


Teacher Turnover in Early Childhood Education: Longitudinal Evidence From the Universe of Publicly Funded Programs in Louisiana

Laura Bellows¹, Daphna Bassok¹, and Anna J. Markowitz²

This study uses longitudinal data to follow a cohort ($N = 4,465$) of all early childhood education teachers working in publicly funded, center-based settings in Louisiana over a 3-year period. We present the proportion of teachers still at their sites across six time points between 2016 and 2019, providing the first statewide, longitudinal estimates of within-year and multiyear retention. We find that less than 40% teachers in the fall of 2016 are still at their site by the fall of 2019. Turnover is particularly high among childcare teachers (compared to teachers at Head Start or school-based pre-kindergarten), teachers of toddlers, and teachers new to their sites. Policy implications are discussed.

Keywords: early childhood; early childhood education; teacher research; teacher turnover; education workforce; preschool; state policy

High-quality early childhood education (ECE) can have a lasting impact on children's learning and their lives. The adults who teach and care for young children in ECE settings are the key drivers of this quality (Institute of Medicine & National Research Council, 2015). Despite their importance, teachers who work with children ages birth to 5 years in the United States typically receive very low compensation and few professional supports.

In turn, ECE teachers frequently leave their positions. Studies report annual turnover rates of 26%–40% across the United States (Totenhagen et al., 2016). In Louisiana, the context for the current study, about 37% of ECE teachers working one year are gone by the next (Bassok, Markowitz, et al., 2021).

These turnover rates are higher than those observed in typical U.S. K–12 settings, which are around 15%–24% (Hanushek et al., 2016; Papay et al., 2017; Redding & Henry, 2018) and are challenging for children and the ECE sector. Young children learn primarily through their interactions with sensitive adults (e.g., Bronfenbrenner & Morris, 2007; Hamre, 2014), and the benefits of ECE hinge largely on stable relationships with caregivers (Markowitz et al., 2017; Sandstrom & Huerta, 2013). Turnover interrupts these developmental processes (Choi et al., 2019; Markowitz, 2019; Tran & Winsler, 2011) and creates stressful environments for leaders and teachers who remain at the site and must

adjust to new duties or coworkers (Cassidy et al., 2011; Kwon et al., 2020; Schaack et al., 2021; Whitebook & Sakai, 2004). Additionally, turnover compromises quality improvement efforts. For example, when teachers leave, investments in their professional development are lost, and leaders must spend more time on staffing than on supporting remaining teachers and children. Moreover, U.S. K–12 data suggest that teachers improve quickly during their first few years of teaching (Ladd & Sorensen, 2017; Papay & Kraft, 2015); early turnover may limit teachers' improvement.

Although evidence is growing regarding annual turnover rates in ECE, lack of administrative data (Whitebook et al., 2018) has meant that foundational questions about turnover in ECE settings have not been examined. For example, we know little about the prevalence of within-year turnover, which is likely more damaging than year-to-year turnover for children and site leaders. We know even less about long-term patterns of turnover and, with few exceptions, also know little about how turnover patterns vary by site or teacher characteristics.

¹School of Education and Human Development, University of Virginia, Charlottesville, VA

²School of Education & Information Studies, University of California, Los Angeles, CA

In K–12, state and district longitudinal administrative data have facilitated nuanced examinations of within-year turnover (Redding & Henry, 2018, 2019) as well as patterns of longer-term retention (Boyd et al., 2008; Hanushek et al., 2016; Papay et al., 2017). These estimates, coupled with information on heterogeneity in patterns by site or teacher characteristics, have helped policymakers target retention supports. This paper uses unique data tracking all ECE teachers working at publicly funded, center-based sites serving low-income children in Louisiana—including school-based pre-kindergarten, Head Start, and subsidized childcare—over a 3-year period to bring this type of analysis to ECE for the first time.

Teacher Turnover in ECE

ECE teacher turnover in the United States is high relative to K–12 teacher turnover (Bassok et al., 2013; Caven et al., 2021; Phillips et al., 2019). However, data limitations have left key dimensions of ECE turnover understudied.

For instance, nearly all currently available turnover estimates focus on annual turnover rates (over a 12-month period). We know very little about the timing of this turnover and specifically the prevalence of within-year turnover, even though losing a teacher during the school year is likely particularly problematic for young children. One study conducted in a sample of children attending subsidized childcare in Florida finds that 41% of children lost their teachers during the school year (Tran & Winsler, 2011). Two others provide estimates of within-year turnover for teachers in Head Start programs across the United States: 36% of first-year teachers (Wells, 2015) and 10% overall (Markowitz, 2019). However, to date, no studies have reported on within-year turnover for the broader ECE workforce.

Similarly, we know little about the likelihood teachers stay at their sites beyond a year. Whitebook and Sakai's (2003) study, released nearly 2 decades ago, is the only one we are aware of that examines multiyear turnover in ECE. Of teaching staff at 92 childcare centers in California, 76% of individuals employed in 1996 were no longer there by 2000 (Whitebook & Sakai, 2003). More recent estimates based on larger samples are needed.

Identifying Site, Job, and Teacher Characteristics Related to Turnover

Beyond describing within- and multiyear turnover rates in a large, statewide sample, the current study examines how patterns differ based on ECE sector, age of children in the classroom, and whether a teacher is new to their site.

Existing research shows that although teachers report attachment to their work, the stress and expanding difficulty of teaching in ECE overshadow these benefits (e.g., Kwon et al., 2020; Schaack et al., 2021). Low compensation, lack of benefits, and lack of instructional resources drive teachers out of classrooms (Kwon et al., 2020; Schaack et al., 2021; Wells, 2017; Whitebook & Sakai, 2004).

As described below, these challenges—and, in turn, staffing challenges—may be particularly pronounced for teachers in sectors in which compensation and support are lowest as well as those working with the youngest children and those newest to the job.

Variability by Sector

In the United States, public funds support three types of center-based ECE: school-based pre-kindergarten, which is typically administered through local public schools and may serve 3- or 4-year-olds; Head Start, a federal program targeted to children from birth through age 5 years from families with very low incomes and children with special needs; and private childcare centers, which receive subsidies to serve children from families with low incomes of any age (e.g., from about 6 weeks onward).

Although all sectors serve children from families with low incomes, these sectors are funded at different levels, face different oversight and regulatory systems, and offer varied teacher compensation and professional growth opportunities. Teachers in childcare centers are typically paid much less than teachers in the other two sectors and have access to fewer professional supports (Whitebook et al., 2014). For example, in a recent survey of two large parishes in Louisiana, lead teachers at childcare sites reported yearly salaries of \$21,000, as compared to \$38,000 and \$41,000 for Head Start and school-based pre-kindergarten teachers, respectively (Bassok et al., 2019).

Differences in compensation and resources may contribute to differences in turnover across sectors. In Louisiana, 46% of childcare teachers left their site in a single year, compared to 34% of Head Start teachers and 26% of school-based pre-kindergarten (Bassok, Markowitz, et al., 2021). Although within-year and multiyear turnover is hypothesized to be highest in childcare, no studies we are aware of have made cross-sector comparisons.

Variability by Age of Children in the Classroom

School-based pre-kindergarten primarily serves 4-year-olds, whereas Head Start and childcare settings typically serve children from birth through age 5 years. These differences in ages served combined with other cross-sector differences likely mean that the youngest learners face the highest levels of turnover. Indeed, in Louisiana, 31% of teachers working with preschoolers turn over annually, compared to 49% of teachers working with toddlers (Bassok, Markowitz, et al., 2021).

Even within sector, teachers working with children of different ages may face somewhat different job demands, credentialing requirements, compensation levels, and labor markets (e.g., a preschool teacher working in childcare may change sectors more easily). One national, although cross-sector, study suggests that ECE staff working with infants and toddlers earn less than those working with preschoolers (National Survey of Early Care and Education Project Team, 2013). If this is the case, turnover for the teachers of the youngest children may be higher within-sector as well.

Variability by Teacher Entry Status

A third potential factor influencing turnover and retention is whether a teacher is new to the site. In the U.S. K–12 context, beginning teachers are more likely to leave than are teachers with more experience (Boyd et al., 2008; Papay et al., 2017; Redding & Henry, 2019). This pattern may be even more pronounced for

ECE teachers because in some sectors, barriers to entry are low. In Louisiana and many states, childcare teachers do not need a college degree or certification to begin teaching. To date, no studies have examined whether teachers who are new to their sites are more likely to leave than those with more experience.

Present Study

This paper uses a longitudinal data set covering all center-based ECE sites receiving public funds in Louisiana to address two key questions. First, what proportion of teachers working at publicly funded, center-based ECE sites in the fall of 2016 were still employed either at the same site or at any publicly funded ECE site in each subsequent spring and fall, through the fall of 2019? Second, do patterns of retention vary by sector, age of children in the classroom, or whether the teacher is new to the site? In addressing these questions, we provide the first statewide estimates of within-year and multiyear teacher stability and begin examining potential correlates of teacher retention.

Data and Methods

We use administrative data collected twice annually by the Louisiana Department of Education (LDOE) as part of its Quality Rating and Improvement System (QRIS), a statewide early childhood accountability system that is mandatory for all center-based ECE settings receiving public funds, including school-based pre-kindergarten, Head Start, and subsidized childcare. As part of the QRIS, trained observers collect data every fall and spring in every classroom serving toddler- or preschool-aged children within all publicly funded, center-based ECE sites. Our data, which stem from these observations, include all lead teachers working at publicly funded, center-based sites and, as far as we know, are the first universal, statewide data of their kind. Sites that do not receive public funds and home-based programs are not beholden to the policy and thus not in our data set.

We follow a cohort of teachers observed during the fall of 2016. Our sample includes 4,465 teachers working in 1,318 sites. We restrict our sample to teachers at sites that were continuously open between the fall of 2016 and the fall of 2019 to ensure that we are capturing turnover—that is, voluntary or nonvoluntary exits from operational sites—rather than site closures. Doing so excludes 608 teachers working in 218 sites that closed by the fall of 2019.

Creating a Longitudinal Data Set Tracking Teachers

Louisiana does not formally track teacher employment or exits in ECE settings. However, the QRIS, which mandates twice-annual observational data collection in every classroom, provides a unique opportunity to track these patterns. At the beginning of each year, site leaders must submit a list of operating classrooms and corresponding teachers. Classroom observations are scheduled based on these lists, and sites are notified of observations in advance. During the observation sessions, observers are required to record the name of the classroom's lead teacher as part of their protocol. This results in a list of all lead

teachers working in publicly funded ECE in the fall and the spring of each academic year.

We match teachers across a 3-year period from the fall of 2016 through the fall of 2019 (seven time periods in all), using their observer-reported names (Louisiana does not attach unique identifiers to ECE teachers). We use fuzzy matching algorithms to account for typos and different spellings in teachers' names across time points (for more information about the data and match process, see Appendix A online).

Defining Retention. Our primary research question focuses on the long-term retention of teachers working in publicly funded, center-based ECE sites beginning in the fall of 2016. We define *retention* as the proportion of teachers who stay at their sites (or in any publicly funded ECE site) at each subsequent spring and fall through the fall of 2019. That is, beginning in the fall of 2016, if we observe a teacher in the same site in the next observation period (e.g., the spring of 2017), they are coded as retained. This process is repeated for each of six time points.

Some teachers may exit and then reenter their sites over a short period of time (due to, for example, maternity leave). If a teacher was not observed in one time period but was observed in the period prior and the period following, we count the teacher as retained throughout.¹

Finally, we repeat this coding but, rather than calculate site retention, calculate overall ECE retention; that is, we calculate whether a teacher was observed at any publicly funded, center-based ECE site in Louisiana during each subsequent time period (subsequently referred to as “overall retention”).

Variation in Retention. We examine how retention rates vary by sector type, classroom age, and entrant status. We observe or construct these measures for all observations in our data such that no data are missing.

Sector type is provided by LDOE, and we use this to determine whether a teacher worked in a school-based pre-kindergarten, Head Start, or childcare in the fall of 2016.

In Louisiana, observers use different observation tools, depending on the age of the majority of children in the classroom (e.g., preschool-age, or 3–5 years; or toddler-age, or 15–36 months). We use the observation type to label teachers as working with preschoolers or toddlers based on their classroom in the fall of 2016.²

Finally, we identify whether teachers were new to their site or returning during the fall of 2016, using the prior year of data. We classify teachers as “entrants” if they were not observed at their site in 2015–16 (i.e., the previous school year). We classify teachers as “returning” if they were observed teaching at their fall 2016 site during either the fall of 2015 or the spring of 2016.³ This approach allows us to identify site entry status for all teachers.

Analytic Approach

To address our first research question, we calculate within-year teacher retention as the proportion of teachers from our initial fall 2016 sample who remained at their site (or in ECE overall) in the spring of that same school year. We then calculate the

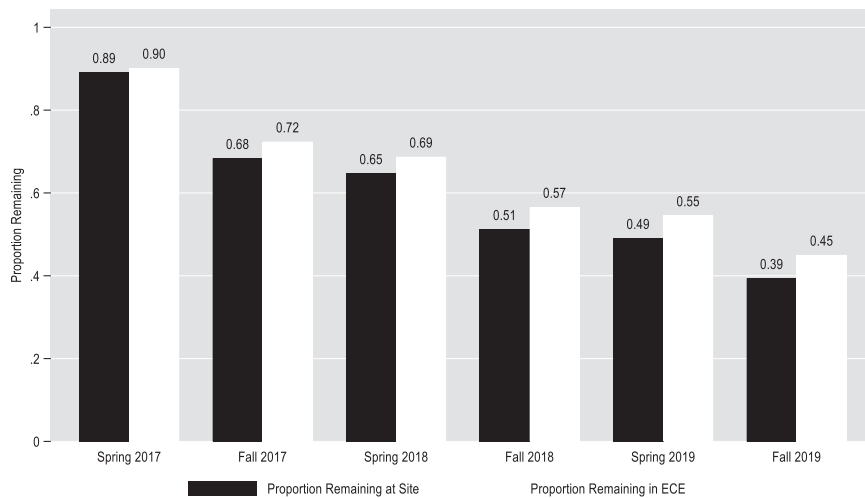


FIGURE 1. *Proportion of fall 2016 ECE teachers remaining at initial site and in ECE.*

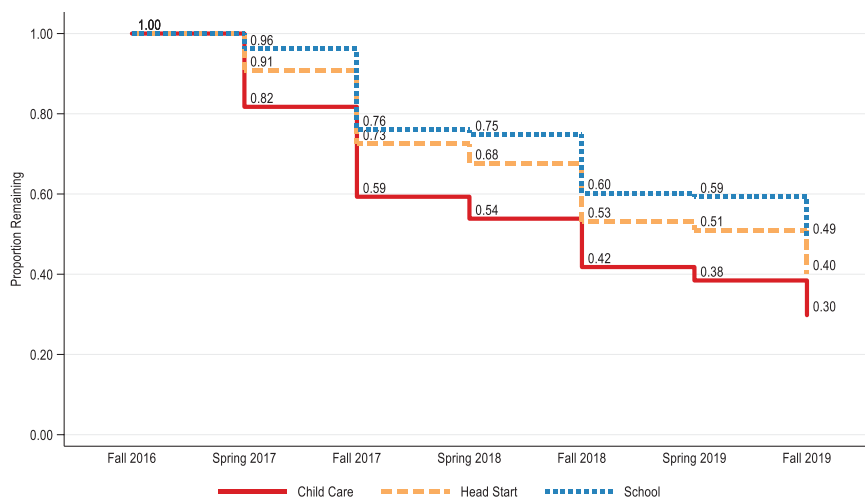


FIGURE 2. *Proportion of fall 2016 ECE teachers remaining at initial site, disaggregated by sector.*

proportion of the 2016 teachers remaining at their site (or in ECE overall) at each time period thereafter, through the fall of 2019. We present these proportions in a figure showing retention in each of the six post-baseline time periods.

To address our second research question, we disaggregate these retention patterns—site and overall—by sector, age of children in the classroom, and teacher entry status. Site retention rates at each time point are presented in Figures 2–4, and overall retention rates in Appendix B online (Figures B1–B3). Although our data are population-level and do not require significance tests, we note that at all time points, all cross-sector, age, and teacher entry status comparisons are statistically significant.

As described above, sector, age of children taught, and likelihood of being new to the site are all correlated. Because of this correlation, we also explore whether age and entrant patterns hold within each sector in Appendix C (online only). Additionally, it is possible that community-level factors are correlated with our key characteristics and teacher retention, such that we might overstate the relationship between turnover and sector, age, and entrant status. To address this issue, we formalize our estimates in discrete time survival models that

simultaneously account for all key characteristics as well as a suite of community-level covariates. Models are presented in Appendix D (online only); our descriptive patterns are unchanged across analyses. In Appendix E (online only), we also show the percentage of teachers remaining in each period, conditional on whether they were teaching in the previous period.

Results

Table 1 presents sample descriptive statistics. In the fall of 2016, about two-fifths of teachers worked in school-based pre-kindergarten, nearly one-fifth worked in Head Start, and the remainder worked in childcare. The majority of teachers (71%) taught preschoolers, but this number varied by sector: Although none of the school-based pre-kindergarten teachers in our sample taught toddlers, the majority of childcare teachers (59%) did. Nearly a third (31%) of teachers were entrants. This status also varied by sector: More than twice as many childcare teachers (44%) were entrants in the fall of 2016, compared to school-based pre-kindergarten teachers (19%).

Table 1
Sample descriptives

	All	School	Head Start	Childcare
Number of sites (#)	1318	608	163	547
Number of teachers (#)	4465	1796	786	1883
Age level of children served (%)				
Preschool (3–5 years)	71	100	80	41
Toddler (15–36 months)	29	0	20	59
Entry status (%)				
Entrant	31	19	28	44

Note. Teachers are considered “preschool teachers” when the majority of children in a classroom are preschool-age (3–5 years) and “toddler teachers” when the majority are toddler-age (15–36 months). “Entrants” are teachers who were not observed at their site in 2015–16; “returning” teachers were observed teaching at their fall 2016 site during either the fall of 2015 or the spring of 2016.

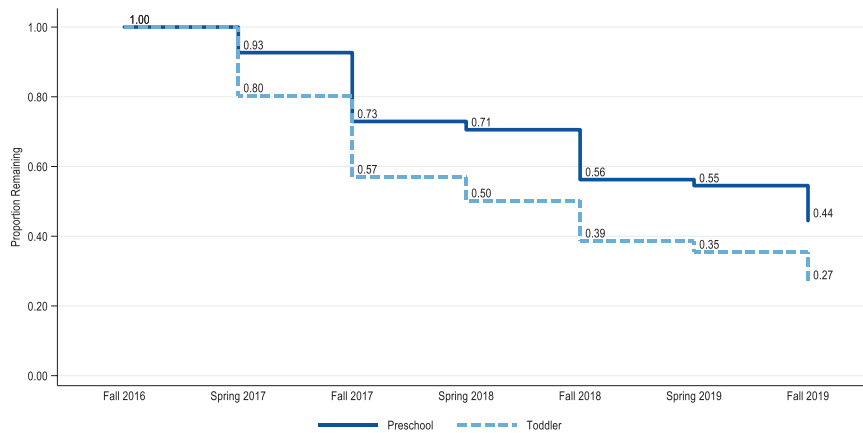


FIGURE 3. *Proportion of fall 2016 ECE teachers remaining at initial site, disaggregated by age of children taught.*

Note. Teachers are considered “preschool teachers” when the majority of children in a classroom are preschool-age (3–5 years) and “toddler teachers” when the majority are toddler-age (15–36 months).

Within-Year and Multiyear Retention

The black bars in Figure 1 show the proportion of teachers observed in the fall of 2016 who remained at the site where they started over the following six time periods. The first one indicates that by the spring of that same school year, 89% of teachers were still at their sites. By the following year, the fall of 2017, 68% of teachers remained at the same site. In other words, about 11% of teachers left within the year, and 32% left from one fall to the next. After 3 years, about two-fifths (39%) of the original sample remained at their site.

The white bars show the proportion of teachers retained in ECE overall—that is, teachers observed working at any publicly funded, center-based site in Louisiana. The black and white bars are quite similar, suggesting very little movement from one publicly funded site to another. For instance, although 68% of teachers were still at their original site after 1 year, 72% were teaching either at their site or in ECE overall. Given this similarity, we discuss variability for site-level retention only throughout the rest of the Results section; analogous results for overall retention are presented in Appendix B (online only) and are substantively similar.

Variability by Sector

Figure 2 presents variability in retention by sector. We find that our overall estimates mask differences by sector, with higher retention rates in school-based sites relative to childcare. Whereas in the spring of 2017, school-based pre-kindergarten sites retained 96% of their teachers, childcare sites retained 82%. Retention rates for Head Start teachers were closer to those for school-based pre-kindergarten (91%). After 1 year, 76% of school-based pre-kindergarten teachers were still at their site, compared to 59% of childcare teachers. This 17-percentage-point “retention gap” stayed relatively stable over time. By the fall of 2019, 49% of teachers in school-based pre-kindergarten were still teaching at their initial site; this number was 30% in childcare.

Variability by Child Age

Retention patterns of ECE teachers also varied by the age of children in the classroom. As shown in Figure 3, at every time point examined, the retention rate for preschool teachers was higher than that of toddler teachers. For example, by the fall of 2019, 44% of preschool teachers remained, whereas only 27% of their counterparts teaching toddlers stayed.

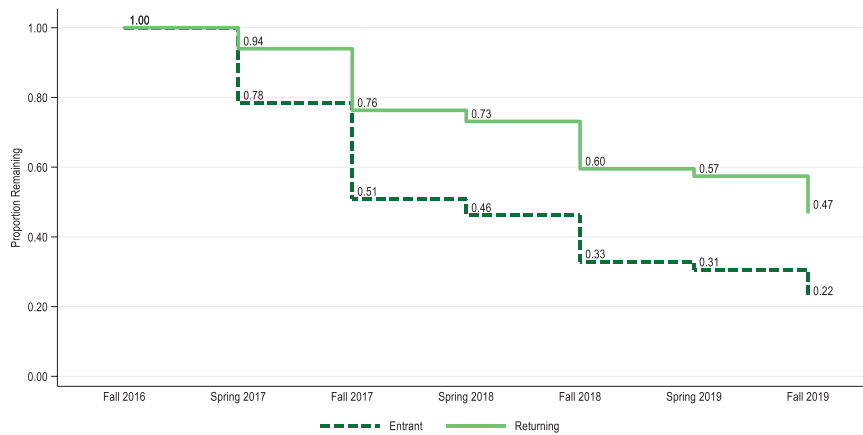


FIGURE 4. *Proportion of fall 2016 ECE teachers remaining at initial site, disaggregated by entry status.*

Note. “Entrants” are teachers who were not observed at their site in 2015–16; “returning” teachers were observed teaching at their fall 2016 site during either the fall of 2015 or the spring of 2016.

Recall that school-based pre-kindergarten in Louisiana serves only preschoolers, so these differential rates of retention reflect, in part, sector differences. To test whether this differential retention by age holds after accounting for sector differences, we first fully disaggregate retention rates by sector and child age in Appendix C, Table C1 (available online only). Within Head Start and childcare, retention rates were lower for toddler teachers than for preschool teachers. In formal models controlling for sector, age, and community characteristics, results were unchanged (Appendix D online).

Variability by Teacher Entry Status

Our sample of fall 2016 teachers was a mixture of teachers new to sites (entrants) and teachers returning to sites (returning teachers). As shown in Figure 4, retention rates were lower among entrants than for returning teachers over time. In the spring of 2017, 94% of returning teachers remained, compared to 78% of entrants. By the fall of 2019, 22% of 2016 entrants remained at their initial sites; in contrast, about half of 2016 returning teachers remained.

Consistent with patterns observed in Figure 2, the proportion of entrants in childcare in the fall of 2016 was higher than in other sectors, raising the possibility that entrant patterns may largely reflect sector differences. We explore this possibility by fully disaggregating retention rates by sector and entrant status (see Table C2 in the online supplementary material). Within all three sectors, retention rates were lower for entrants than for returning teachers. In formal models controlling for sector, age, and community characteristics (see Appendix D online), results were unchanged.

Discussion

This paper is the first we know of to use statewide data to track ECE teachers’ employment stability, including within-year movements and multiyear employment trajectories. We track nearly 4,500 teachers longitudinally and calculate teacher retention—that is, the proportion of teachers still at their sites

across six time points over a 3-year period. We also explore whether patterns differed across sector, by age of children taught, and by teacher entry status. In doing so, we provide the first evidence on the prevalence of understudied types of turnover in ECE and on variability by key characteristics that can inform policy response (sector, age of children in the classroom, and teacher entry status).

Within-Year and Multiyear Patterns

Like prior research on teacher turnover and retention in ECE, our study shows that early educators leave—their sites and ECE overall—at rates much higher than do teachers in K–12 settings. A key contribution of our study is our ability to observe within-year turnover, which likely creates the greatest challenges for young children and sites. Our findings indicate that between the fall and the spring of 2016, the first year we study, 11% of early educators left their sites, and 10% left ECE overall. This estimate is more than twice as high as the within-year turnover rate for K–12 teachers in another southern state (4.6%; Redding & Henry, 2018).

When we consider turnover from the first fall of our panel to the next fall—an estimate more like commonly reported annual turnover rates—we find that 32% of teachers left their sites and 28% left ECE overall. This means that roughly a third of early educators left their sites from one year to the next, and about a third of these were within-year exits. Supplementary analyses presented in the online material as part of Appendix E show that in all 3 years under study, and in all three sectors, within-year turnover was considerably less likely than between-year turnover. In other words, teachers were more likely to leave their positions in the summer than during the school year. Because within-year turnover is hypothesized to be particularly challenging for children and sites, this pattern is encouraging. However, within-year turnover was still prevalent, especially in childcare, where 8%–18% of teachers left within the year across our 3-year panel.

A second contribution of our study is the ability to track teacher turnover and retention over 3 years. By the fall of 2019, just 39% of teachers remained at their initial site, and 45% still

taught in publicly funded, center-based ECE in Louisiana. That more than half of early educators in publicly funded ECE programs were gone within 3 years has implications for returns on teacher-centered quality improvement investments (e.g., coaching or professional development). These types of investments will only yield desired benefits if coupled with efforts to reduce turnover.

Variation by Site, Job, and Teacher Characteristics

Policies aimed at stabilizing the ECE workforce require a clear understanding of which teachers are leaving. This study examines how retention patterns vary based on three policy-relevant characteristics.

Sector. Teacher turnover was larger in childcare settings than in Head Start or school-based pre-kindergarten, both within the year and across years. We find that within-year turnover for school-based pre-kindergarten teachers was similar in magnitude to K–12 estimates (4%; see Redding & Henry, 2018), but within-year turnover for childcare teachers was about four times as high (18%). Within-year turnover for Head Start teachers was between estimates for childcare and school-based pre-kindergarten teachers, similar to national estimates (9%; see Markowitz, 2019).

Similar sector-level gaps emerge for multiyear turnover. Over the course of our 3-year panel, 51% of school-based pre-kindergarten teachers left their sites, an estimate within the range of 3-year turnover rates in K–12 (36%–55%; Hanushek et al., 2016; Papay et al., 2017). These rates were about 10 percentage points higher for Head Start and 20 percentage points higher for childcare. Indeed, fewer than one-third of childcare teachers observed at the start of our panel were still at their sites 3 years later.

Our data cannot say why these large sector differences exist, but differences in teacher compensation are one likely candidate explanation: school-based pre-kindergarten teachers have substantially higher wages and access to benefits than do teachers in the other sectors, particularly childcare (Bassok et al., 2020; Whitebook et al., 2014). In turn, Head Start and childcare teachers are more likely to be food-insecure or to report that they are unable to afford basic expenses, such as medical care, than are school-based teachers (Bassok et al., 2019). School-based teachers also have greater access to professional supports (Johnson et al., 2019). These resources may explain why school-based pre-kindergarten teachers were less likely to leave their positions.

Child Age. Teachers working with toddlers were less likely to stay in their positions than those working with preschool-age children. Toddlers have substantial capacity for learning and may benefit most from stable relationships, so this systematic difference is troubling (Sandstrom & Huerta, 2013).

Differences in retention rates by age were partially explained by sector differences. However, they remained even when looking within sectors (see Appendices C and D, online only). This pattern may be explained by discrepancies in pay by age level even within sectors or by unique challenges related to teaching toddlers. Alternatively, teachers of toddlers may move into infant classrooms (which we do not observe in our data) more frequently

than do teachers of preschoolers. Additional research on the specific challenges faced by teachers working with the youngest learners is needed.

Teacher Entry Status. Finally, teachers new to their sites at baseline (entrants) were less likely to stay than those with prior experience. Entrants were more than three times as likely to exit within the 2016–17 school year (22%) than were returning teachers (6%). By the fall of 2019, just 22% of entrants remained, less than half of returning teachers. The turnover rates among entrants in ECE were also high relative to those of new teachers in K–12 (Boyd et al., 2008; Papay et al., 2017; Redding & Henry, 2019).

These high rates are particularly concerning in childcare settings, where nearly half of childcare teachers were entrants in any given year. Of those entrants, the majority were new to the site and new to teaching in publicly funded, center-based ECE in Louisiana. Although we can determine whether teachers are new to publicly funded, center-based ECE in Louisiana, we cannot determine whether these new teachers previously taught in privately funded ECE in Louisiana or previously taught in publicly funded, center-based ECE in another state. However, given that most teachers new to their sites were new to publicly funded, center-based ECE in Louisiana (rather than switching sites), we suspect that they were new to ECE more generally.

For children, having teachers very new to the job may mean lower-quality experiences (Bassok, Markowitz, et al., 2021). Evidence from K–12 suggests that new teachers improve substantially in their first years of teaching (Ladd & Sorensen, 2017; Papay & Kraft, 2015); the high exit rates of entrant ECE teachers likely mean that most ECE teachers are not staying long enough at their sites to realize those improvements. As policymakers consider strategies to improve the knowledge and skills of ECE teachers, identifying supports that might keep beginning teachers in the classroom is essential. Otherwise, programs that invest in novice teachers' professional development will continue to serve a revolving door of participants, and classrooms will not benefit from the additional training.

Limitations and Future Directions

Our study uses multiyear, statewide data to answer key questions around ECE teacher turnover and retention for the first time. In doing so, it begins to overcome some of the existing limitations surrounding ECE workforce data. Our data are not designed to track teacher employment, however; thus, the study also highlights challenges to doing this work and future directions to pursue.

First, our data highlight the importance of teacher data systems with unique teacher identifiers. Because teachers are not assigned to unique identifiers during their QRIS-required observations, we match teachers by name and site. Our main results may include a few cases in which a teacher is matched who should not be matched or a teacher is not matched who should be (particularly if the teacher changed names; see Appendix A in the online supplementary material). Investing in ECE data systems that align with those available in K–12 will allow future researchers to answer basic questions about the ECE workforce without this limitation.

Second, because our data are derived from Louisiana's QRIS, we are restricted to lead teachers in classrooms with toddler- or preschool-age children. This necessarily excludes teachers in infant classrooms and assistant teachers, both of whom are essential to ECE sites. Because of this limitation, we cannot speak to the turnover and retention of these teachers. Additionally, by not having the full roster of teachers working at a site, it may be that teacher movement in and out of roles (e.g., movement to a new classroom or assistant director) or irregularities in who is observed for the QRIS (e.g., observing an assistant teacher due to an unexpected absence) erroneously increase turnover rates. Because observations are scheduled with sites, however, it is unlikely that this happens frequently. Although these challenges are unlikely to affect our main findings, they should be considered in the development of future data systems.

Our study also has limitations related to generalizability and external validity. Although the ability to follow the universe of teachers working in any publicly funded site in Louisiana is unique, our data exclude centers that do not accept public funds as well as home-based sites. These programs serve large numbers of children, and understanding instability in these settings would present a more comprehensive picture of the early childhood sector. Moreover, given that data suggesting turnover in K–12 schools are negatively correlated with the family incomes of the children served (Grissom et al., 2016), estimating turnover in ECE sites that do not receive public funds to serve low-income children could also shed light on the ways in which differential turnover rates in early childhood may contribute to inequality.

Similarly, we study a single state, Louisiana. It is likely that turnover patterns vary across states. As state ECE data systems improve, comparing turnover in ECE across policy contexts may illuminate differences that help us understand how state ECE policies relate to the well-being of the ECE workforce.

Finally, although the current study adds to our understanding of teacher turnover and retention in ECE, many questions remain unanswered. As more states work on tracking ECE teacher movements, future research should tackle these questions, including more deeply examining which teachers leave (e.g., the role of education and training) and why (e.g., the role of compensation and supports) as well as the impacts of turnover on child and family well-being. In light of COVID-19 and the subsequent childcare crisis, there is a need and an opportunity to dig deeper.

Conclusion and Policy Implications

Using unique data that follow all teachers in publicly funded, center-based ECE across an entire state over 3 years, we find substantial within-year and multiyear turnover, particularly in childcare, for teachers of toddlers, and for teachers new to their sites. Although there is no agreed-upon benchmark for too much turnover, the rates documented in this paper are far higher than those observed among K–12 teachers and likely have negative implications for children, families, teachers, and leaders. What's more, without efforts to reduce turnover, other investments in ECE may be ineffective at creating a better system for children, families, and early educators. One promising way to address these turnover rates is to increase compensation and other work

supports (e.g., health insurance and other benefits) for early educators, particularly those working in childcare centers (Bassok, Doromal, et al., 2021). Doing so would require increasing public supports to childcare sites (e.g., through increasing subsidy reimbursement rates to levels that allow for higher pay). Additionally, efforts to support new teachers through their first year of teaching—when turnover rates are particularly high—may be worthwhile. Coaching and mentoring programs may offer one promising approach. Many states have used COVID relief funds to experiment with new approaches to teacher retention, and research on these approaches could offer promising lessons. Such research will be essential for creating policies to stabilize and support this important setting for children and families.

ORCID ID

Laura Bellows  <https://orcid.org/0000-0003-4388-0696>

NOTES

The research reported in the article was made possible (in part) by a grant from the Spencer Foundation #201900001. The views expressed are those of the authors and do not necessarily reflect the views of the Spencer Foundation. Laura Bellows was supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R305B170002 to the University of Virginia (Principal Investigator: Sara Rimm-Kaufman/Daphna Bassok). The authors would like to thank participants in the EdPolicyWorks seminar series, the fall conference of the Association for Public Policy and Management, the annual conference of the Association for Education Policy and Finance, and the annual conference for the Population Association of America for their many helpful comments on earlier iterations of this paper. In particular, the authors would like to thank Susanna Loeb, Chloe Gibbs, and Marianne Bitler for serving as discussants. The authors would also like to thank staff at the LDOE, particularly Taylor Dunn and Pheriche Perkins, who provided helpful feedback on early results, as well as Louisiana early educators who attended briefings on this material. Finally, the authors would like to thank #catchatsback for their insights and humor.

¹Nearly 10% of our sample experienced at least one missing period of observation but were later observed teaching at the same site. The majority of teachers reentering, approximately 263 of the total 4,465 teachers (6%), were missing one time period but observed during the prior and following periods at the same site. Four teachers repeated this pattern multiple times. These teachers are recoded as being at the same site during their missing time period. As we do not observe teachers in the spring of 2020, it is possible that some teachers observed in the spring of 2018 who were not observed in the fall of 2019 would similarly be observed in the spring of 2020. We estimate that this would raise overall retention estimates for the fall of 2019 by 1–2 percentage points.

²In a small number of cases, teachers are recorded teaching different age levels in different years (37 teachers switched age level and site, and 212 teachers switched between age levels at the same site) or moving across sectors (61 teachers). Infant classrooms were not observed in 2016–17 and are therefore excluded from all analyses.

³Of “entrant” teachers (i.e., teachers who were not observed at their site in 2015–16), the vast majority (84%) were new to publicly funded, center-based ECE in Louisiana entirely (i.e., we do not observe them at another publicly funded ECE site in Louisiana in 2015–16). As we do not have data from privately funded sites in Louisiana or data from other states, they could have previously been teaching in privately funded ECE in Louisiana or in publicly funded ECE in another state.

REFERENCES

- Bassok, D., Doromal, J. B., Michie, M., & Wong, V. (2021). *The effects of financial incentives on teacher retention in early childhood education: New evidence from Virginia*. Association for Education Finance and Policy (AEFP) 46th Annual Conference.
- Bassok, D., Fitzpatrick, M., Loeb, S., & Paglayan, A. S. (2013). The early childhood care and education workforce from 1990 through 2010: Changing dynamics and persistent concerns. *Education Finance and Policy*, 8(4), 581–601.
- Bassok, D., Markowitz, A. J., Bellows, L., & Sadowski, K. (2021). New evidence on teacher turnover in early childhood. *Educational Evaluation and Policy Analysis*, 43(1), 172–180. <https://doi.org/10.3102/0162373720985340>
- Bassok, D., Markowitz, A. J., Smith, A., & Oleson, L. (2019). *The early childhood education workforce in Louisiana: Findings from the 2018 Early Childhood Workforce Survey in Jefferson and Rapides Parishes*. Study of Early Education in Louisiana. <https://curry.virginia.edu/sites/default/files/uploads/epw/The%20Early%20Childhood%20Education%20Workforce%20in%20Louisiana%20Findings%20from%20the%202018%20Early%20Childhood%20Workforce%20Survey%20in%20Jefferson%20and%20Rapides%20Parishes.pdf>
- Bassok, D., Michie, M., Cubides-Mateus, D., Doromal, J. B., & Kiscaden, S. (2020). *The divergent experiences of early educators in schools and child care centers during COVID-19: Findings from Virginia*. University of Virginia, Study of Early Education Through Partnerships. <https://files.elfsightcdn.com/022b8cb9-839c-4bc2-992e-cefccb8e877e/710c4e38-4f63-41d0-b6d8-a93d766a094c.pdf>
- Boyd, D., Grossman, P., Lankford, H., Loeb, S., & Wyckoff, J. (2008). *Who leaves? Teacher attrition and student achievement*. National Bureau of Economic Research.
- Bronfenbrenner, U., & Morris, P. A. (2007). The bioecological model of human development. In W. Damon & R.M. Lerner (Eds.), *Handbook of Child Psychology*. John Wiley and Sons. <https://doi.org/10.1002/9780470147658.chpsy0114>
- Cassidy, D. J., Lower, J. K., Kinter-Duffy, V. L., Hegde, A. V., & Shim, J. (2011). The day-to-day reality of teacher turnover in preschool classrooms: An analysis of classroom context and teacher, director, and parent perspectives. *Journal of Research in Childhood Education*, 25(1), 1–23. <https://doi.org/10.1080/02568543.2011.533118>
- Caven, M., Khanani, N., Zhang, X., & Parker, C. E. (2021). *Center- and program-level factors associated with turnover in the early childhood education workforce*. U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northeast. https://ies.ed.gov/ncee/edlabs/regions/northeast/pdf/REL_2021069.pdf
- Choi, J. Y., Horm, D., Jeon, S., & Ryu, D. (2019). Do stability of care and teacher-child interaction quality predict child outcomes in Early Head Start? *Early Education and Development*, 30(3), 337–356. <https://doi.org/10.1080/10409289.2018.1546096>
- Grissom, J. A., Viano, S. L., & Selin, J. L. (2016). Understanding employee turnover in the public sector: Insights from research on teacher mobility. *Public Administration Review*, 76(2), 241–251. <https://doi.org/10.1111/puar.12435>
- Hamre, B. K. (2014). Teachers' daily interactions with children: An essential ingredient in effective early childhood programs. *Child Development Perspectives*, 8(4), 223–230. <https://doi.org/10.1111/cdep.12090>
- Hanushek, E. A., Rivkin, S. G., & Schiman, J. C. (2016). Dynamic effects of teacher turnover on the quality of instruction. *Economics of Education Review*, 55, 132–148. <https://doi.org/10.1016/j.econedurev.2016.08.004>
- Institute of Medicine & National Research Council. (2015). *Transforming the workforce for children birth through age 8: A unifying framework*. National Academies Press.
- Johnson, A. D., Martin, A., & Schochet, O. N. (2019). How do early care and education workforce and classroom characteristics differ between subsidized centers and available center-based alternatives for low-income children? *Children and Youth Services Review*, 107, 1–12. <https://doi.org/10.1016/j.childyouth.2019.104567>
- Kwon, K.-A., Malek, A., Horm, D., & Castle, S. (2020). Turnover and retention of infant-toddler teachers: Reasons, consequences, and implications for practice and policy. *Children and Youth Services Review*, 115. <https://doi.org/10.1016/j.childyouth.2020.105061>
- Ladd, H. F., & Sorensen, L. C. (2017). Returns to teacher experience: Student achievement and motivation in middle school. *Education Finance and Policy*, 12(2), 241–279. https://doi.org/10.1162/EDFP_a_00194
- Markowitz, A. J. (2019). *Within-year teacher turnover in Head Start and children's school readiness*. EdPolicyWorks, University of Virginia. <http://curry.virginia.edu/edpolicyworks/wp>
- Markowitz, A. J., Bassok, D., & Hamre, B. K. (2017). Leveraging developmental insights to improve early childhood education. *Child Development Perspectives*, 12(2), 87–92. <https://doi.org/10.1111/cdep.12266>
- National Survey of Early Care and Education Project Team. (2013). *Number and characteristics of early care and education (ECE) teachers and caregivers: Initial findings from the National Survey of Early Care and Education (NSECE)*. Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services. https://nieer.org/wp-content/uploads/2020/03/nsece_wf_brief_102913_0.pdf
- Papay, J. P., Bacher-Hicks, A., Page, L. C., & Marinell, W. H. (2017). The challenge of teacher retention in urban schools: Evidence of variation from a cross-site analysis. *Educational Researcher*, 46(8), 434–448. <https://doi.org/10.3102/0013189X17735812>
- Papay, J. P., & Kraft, M. A. (2015). Productivity returns to experience in the teacher labor market: Methodological challenges and new evidence on long-term career improvement. *Journal of Public Economics*, 130, 105–119. <https://doi.org/10.1016/j.jpubeco.2015.02.008>
- Phillips, D. A., Anderson, S., Datta, A. R., & Kisker, E. (2019). The changing portrait of center-based preschool teachers: 1990 and 2012. *Children and Youth Services Review*, 107. <https://doi.org/10.1016/j.childyouth.2019.104558>
- Redding, C., & Henry, G. T. (2018). New evidence on the frequency of teacher turnover: Accounting for within-year turnover. *Educational Researcher*, 47(9), 577–593. <https://doi.org/10.3102/0013189X18814450>
- Redding, C., & Henry, G. T. (2019). Leaving school early: An examination of novice teachers' within- and end-of-year turnover. *American Educational Research Journal*, 56(1), 204–236. <https://doi.org/10.3102/0002831218790542>
- Sandstrom, H., & Huerta, S. (2013). *The negative effects of instability on child development: A research synthesis*. Urban Institute. <https://www.urban.org/sites/default/files/publication/32706/412899-The-Negative-Effects-of-Instability-on-Child-Development-A-Research-Synthesis.PDF>
- Schaack, D. D., Donovan, C. V., Adejumo, T., & Ortega, M. (2021). To stay or to leave: Factors shaping early childhood teachers' turnover and retention decisions. *Journal of Research in Childhood Education*, 36(2), 327–345. <https://doi.org/10.1080/02568543.2021.1955779>

- Totenhagen, C. J., Hawkins, S. A., Casper, D. M., Bosch, L. A., Hawkey, K. R., & Borden, L. M. (2016). Retaining early childhood education workers: A review of the empirical literature. *Journal of Research in Childhood Education, 30*(4), 585–599. <https://doi.org/10.1080/02568543.2016.1214652>
- Tran, H., & Winsler, A. (2011). Teacher and center stability and school readiness among low-income, ethnically diverse children in subsidized, center-based child care. *Children and Youth Services Review, 33*, 2241–2252.
- Wells, M. B. (2015). Predicting preschool teacher retention and turnover in newly hired Head Start teachers across the first half of the school year. *Early Childhood Research Quarterly, 30*, 152–159. <https://doi.org/10.1016/j.ecresq.2014.10.003>
- Wells, M. B. (2017). Is all support equal?: Head Start preschool teachers' psychological job attitudes. *Teaching and Teacher Education, 63*, 103–115.
- Whitebook, M., McLean, C., & Austin, L. (2018). *The workforce data deficit*. Center for the Study of Child Care Employment, University of California, Berkeley. <https://cscce.berkeley.edu/files/2018/04/The-Workforce-Data-Deficit.pdf>
- Whitebook, M., Phillips, D., & Howes, C. (2014). *Worthy work, STILL unlivable wages: The early childhood workforce 25 years after the National Child Care Staffing Study*. Center for the Study of Child Care Employment, University of California, Berkeley.
- Whitebook, M., & Sakai, L. (2003). Turnover begets turnover: An examination of job and occupational instability among child care center staff. *Early Childhood Research Quarterly, 18*, 273–293.
- Whitebook, M., & Sakai, L. (2004). *By a thread: How child care centers hold on to teachers, how teachers build lasting careers*. W. E. Upjohn Institute for Employment Research.

AUTHORS

LAURA BELLOWES, PhD, is an associate policy researcher at RAND Corporation, P.O. Box 800784, Charlottesville, VA 22904; lbellowes@rand.org. Her work focuses on how U.S. social policies relate to child outcomes.

DAPHNA BASSOK, PhD, is the Batten Bicentennial Associate Professor of early childhood education at the University of Virginia, School of Education and Human Development, 405 Emmet Street South, Charlottesville, VA 22904; db9ec@virginia.edu. She studies early childhood education policy.

ANNA J. MARKOWITZ, PhD, is a developmental psychologist at UCLA, School of Education & Information Studies, 405 Hilgard Avenue, Los Angeles, CA 90095; markowitz@seis.ucla.edu. Her work lies at the intersection of children's development and policy for children and families, with an emphasis on the adults whom children spend time with, particularly early educators.

Manuscript received August 18, 2021

Revisions received May 31, 2022; August 11, 2022

Accepted August 23, 2022