



BEGINNING TEACHER TURNOVER IN UTAH BETWEEN 2008-09 AND 2014-15

Yongmei Ni, PhD

Rui Yan, PhD

Andrea K. Rorrer, PhD

Allison Nicolson, MPP

Suggested citation for this policy report: Ni, Y., Yan, R., Rorrer, A., & Nicolson, A. (2017). *Beginning Teacher Turnover in Utah between 2008-09 and 2014-15*. Utah Education Policy Center: Salt Lake City, UT.

January 2017

<http://uepc.utah.edu/>



Bridging Research, Policy, and Practice

The Utah Education Policy Center (UEPC) is a research-based center at the University of Utah founded in the Department of Educational Leadership and Policy in 1990 and administered through the College of Education since 2007. As an integral part of the College's commitment to improving educational access and opportunities, the purpose of the UEPC is to improve the quality of educational policies, practices, and leadership in public schools and higher education by informing and influencing educational policy and practice in Utah and the surrounding region through research, evaluation, and TA.

The UEPC provides advanced and balanced research and evaluation to facilitate sound and informed decisions about educational policy and practice. We are committed to helping our clients understand whether educational policies, programs, and practices are being implemented as intended, whether they are effective and impactful, and how they might be improved.

Please visit our website for more information about the UEPC.

<http://uepc.utah.edu>

Andrea K. Rorrer, Ph.D., Director

Phone: 801-581-4207

andrea.rorrer@utah.edu

Introduction

In collaboration with the Utah State Board of Education (USBE), the Utah Education Policy Center (UEPC) is exploring issues related to Utah’s educator workforce through a series of research briefs. The first brief in this series, [At First Glance: Teachers in Utah](#), explored available data related to educator supply, demand, and shortage. A second brief, [Utah Educators](#), reviews the importance of highly-qualified educators, the supports they need, and potential policy options to strengthen the educator workforce in Utah. This brief explores beginning teacher turnover in Utah, an important issue identified in the first two briefs.

[At First Glance](#) reported that 42% of all Utah educators who started their jobs in the 2010-11 school year were no longer teaching in the Utah public education system by the end of their 5th year. This has consequences for teacher demand and supply in Utah, which affects teacher shortages, a recent and highly-visible policy discussion in the state. This early attrition rate of Utah teachers appears to be much higher than the national average. [A study](#) using the Beginning Teacher Longitudinal Study (BTLS) survey data reported that among all beginning teachers in 2007-08 nationwide, only 17 percent were no longer teaching five years later in 2011-12.¹ The significantly higher teacher attrition rate in Utah compared to the nation is large enough to warrant further exploration of the Utah data.²

To extend the discussion of teacher supply and demand, we examine beginning teacher turnover in Utah in more depth in this brief. Specifically, we include an analysis of additional years of data and report teacher turnover by different types and by teacher characteristics.

Data Source and Methodology

This brief uses the *Comprehensive Administration of Credentials for Teachers in Utah Schools (CACTUS)* database maintained by the Utah State Board of Education. This database contains Utah educator demographic, credential, and assignment data. In accordance with USBE data use guidelines, data are not reported in cases where the N size is less than 10.

This report focuses on individuals identified in the USBE CACTUS database as classroom teachers³ for the first time in the 2007-08 school year, also known as the 2008 Cohort. For the purposes of this study, teachers new to the Utah system in 2008 were defined as being a beginning teacher, even if they had previously taught in another state or in a private school. In addition, if a teacher was assigned to multiple schools or multiple teaching assignments in the same school year, the teacher was defined as being in one school, teaching one subject, based on the highest FTE percentage or the earliest begin date (if FTEs were equal).

¹ Gray, L., Taie, S., & O’Rear, I. (2015). Public School Teacher Attrition and Mobility in the First Five Years: Results From the First Through Fifth Waves of the 2007–08 Beginning Teacher Longitudinal Study. (NCES 2015-337). U.S. Department of Education: Washington, DC.

² The two studies are not completely comparable, because 1) they represent different starting years and 2) the national study focuses exclusively on teachers, whereas the Utah study focuses on all educators, including teachers and other licensed educational professionals.

³ The present study includes Utah teachers only, not *all* licensed educators as in the *At First Glance* brief.

Due to the methodology, this study follows 2,699 beginning Utah teachers from school years 2007-08 through 2014-15. Specifically, we look at teacher turnover over this 8-year period and how turnover rates vary by teacher characteristics, including age, gender, race, and teaching subject.

Teacher Turnover Definitions

Stayer	<ul style="list-style-type: none"> • A teacher who stayed in the same school from one year to the next.
Leaver	<ul style="list-style-type: none"> • A teacher who stopped being a Utah classroom teacher during the study period, either by leaving teaching or leaving the Utah public education system.
Mover	<ul style="list-style-type: none"> • Different LEA Transfer or Between-LEA Transfer: A teacher who moved from one LEA to a different LEA from one year to the next. • Same LEA Transfer or Within-LEA Transfer: A teacher who moved from one school to another school within an LEA from one year to the next.
Stop-Out	<ul style="list-style-type: none"> • A teacher who started teaching in the 2007-08 school year, did not teach for at least one year, and then returned to teach again during the study period.

For all teacher categories listed above, calculations are made by looking at a teacher’s school assignment compared to the previous year. For example, a beginning teacher was considered to be a “stayer” in the 2008-09 school year if the teacher’s school was the same as in the 2007-08 school year.

Overall Trends

Among all the 2,699 beginning teachers in the 2008 cohort, 211 teachers were identified as stop-out or returning teachers, who are not included in Table 1 below. Table 1 shows the cumulative number and percentage of teachers who stayed, moved, or left each year. By the end of the eight years of the study, over half of this cohort (56%) had left teaching within a Utah public school, 25% were in the same school they started in, and the rest (19%) had moved schools at least once but remained teaching. The numbers and rates in this table are cumulative. However, the number of movers in one year is not necessarily larger than the previous year because some of the movers eventually became leavers.

Table 1. Cumulative Turnover Rates for the 2008 Cohort Beginning Teachers, by Year

School Year	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Stayers	1,724 (69%)	1,371 (55%)	1,135 (46%)	983 (40%)	832 (33%)	709 (28%)	611 (25%)
Movers	353 (14%)	422 (17%)	455 (18%)	469 (18%)	491 (20%)	510 (21%)	489 (19%)
Leavers	411 (17%)	695 (28%)	898 (36%)	1,036 (42%)	1,165 (47%)	1,269 (51%)	1,388 (56%)
Total	2,488						

Overview of Leavers

Figure 1 illustrates that the cumulative rate of leaving increases each year (see also Table 1). The increase is steeper in the first several years, which further indicates the greater number of leavers in the initial years of teaching. Figure 2 shows this trend by displaying the annual leaving, or attrition, rate of beginning teachers in each year of the study. Figure 2 displays non-cumulative numbers. These data indicate that the highest percentage of teachers left in the second year, or 2008-09 (17%), a slightly lower but still high percentages left in years three and four, and the percentage of leavers in the final four years held fairly steady.

Figure 1. Cumulative Percentage of Leavers in the 2008 Cohort

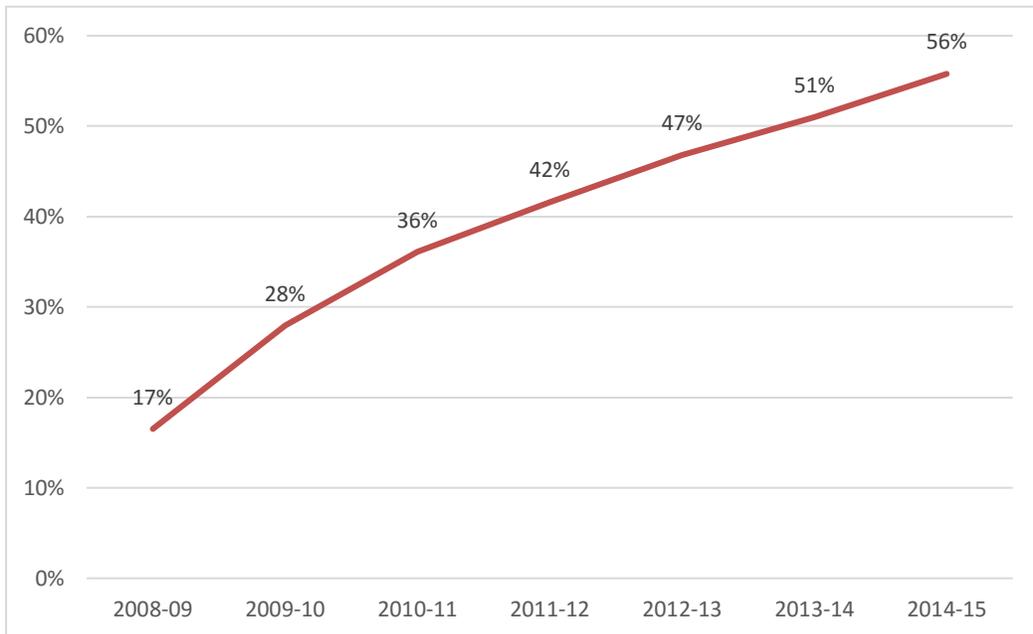
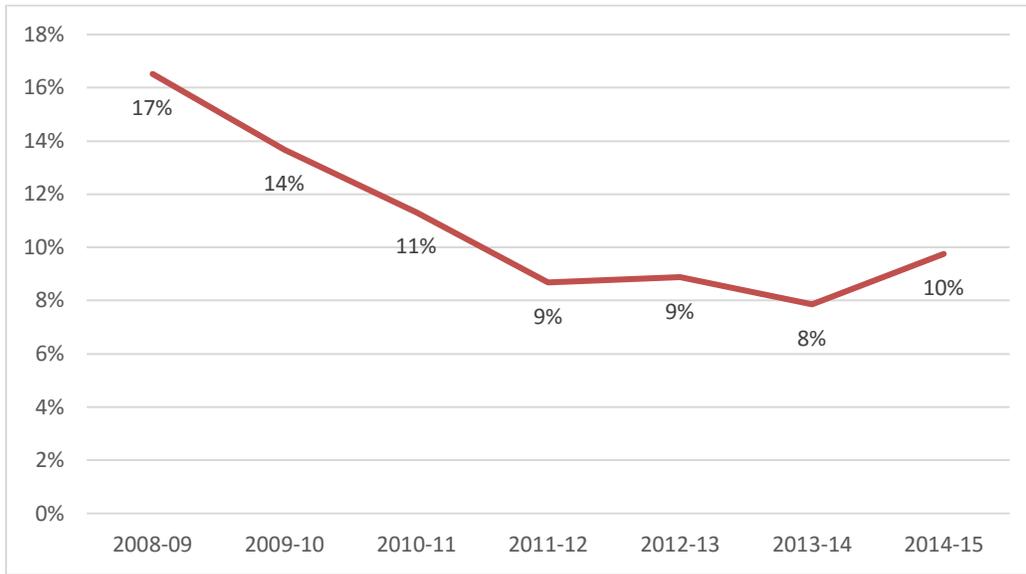


Figure 2. Annual Percentage Rates of Leavers in the 2008 Cohort

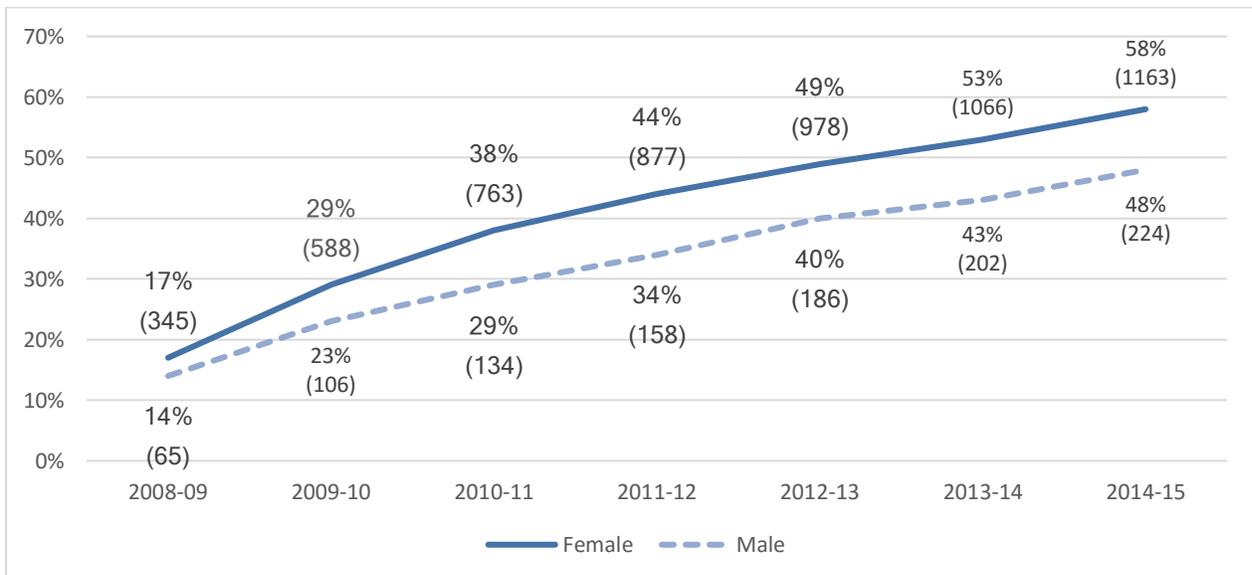


Note: The percentages in Figure 2 do not add up to the cumulative leaving rates in Figure 1 because the denominators are different in the two figures.

Leavers by Gender

Among the 2,488 beginning teachers in the 2008 cohort who were not identified as stop-outs, 2,016 were female teachers, accounting for 81% of the cohort. Figure 3 shows that a greater percentage of female teachers left Utah teaching after their first year, and this difference increased in the next two years and then held steady for the remaining years of the study at a 10 percentage point difference.

Figure 3. Cumulative Leaving Rates for the 2008 Cohort, by Gender

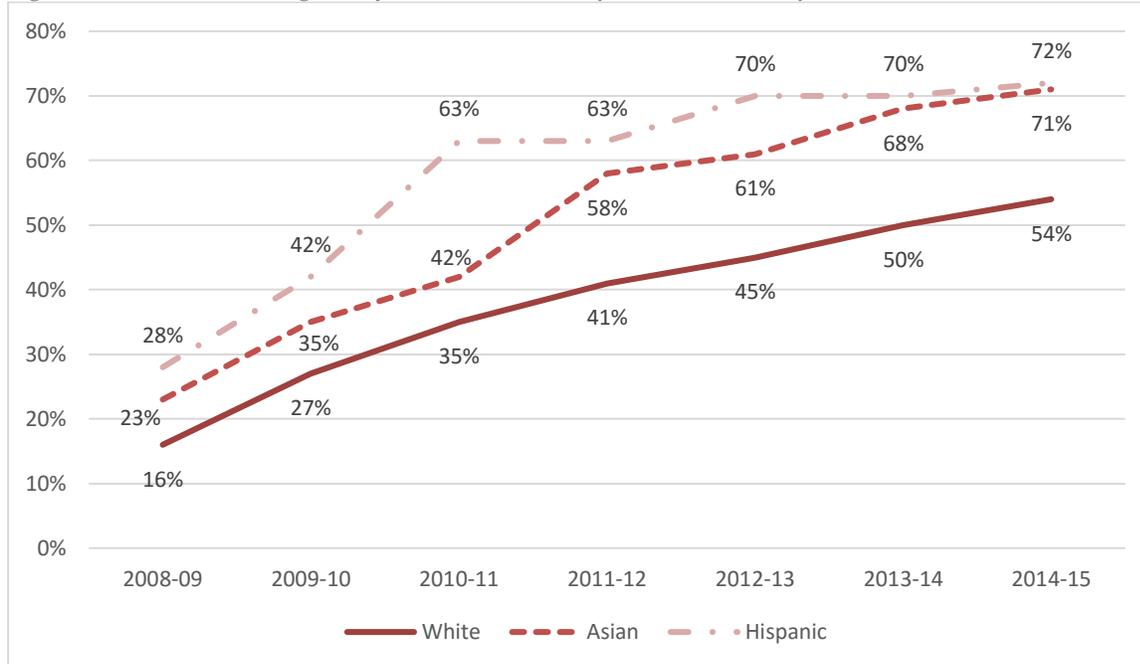


Leavers by Race/Ethnicity

In the 2008 cohort, 2,007 (80.7%) were reported as White, 60 (2.4%) Hispanic, 31 (1.3%) Asian, 364 (14.6%) were unknown, and the remaining 26 (1.0%) as African American, Pacific Islanders, or American Indian combined.

Figure 4 shows that beginning teachers who were White had the lowest leaving rates across the years. By the end of the 8th year, White teachers' cumulative leaving rate was 54%, compared to 72% and 71% for Hispanic and Asian teachers, respectively. Leaving rates were lower for Asian teachers than Hispanic teachers in their first several years, but by the end of study period, that gap had disappeared. The Asian and Hispanic data should be interpreted with caution due to the low number of teachers in these categories in the 2008 cohort. Due to the small numbers, the leaving rates of African American, Pacific Islanders, and American Indian teachers are not reported.

Figure 4. Cumulative Leaving Rates for the 2008 Cohort, by Race and Ethnicity



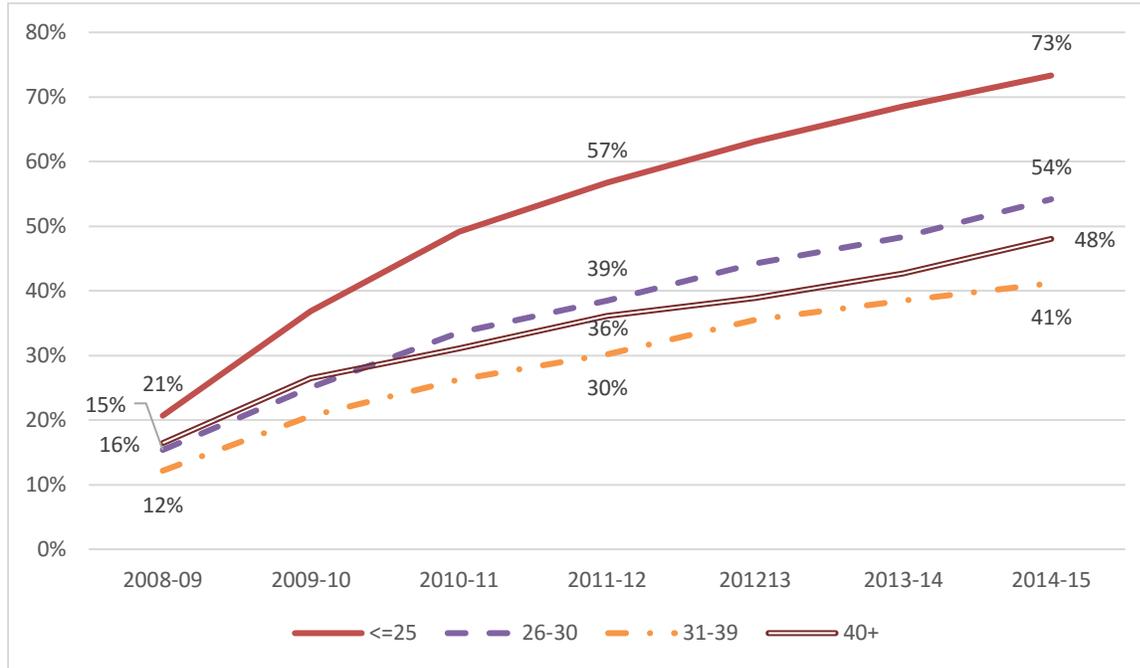
Leavers by Age Group

The average age of teachers in the 2008 cohort was 33 years when they started teaching in Utah, with a median age of 29. Specifically, 735 (30%) were 25 or younger, 683 (27%) were between 26 and 30, 510 (21%) were between 31 and 39, and 560 (23%) were at least 40. Although no relevant data were available, many older teachers might have had previous out-of-state or private school teaching experience not accounted for in CACTUS.

Figure 5 shows cumulative teacher leaving rates by age group. Teachers from the youngest age group (25 or younger) had the highest leaving rates, with 21% leaving after one year of teaching, and 73%

leaving by the end of 2014-15. In contrast, teachers who began teaching in the 31-39 age group had the lowest leaving rates. Only 12% left after one year of teaching. By the end of their 8th year, only 41% had left the classroom. The leaving rates for the remaining two groups, ages 26-30 and age 40+, were close to the cohort average (54% and 48% by the end of the 8th year, respectively), with the 40+ group having slightly lower leaving rates.

Figure 5. Cumulative Leaving Rates for the 2008 Cohort, by Beginning Age Group



Leavers by Teaching Assignment

Among the 2,488 teachers in the 2008 cohort not identified as stop-outs, 1,346 (54%) started as elementary teachers, 888 (36%) started as secondary teachers, and 254 (10%) started as special education teachers.⁴ Among the 888 secondary-level teachers, 127 (14%) taught math, 90 (10%) taught science, and 671 (76%) taught other subjects.

Figure 6 shows that elementary and secondary school teachers had similar leaving rates during the study period, which reached 57% and 56% by the end of their 8th year. Special education teachers had much lower leaving rates than elementary or secondary school teachers (46% by the end of the 8th year).

Figure 7 shows leaving rates by subjects among secondary teachers. By the end of 2014-15 school year, the cumulative leaving rate for secondary science teachers was 45.6%, 10 percentage points lower than math teachers and teachers in other subjects.

⁴ It should be noted that although teacher assignment might change during the study period, the assignments reported here reflect the initial assignment only.

Figure 6. Cumulative Leaving Rates for the 2008 Cohort, by Teaching Assignment

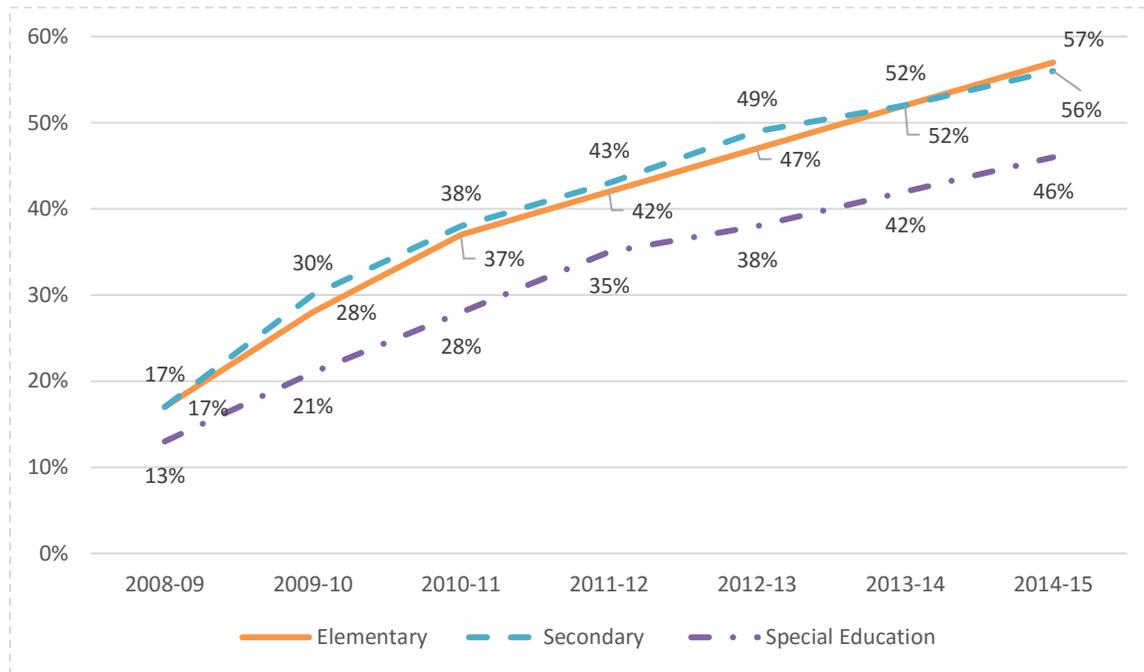
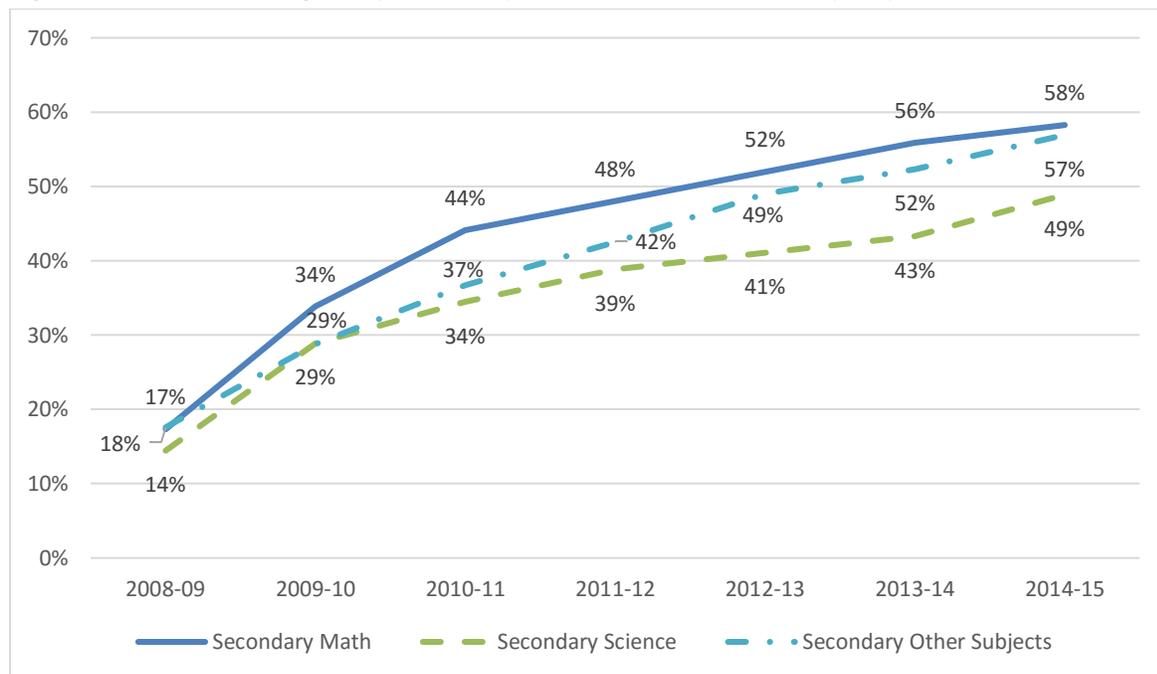


Figure 7. Cumulative Leaving Rates for Secondary Teachers in the 2008 Cohort, by Subject



Where Did Leavers Go?

By the end of the 2014-15 school year, 1,388 (56%) of the 2008 cohort were no longer teaching in Utah public schools. Further investigation revealed that most of these leavers (1,286 or 92%) were no longer in the CACTUS databases. This means they had left the Utah system of education altogether, rather than

moving to a non-teaching role within the system. These individuals may have left to teach elsewhere (such as a private school or another state), changed professions, or left the workforce altogether. Only 102 leavers remained in the CACTUS database. Table 2 shows that 22 of these individuals became school administrators, 10 became LEA administrators, 52 became school-based specialists or librarian and media specialists, and 18 were in other roles including counselors, paraprofessionals, audiologists, and speech-language pathologists.

Table 2. Leaver Status in 2014-15

	Number	Percent
No longer in CACTUS	1,286	92.7%
School administrators	22	1.6%
LEA administrators	10	0.7%
Specialists	52	3.7%
Others (includes counselors, paraprofessionals, audiologists or speech-language pathologists)	18	1.3%
Total Leavers	1,388	100%

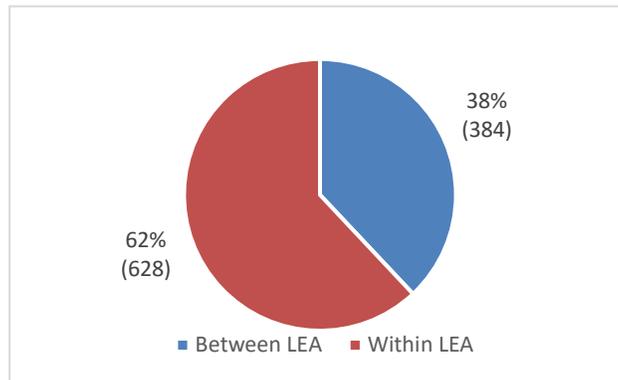
Findings among the Movers or Transfers

Among the 2,488 teachers not categorized as stop-outs, 770 (31%) teachers made at least one transfer during the 8 years. Among the 770 movers, 489 (64%) continued to teach through their 8th year, and 281 (36%) left Utah public teaching. Table 3 shows the transfer frequency of movers. Because some movers made multiple transfers, there were 1,012 transfers in total made by all 770 movers during the 8 years. Among all these transfers, 62% of them were within-LEA transfers and 38% were between-LEA transfers (see Figure 8).

Table 3. Number and Percent of Movers in the 2008 Cohort, by Transfer Frequency

	Number of Teachers	Percent of 2008 Cohort
Movers who transferred once	586	24%
Movers who transferred twice	140	6%
Movers who transferred three times and more	44	2%
Total Movers	770	31%

Figure 8. Distribution of Between-LEA and within-LEA Transfers



Transfers by Gender

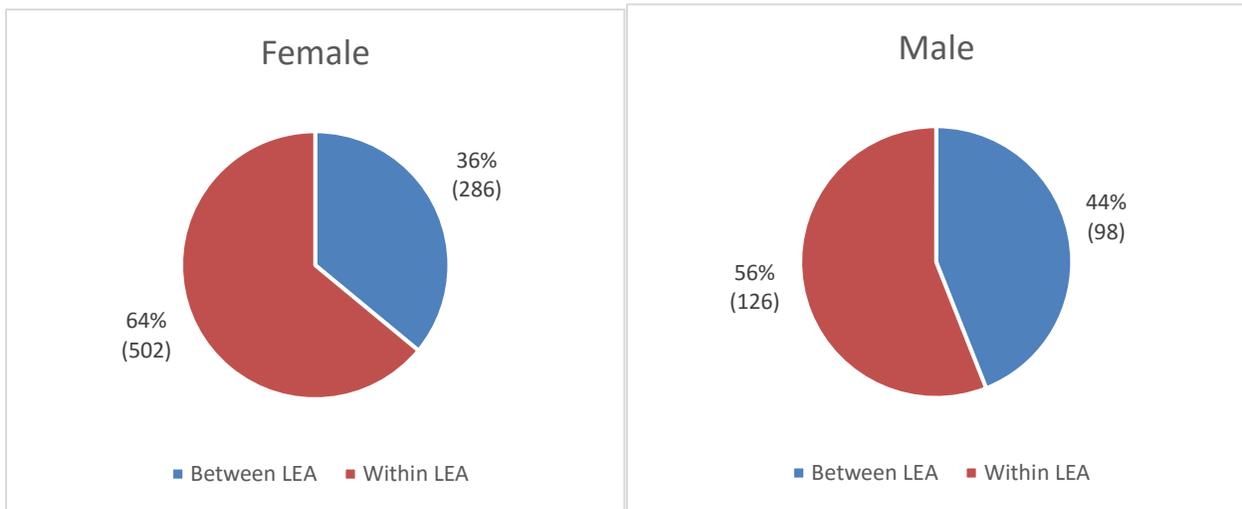
Table 4 shows that male teachers moved to a new school more than female teachers. A greater percentage of male teachers moved at least once, and male teachers moved more often.

Table 4. Number and Percent of Movers in the 2008 Cohort, by Gender

	Female		Male	
	Number of teachers	Percent of 2008 Cohort	Number of teachers	Percent of 2008 Cohort
Movers who transferred once	480	24%	106	23%
Movers who transferred twice	103	5%	37	8%
Movers who transferred three times and more	30	1%	14	3%
Total Movers	613	30%	157	33%

In terms of transfer type, female teachers were more likely to make within-LEA transfers than male teachers (see Figure 9).

Figure 9. Distribution of Between-LEA and Within-LEA Transfers, by Gender



Transfers by Race

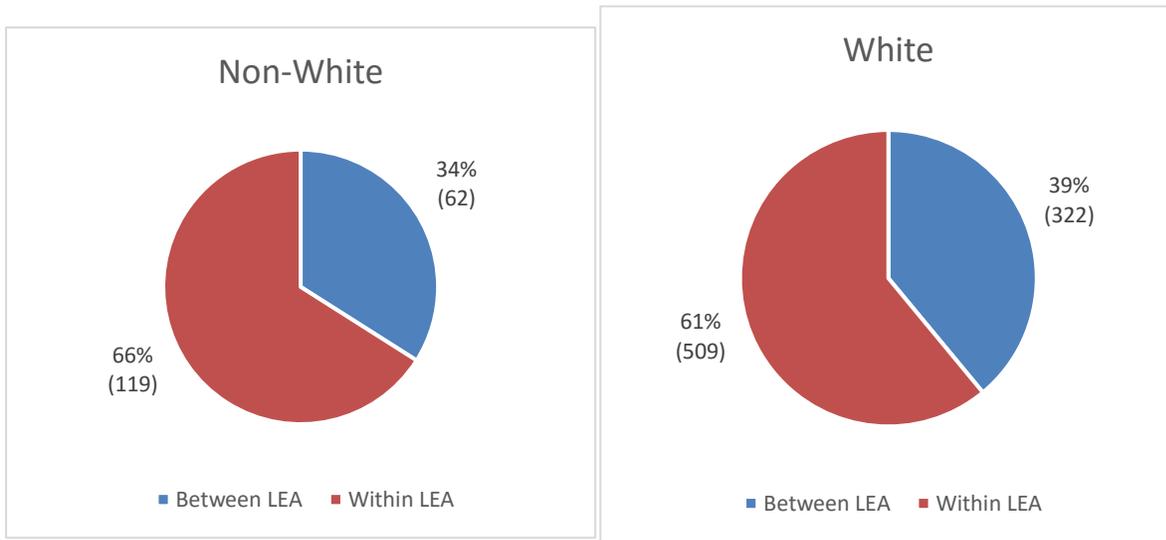
Since the numbers of movers in some specific ethnic/racial groups are small, moves are analyzed by two broad categories: White and non-White teachers. As Table 5 shows, the percentages of White and non-White teachers who transferred at least once were similar. Figure 10 also shows similarities in the types of transfers between the two groups.

Table 5. Number and Percent of Movers Between 2008-09 and 2014-15, by Race

	Non-White		White	
	Number of teachers	Percent of 2008 Cohort	Number of teachers	Percent of 2008 Cohort
Movers who transferred once	112	23%	474	24%
Movers who transferred twice	*	*	117	6%
Movers who transferred three times and more	*	*	37	2%
Total Movers	142	30%	628	31%

* Data suppressed to protect privacy (n<10).

Figure 10. Distribution of Between-LEA and Within-LEA Transfers, by Race



Transfers by Age Group

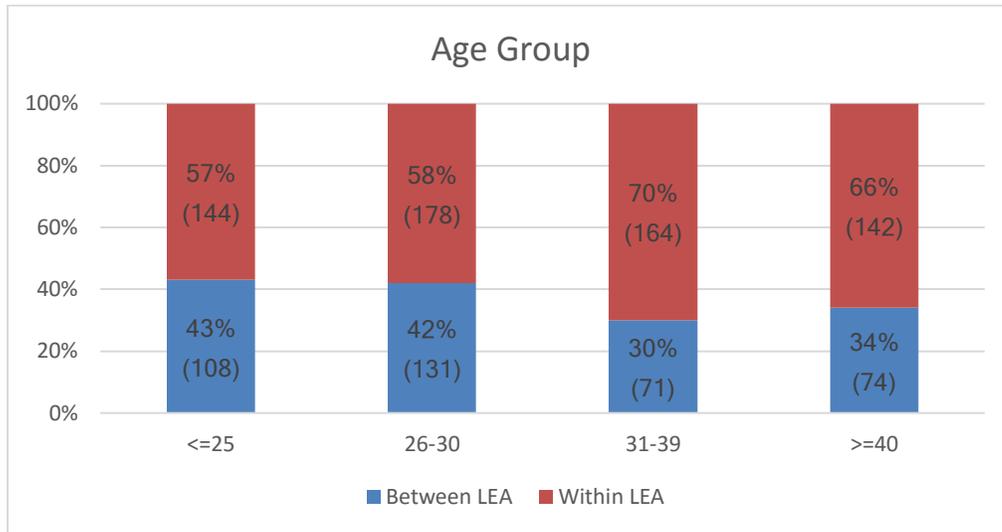
Table 6 shows transfer frequencies of all movers by age group. Teachers who started teaching in the two middle age groups (26-30 and 31-39) were more likely to transfer than teachers who started teaching when they were younger (25 and younger) or older (40+). This is true in both percentage of movers and the frequency of moves. For example, 35% of teachers who started teaching between ages 26 and 30 transferred at least once during the first 8 years of their career, and 27% from the youngest age group transferred within the 8 years. In addition, beginning teachers in the two middle age groups also tended to transfer more frequently than teachers in the youngest and oldest age groups. When looking at the transfer type by age group, it is clear that teachers who started teaching in their 30s and beyond made more within-LEA transfers than teachers who started at age 30 or younger, as shown in Figure 11. This may reflect an assumption that older teachers may value privileges often associated with seniority within LEAs.

Table 6. Number and percent of movers between 2008-09 and 2014-15, by age group

Teacher Age Group	25 and younger		26-30		31-39		40 and older	
	Percent of 2008 Cohort		Percent of 2008 Cohort		Percent of 2008 Cohort		Percent of 2008 Cohort	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Movers who transferred once	154	21%	183	27%	115	23%	134	24%
Movers who transferred twice	*	*	44	6%	40	8%	21	4%
Movers who transferred 3+ times	*	*	12	2%	12	2%	12	2%
Total Movers	197	27%	239	35%	167	33%	167	30%

* Suppressed to protect privacy (n<10).

Figure 11. Distribution of between-LEA and within-LEA transfers, by age group



Transfers by Teaching Assignment

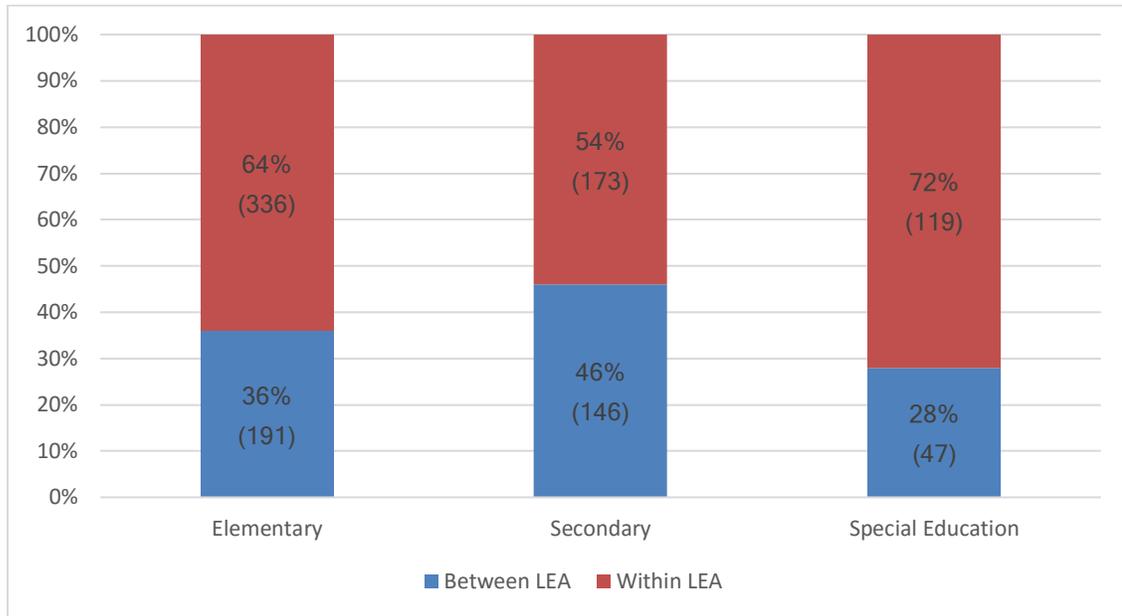
Compared to general education teachers, special education teachers were more likely to make transfers. As Table 7 shows, 44% of special education teachers transferred at least once during the 8 years, while only 31% of elementary and 28% of secondary general teachers transferred. Special education teachers were also more likely to make multiple transfers than general education teachers. While 17% of special education teachers transferred twice and more, only 6% of elementary and secondary teachers transferred twice or more.

Transfer types were also very different among special and general education teachers. As Figure 12 shows, among all the transfers made by special education teachers, 72% were within-LEA transfers, which is much higher than those made by general education teachers. Among the transfers made by general education teachers, 64% of transfers made by elementary school teachers and 54% made by secondary school teachers were within-LEA transfers. The difference is consistent with the fact that an LEA typically has more elementary schools than middle and high schools.

Table 7. Number and Percent of Movers Between 2008-09 and 2014-15, by Teaching Assignment

	Elementary		Secondary		Special Education	
	Number	Percent of 2008 Cohort	Number	Percent of 2008 Cohort	Number	Percent of 2008 Cohort
Movers who transferred once	332	25%	194	22%	60	24%
Movers who transferred twice	69	5%	44	5%	27	11%
Movers who transferred 3+ times	17	1%	12	1%	15	6%
Total Movers	418	31%	250	28%	102	40%

Figure 12. Distribution of Between-LEA and Within-LEA Transfers, by Teaching Assignment



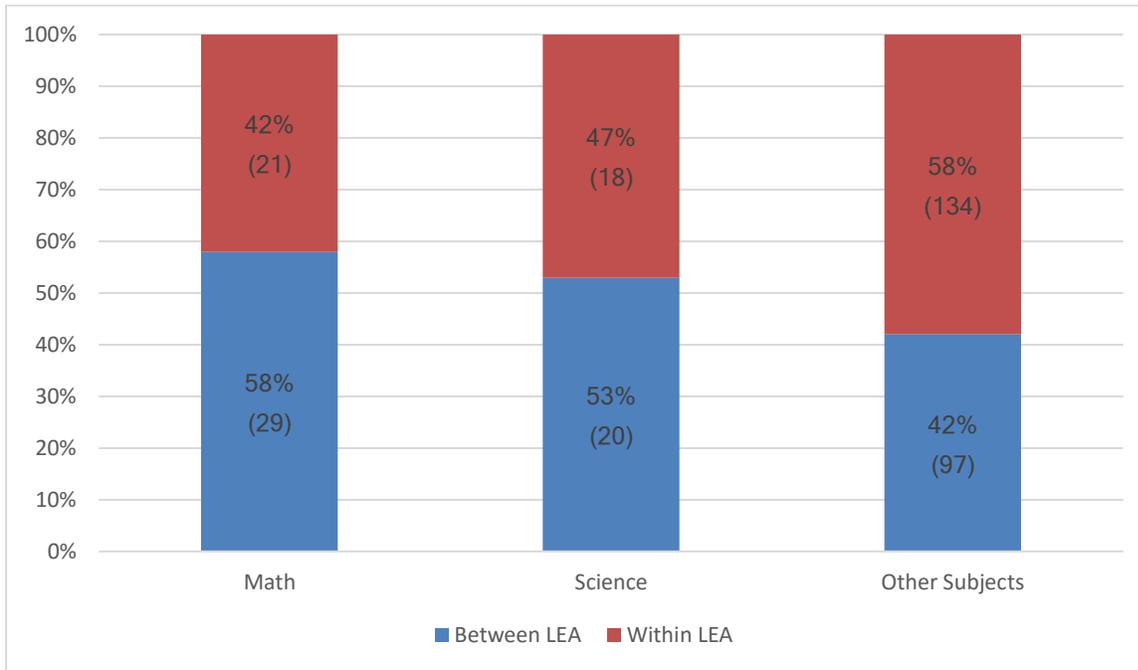
Among all secondary school teachers, science teachers were more likely to transfer than math teachers and teachers in other subjects. As Table 8 shows, 36% of science teachers made at least one transfer during the 8 years, while 32% of math teachers and 26% of teachers in other subjects transferred. In terms of transfer type, surprisingly, more than half of the transfers made by secondary math and science teachers were between-LEA transfers, while 42% of the transfers made by secondary teachers of other subjects made between-LEA transfers (see Figure 13). This could be caused by demand side factors, where schools are actively trying to attract math and science teachers from other LEAs.

Table 8. Number and Percent of Movers Between 2008-09 and 2014-15 for Secondary Teachers, by Subject

Secondary School Teachers	Math		Science		Other Subjects	
	Number	Percent	Number	Percent	Number	Percent
Total movers	41	32%	32	36%	177	26%

Note: Transfer frequencies were not reported in the table due to small sample sizes.

Figure 13. Distribution of Between-LEA and Within-LEA Transfers for Secondary Teachers, by Subject



Findings among the Stop-out Teachers or Returners

As mentioned earlier, the number of stop-out teachers identified between school years 2007-08 and 2014-15 was 211, making up 7.8% of total teachers in the 2008 cohort. When comparing the stop-out teachers with the whole cohort by gender, race/ethnicity, age, and teaching assignment, little differences were detected. For example, of the 211 stop-out teachers, 81.5% were female teachers, matching the gender distribution of the whole cohort. In addition, 168 (79.6%) were White, again matching the racial/ethnic makeup of the whole cohort. The average age for stop-out teachers was 34 years old, and the median age was 30. This is slightly higher than the whole cohort, but only by one year. The distribution of the teachers by teaching assignment is relatively similar too. The majority of stop-out teachers (110, 52%) started as elementary school teachers, while 72 (34%) were secondary school teachers. This is comparable to the whole cohort, with 54% starting as elementary teachers and 36% starting as secondary teachers. In addition, 14% were special education teachers, which was 4% higher than that of the whole cohort.

Concluding Observations

Compared to the national average, beginning teacher turnover rates are very high in Utah. To further our understanding on this issue and to inform Utah policy makers, we examined beginning teacher turnover patterns of the 2008 cohort between 2008-09 and 2014-15, which represents the first eight years of their careers. The overall trends show that the cohort started at 2,699 teachers and shrank every year. By the 2014-15 school year, more than half of the cohort (56%) were no longer Utah classroom teachers. In addition to a small number of teachers (211) who stopped out and returned to

teach at some point during the eight years, most of the leavers have left the Utah public school system altogether. Only 4% remained in the system but in changed roles as administrators, specialists, or other education jobs.

When looking at the leavers by teacher characteristics:

- Female teachers had higher leaving rates than males.
- Non-White teachers had higher leaving rates than White teachers.
- Teachers who started teaching at 25 or younger had the highest leaving rates; only one out of four remained teaching at the end of 8th year.
- By contrast, teachers who started teaching in the age group of 26-30 had the lowest leaving rates. 41% left by the end of the 8th year.
- Special education teachers had much lower leaving rates than general education teachers at both elementary and secondary levels.
- At the secondary school level, science teachers had the lowest leaving rates, when comparing them to math teachers and all teachers in other subjects.

Among all the 2,488 beginning teachers in the 2008 cohort who were not categorized as stop-out, 770 (31%) teachers made at least one transfer during the 8 years, and 281 of these movers eventually left teaching in Utah public schools. Additionally, three-fourths of all movers transferred only once during the eight years. Among all these transfers, the majority (65%) of transfers were made between schools within the same LEA.

When looking at the frequency and the type of transfers by teacher characteristics:

- Male teachers were more likely to transfer than female teachers. They were also more likely to make between-LEA transfers than female teachers.
- White and non-White teachers were similar in terms of the likelihood of transferring, although White teachers were more likely to make between-LEA transfers than non-White teachers.
- Teachers who started teaching between the ages of 26 and 39 were more likely to transfer than teachers who started teaching younger (25 and younger) or older (40+).
- Teachers who started teaching in their 30s and beyond were more likely to make within-LEA transfers than teachers who started at 30 or younger.
- Special education teachers were much more likely to transfer than general education teachers. They were also more likely to make within-LEA transfers than general education teachers. Distribution of time between schools within an LEA may account for some of this variation.
- Elementary teachers were slightly more likely to transfer than secondary teachers. They also were more likely to make within-LEA transfers than secondary teachers.
- Among all secondary teachers, science teachers were more likely to transfer than math teachers and teachers in other subjects.
- More than half of the transfers made by secondary math and science teachers were between-LEA transfers, which was much higher than that of teachers of other subjects.

Finally, the characteristics of the 211 (8%) stop-out teachers were similar to the whole cohort in terms of gender, race/ethnicity, age, and teaching assignment.

Further Considerations

The 2008 cohort in Utah for this study had a sample size of 2,699. The sample size grows even smaller when we analyze movers and leavers by teacher characteristics. The small sample size and the presence of just one cohort limits the power of these findings to a certain degree. Future studies of this nature including more cohorts will increase the generalizability of the findings.

State policy makers and local policy makers both should be alarmed at the high number of teachers leaving the state teaching core, particularly in the first few years. This speaks to the need for additional support and specific programs aimed at assisting these new teachers to help them stay in the classroom. Policy makers in LEAs may find different applications of these data compared to state policy makers, since LEAs are more affected by transfers. As the employers of teachers, LEAs may be more attuned to the patterns and trends of teachers to transferring between districts.