was provided by staff from the Kauffman Foundation. The teachers were identified by cohort, initial placement, and whether they were still employed as teachers in the fall of 2004. The KCTF teacher records were matched against teacher employment and certification data sets maintained by the Missouri Department of Elementary and Secondary Education (DESE) and higher education completion records for public colleges and universities maintained by the Missouri Department of Higher Education (DHE). Data for comparison group teachers were selected from the same state level data sets.

The first analysis examines characteristics of teachers who were employed in the 2003-2004 school year. According to Kauffman Foundation records, there were 68 KCTF teachers from the 2001-2002 through 2003-2004 cohorts who were employed in the KCMSD school district in the 2003-2004 school year. Of those 68 teachers, we were able to find 67 in DESE's teacher employment records. For a comparison group we chose full-time teachers from KCMSD and ROJC with three or fewer years of public school teaching experience. Since some schools in the KCMSD are charter schools, which operate under different management and personnel policies than regular public schools, we used two comparison groups for KCMSD: a) teachers in all KCMSD schools, including the 17 independent charter schools operating in the district, and b) only teachers in KCMSD-run schools. There were 462 comparison teachers in KCMSD charter and non-charter schools, 355 in KCMSD-run schools only, and 728 in ROJC schools.

The second analysis compares the teacher employee retention rates from the 2002-2003 to 2003-2004 school years. For this analysis we began with 74 KCTF teachers who were employed by the KCMSD in the 2002-2003 school year. Since there were only two cohorts of

KCTF teachers represented in the 2002-2003 school year, comparison teachers selected for KCMSD and ROJC were full-time teachers in 2002-2003 with two or fewer years of public school teaching experience. As in the first analysis, teachers from all KCMSD schools and from non-charter KCMSD schools were used as comparison groups. There were 365 comparison teachers in all KCMSD schools, 274 in non-charter KCMSD schools, and 552 in ROJC schools.

The results of these analyses are reported in Tables 1 and 2 and our findings are summarized in the following bullets.

Summary of Findings

- The percentage of white and non-white teachers is similar for KCTF and KCMSD, however, a much larger share of the ROJC teachers are white.
- The percentage of female teachers in KCTF and KCMSD is somewhat lower than it is for ROJC.
- Teachers in KCTF and KCMSD are roughly five years older, on average, than teachers in ROJC.
- A higher percentage of KCTF teachers teach math, science, English, and special education, and a smaller percentage teach elementary, compared to teachers in KCMSD and ROJC.
- While ACT scores were not available for a substantial percentage of KCTF, KCMSD, and ROJC teachers, for those teachers with available ACT information, KCTF teachers had higher ACT scores on average than KCMSD and ROJC teachers.¹
- A higher percentage of KCTF teachers received undergraduate degrees from selective colleges than KCMSD and ROJC teachers.
- A smaller percentage of KCTF and KCMSD teachers received undergraduate degrees from Missouri public higher education institutions than ROJC teachers.
- None of the KCTF teachers had an undergraduate major in education, as compared to just over one-half of KCMSD, and over three-quarters of the ROJC teachers (based on Missouri public higher education graduates only.)
- The retention rate from the 2002-2003 to 2003-2004 school years for KCTF teachers was higher than for KCMSD teachers, but lower than the retention rate for ROJC teachers.

¹ We have access to ACT scores only for Missouri test-takers from 1991 to the present. No doubt many of the older “new teachers” took the ACT before then.

Table 1
 Comparison of KCTF Teachers and New Teachers (Experience <= 3 Years)
 from KCMSD and Rest of Jackson County (ROJC)

	<u>KCTF</u>	<u>KCMSD Including Charters</u>	<u>KCMSD Without Charters</u>	<u>ROJC</u>
RACE^a				
White	59.7%	61.0%	60.0%	94.9%
Black	40.3%	33.3%	33.5%	3.6%
Hispanic	0.0%	4.1%	4.5%	0.5%
Other	0.0%	1.5%	2.0%	1.0%
GENDER^a				
Female	73.1%	72.5%	71.0%	80.1%
Male	26.9%	27.5%	29.0%	19.9%
TEACHING FIELD^a				
Elementary	37.3%	32.3%	30.1%	37.6%
Math	13.4%	6.7%	7.3%	5.5%
Science	10.4%	6.1%	6.8%	5.9%
English	16.4%	14.1%	14.1%	9.5%
Special Education	17.9%	11.0%	12.1%	15.2%
Other	4.5%	29.9%	29.6%	26.2%
AVERAGE AGE^b	35.3	35.7	36.2	29.7
(% Age Missing)	(0)	(6.3)	(2.8)	(1.0)
Number of Teachers	67	462	355	728

^a Source is DESE teacher employment records

^b Source is DESE teacher certification records

Table 2

Comparison of Ability, Preparation, and Retention of KCTF Teachers and New Teachers from KCMSD and Rest of Jackson County

	<u>KCTF</u>	<u>KCMSD Including Charters</u>	<u>KCMSD Without Charters</u>	<u>ROJC</u>
ABILITY				
Average ACT Score ^a	23.3	21.4	21.1	22.7
(Percent Included)	(28.4)	(27.5)	(27.0)	(56.5)
% with Bachelors Degree From Selective College ^b	38.1%	21.3%	20.4%	27.4%
(Percent Included)	(94.0)	(86.5)	(89.9)	(97.8)
PREPARATION				
% Graduated from MO 4 Year College ^c	37.3%	40.0%	37.8%	62.6%
(% Included)	(100.0)	(90.9)	(94.6)	(98.8)
% With Education Bachelor's Degree ^c	0.0%	53.7%	54.0%	77.4%
(% Included)	(29.9)	(29.0)	(28.2)	(56.5)
RETENTION				
% Retained 2002-2003 to 2003-2004	78.4%	71.8%	72.6%	86.2%
Number of Teachers	67	462	355	728

^a Source is cumulative file of ACT scores of Missouri test takers, 1991 - 2004

^b Source is education information in DESE teacher certification records

^c Source is completion data for public institutions from DHE

Projected Retirements and Hiring Needs

Table 3 reports information about the age distribution of the KCMSD and ROJC teaching workforces in 2003-04. As can be seen below, the average age of the KCMSD teachers is considerably higher than ROJC. The average teacher age in KCMSD is 45.8 versus 40.4 in ROJC. More to the point, 24 percent of KCMSD teachers are 55 or older versus 11 percent in ROJC. Based on these data, we can reasonably assume that roughly 1100 public school teachers will retire in Jackson County over the next five to seven years, primarily from KCMSD. However, retirements are only part of the hiring requirements of school districts. There is considerable turnover of younger teachers as well. If we assume that five percent of teachers under the age of 55 leave these districts annually (higher in KCMSD and lower in ROJC), that would imply roughly a hiring rate of roughly 500 teachers per year in addition to retirements. Of course, many of these exits are short term and not permanent.

Table 3
Potential Teacher Retirements

	<u>KCMSD</u>	<u>ROJC</u>
Total Teachers	2547	4613
Average Age	45.8	40.4
Teachers 55 and Older (#)	622	503
Teachers 55 and Older (%)	24.4%	10.9%

Education Graduates from Selected Teacher Training Programs

Table 4 reports the number of baccalaureate education majors graduating in academic year 2003-04 from colleges and universities that are in the Kansas City metropolitan area or that our previous research has identified as significant providers of educational services to individuals who teach in the KCMSD (Podgursky, et al. 2003). Clearly the annual flow of new education majors (670) is fairly large relative to the flow of vacancies discussed in the previous section. However, several caveats need to be kept in mind. First, a substantial share of education majors never teach in public schools in the state in which they graduate. In previous work for Missouri we found that roughly one-third of Missouri education majors never taught in a Missouri public school classroom within three years of graduation. (Podgursky, et al. 1999. <http://web.missouri.edu/~econ4mp/final99c.doc>). Thus, many of these education graduates will not be available to fill KC area public school vacancies. In addition, many CMSU students may not view Jackson County or Kansas City as their most desirable teaching location. Hence these factors suggest that the Table 4 totals over-state new teacher supply for KCMSD and ROJC.

On the other hand, we are ignoring several other important sources of teacher supply. In any school district, a large share of new teacher hires are previously experienced teachers. In addition, our statistics on new teacher supply in Table 4 do not include teachers who enter via post-baccalaureate programs. These are individuals already holding a baccalaureate degree in a field other than education who take sufficient education coursework to meet certification requirements but do not earn an education masters degree or a second baccalaureate. Since these teachers do not earn a degree, they do not show up in U.S. Department of Education (IPEDS) or Missouri DHE graduation statistics.

Table 4
 Estimated Supply of New Teachers: Education Baccalaureate Graduates
 from Selected Colleges and Universities

	KC Area Baccalaureate Education Graduates
	Academic Year <u>2003-04</u>
UMKC	129
CMSU	349
Central Methodist	36
Avila	19
William Jewell	26
Rockhurst	14
Park	51
Mid-America Nazarene University (KS)	34
Ottawa University-KC (KS)	12
Total	670

References

Podgursky, M., Watson, D., Ehlert, M., Walker, M., Foster, W. 1999. A Statistical Analysis of the Labor Market for Missouri Public School Teachers: 1994-95 to 1998-99. Report prepared for the Missouri Department of Elementary and Secondary Education.

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