Department of Education
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# Universal Literacy
# Year 2 Evaluation Summary Report

## SY 2017–18

*Submitted by*

Research & Policy Support Group

# TABLE OF CONTENTS

# Introduction

The ultimate goal of the Universal Literacy initiative is to have all students reading on grade level by the end of the second grade, by 2026. The initiative takes a research-based, capacity-building approach by training educators to become Reading Coaches, who work with K–2 teachers individually and in groups on how to effectively teach children to read.

Researchers from the New York City Department of Education's Research & Policy Support Group (RPSG) conduct evaluation activities for the initiative, working in partnership with the Early Literacy team. In addition to the evaluation activities described in this report, RPSG researchers respond to requests by policymakers for data and analytics; support the team in the development and implementation of the *Digital Daily Coaching Log*; present to the Reading Coaches and staff on a variety of research-related topics; and keep abreast of the empirical literature on literacy coaching. In Year 1 (Y1), School Year (SY) 2016–17, RPSG collaborated with the Early Literacy team to collect data to serve as a baseline for the initiative; provided formative findings to help inform program implementation; and piloted instruments, data collection, and analysis.

The main purposes of the SY 2017–18 Year 2 (Y2) evaluation were to:

- Track metrics about the initiative's reach;
- Learn about the initiative's implementation, in order to:
    - Provide formative results that the program team can use to inform planning and improvement;
    - Document successes and challenges related to implementation and sustainability; and
- Analyze early impacts, including the extent to which the presence of a reading coach influences the reading scores of Grade 2 students.

The Universal Literacy initiative (ULit) is informed by bodies of research[1] related to how children learn to read and how teachers learn to teach children to read. Its organization and deployment were influenced by research on literacy coaching and by past New York City Department of Education (NYCDOE) coaching initiatives. The evaluation used these sources to develop research

[1] See, for instance: National Institute of Child Health and Human Development (NICHD) (2000), National Research Council (1998), Foorman, et al. (2016).

questions and data collection protocols. The research questions described in Table 1 guided RPSG's work in Year 2.

Table 1. Year 2 Evaluation: Research Questions

| Research Question | Data Sources |
|---|---|
| ❶ **What is the *reach* of Universal Literacy?** | Program team data; DOE institutional data; coach logs |
| ❷ **How is the initiative being *implemented* in schools?** | Group and individual interviews; site visits/portraits of practice; surveys; coach logs |
| ❸ **What is the *impact* of the Universal Literacy initiative on student learning?** | Gates-MacGinitie Reading Test (GMRT), Level 2 |

Reading coaches must navigate complex school ecosystems in order to fulfill their mission of providing job-embedded coaching to K–2 classroom teachers. They report to central district office staff while working onsite in schools. They need to gain the trust of school-based educators. Because they are not reading interventionists who work one-on-one with students, but rather instructional coaches there to build the capacity of K–2 classroom teachers to teach students to read, they need to clearly communicate the purposes and boundaries of their roles to school building leaders and staff.

## Reach

To answer the first research question, about the initiative's reach, we used program data and DOE institutional data.

In SY 2017–18, the Universal Literacy initiative scaled to 14 districts from its original four districts. It conducted an intensive three-week summer training course on reading acquisition, instructional coaching, and adult learning for them along with bi-monthly sessions during the school year for new coaches; returning coaches attended a week-long summer session and monthly trainings to deepen their knowledge about literacy coaching. Additionally, coaches received optional training on curricular materials used in their schools, such as Fundations.

The initiative recruited 150 Reading Coaches for SY 2017–18, who joined the 86 Reading Coaches who began in SY 2016–17 for a total of 236 coaches.[2] In total, these coaches served 298 schools, with 168 Reading Coaches serving one school and 68 Reading Coaches serving two schools. In all, these schools served approximately 70,000 K–2 students. The average Economic Need Index[3] of schools was 84.1%.

Based on coach log data, 3,343 K–2 teachers received individual coaching.[4] On average, coaches spent a total of 287 class periods coaching individual teachers during the time frame the log was active, with an average of just over 20 periods with each teacher and a range of 0 to 175 periods. Coaches split their time fairly evenly coaching teachers of each grade, on average (37% of time with K teachers, 34% with Grade 1 teachers, and 35% with Grade 2 teachers).[5]

## Implementation

To answer the question about the initiative's implementation, we used program data as well as data that RPSG collected via surveys, interviews, and site visits. A review of the empirical literature and policy literature on reading acquisition, reading instruction, and instructional coaching informed our approach.[6]

[2] Data taken from Spring 2018 coach roster; numbers fluctuated slightly throughout the year due to rolling hiring and resignations. In SY 2017–18, ULit had 242 coach positions and 6 vacancies. A small number of large schools had two Reading Coaches.

[3] The Economic Need Index (ENI) estimates the percentage of students facing economic hardship. The metric includes eligibility for public assistance from the NYC Human Resources Administration (HRA), temporary housing status, and census tract data. The school's Economic Need Index score is the average of its students' Economic Need Values. The highest possible ENI value is 100.

[4] All data are from the period of December 2017 to June 2018, when the *Digital Daily Coaching Log* was active. Coaches record their coaching activities for each period (approximately 45 minutes) that they are in a school. *Digital Daily Coaching Log*. See footnote 8 below for more detail.

[5] Teachers can be associated with multiple grades and coaches may work with two co-teachers in a single class period; thus, percent of time use with different grades does not add up to 100.

[6] See, for example: Coburn & Woulfin (2012), Deussen, Coskie, Robinson, & Autio (2007), Elish-Piper & L'Allier (2010, 2011), L'Allier, Elish-Piper, & Bean (2010), Mangin & Dunsmore (2015), Matsumura, Sartoris, Bickel, & Garnier (2009), Phillips et al. (2016), Scott, Cortina & Carlisle (2012), and Zigmond, et al. (2011).

### Implementation: Coach Time Use

An analysis of coach log data showed that coaches spent, on average, 42.4% of their work time in schools with teachers.[7] This number includes time coaching individual teachers (34.1%), working with groups of teachers such as in grade team meetings or peer observations (5.3%), and doing formal professional learning sessions for educators (3.0%). See Table 2 for details. Table 3 describes how coaches spent their time in schools in SY 2017–18, disaggregated by class and teacher types. The total number of periods coaches spent with individual teachers was fairly evenly distributed across grades.[8] Coaches spent 59% of their time with teachers whose classrooms contain students with disabilities (42% with teachers in integrated co-teaching (ICT) classrooms and 17% in self-contained classrooms). Comparatively, coaches spent the least amount of time with brand-new teachers.

Table 2. Coach time use, averages for Dec. 2017 – Jun. 2018

| Activity | Total Number of Periods | Percent of Total Time (average) |
|---|---|---|
| **Working with teachers** | **79,805** | **42.4%** |
| Coaching individual teachers | 64,169 | 34.1% |
| Coaching groups of teachers | 10,030 | 5.3% |
| Professional learning sessions | 5,606 | 3.0% |
| **Planning** (includes planning PD sessions, planning for work with teachers, communications) | **48,354** | **25.7%** |
| **Other** (includes data analysis and assessment work; work with Instructional Specialists, school literacy consultants, and parents; and special ULit projects) | **26,564** | **14.1%** |
| **Clinical application/practice** (Reading Rescue tutoring) | **14,860** | **7.9%** |
| **Working with school leaders** | **12,876** | **6.9%** |
| **Time unrelated to coaching work** | **5,537** | **3.0%** |

[7] Note that Reading Coaches are scheduled to work 7 hours and 30 minutes a day, excluding a 30-minute lunch break, as they serve in a "teacher assigned" role; a typical teacher workday is 6 hours and 20 minutes, inclusive of a lunch period.

[8] Reading coaches complete the *Digital Daily Coaching Log* for each day they work in a school. Reading coaches report how they spent the majority of each period; although the length of a "period" and the number of periods varies slightly from school to school, this approach provides a high-level look at how coaches spend their time. They reported a total of 64,194 periods with individual teachers in the period December 2017 –June 2018. Coaches may spend time with more than one teacher in a period. In addition, teachers can be associated with multiple classroom types; thus, percent of time use with different classroom types does not add up to 100%.

Table 3. Coach time, disaggregated by grade, class type, and years of DOE experience

| | Class/teacher type | % of time with teachers |
|---|---|---|
| Grade of class | K | 37% |
| | 1 | 34% |
| | 2 | 35% |
| Teachers in types of classrooms[9] | General education | 45% |
| | English as a New Language | 19% |
| | Integrated Co-Teaching | 45% |
| | Self-contained | 16% |
| Teachers' years of DOE experience | First year | 17% |
| | Early career (1–5) | 28% |
| | Mid-career (5–14) | 25% |
| | Veteran (15 or more) | 29% |

### Implementation Perspectives: Teacher, Administrator, and Coach

RPSG administered end-of-year surveys[9] for K–2 teachers, school building leaders, and Reading Coaches. More details about the surveys and their response rates can be found in Appendix A.

*Teachers*

Over 90% of teacher respondents reported that their coach had worked with them during SY 2017–18. Forty percent indicated that the coach worked with them "on an ongoing basis," while 31% said their coach worked with them in one or more coaching cycles and 16.8% reported the coach worked with them "from time to time." Of the teacher respondents who worked with a coach, the majority indicated that they incorporate more phonics, phonemic awareness, fluency, and vocabulary instruction into their class as a result of working with the reading coach. See Table 4 below for details.

When asked how they would most like to work with their reading coach the following year, almost half (47.2%) of teacher respondents indicated that they would like the reading coach to work with them one-on-one. When asked about the areas in which they would like support in the future, a similar number (48.3%) expressed a desire for support around working with struggling readers; the second area that teachers would like support in is literacy content areas (39.8%).

[9] Response rates were as follows: Reading Coaches, 86%; School Building Leaders, 39%; and Teachers, 25%.

Table 4. Extent to which teachers say their teaching has changed as a result of working with their ULit coach

| | Not at all | To a small extent | To a moderate extent | To a great extent |
|---|---|---|---|---|
| I incorporate more phonics and phonemic awareness instruction in my class. | 14.2% | 13.5% | 30.2% | 42.0% |
| I incorporate more fluency instruction in my class. | 15.0% | 18.0% | 30.9% | 36.0% |
| I incorporate more vocabulary instruction in my class. | 15.0% | 18.5% | 31.7% | 34.7% |
| The ways I group students has changed. | 18.2% | 17.1% | 32.8% | 31.9% |
| The ways I assess students has changed. | 16.5% | 18.8% | 33.1% | 31.6% |

*School Building Leaders (SBL)*

When asked how satisfied they were with the Universal Literacy initiative at their school on a scale of 0–10, school building leaders expressed a variety of views, with a majority (59.0%) satisfied or highly satisfied (e.g., chose 7–10 on the scale). Of SBL respondents, 18.8% were unsatisfied or highly unsatisfied (chose 0–3 on the scale) and the rest (22.2%) in the middle (chose 4-6 on the scale). Administrators whose schools were in the second year of the initiative reported much higher satisfaction rates and lower overall dissatisfaction, with 69.2% of Cohort 1 administrators in the "satisfied/highly satisfied" versus 52.6% for Cohort 2 administrators, leading us to speculate that perhaps schools in their first year experience an adjustment period. Another hypothesis is that because response rates for administrators were low, the ones who took the time to complete an optional survey were disproportionately highly satisfied or highly dissatisfied.

The optional open-ended responses help to triangulate these responses. A number of school building leaders wrote about the transformative work of the reading coach.

> *Having a Universal Literacy Coach in our building has helped us to support our K–2 teachers in a more equitable way.*
>
> *Our ULIT Coach has been an essential part of our literacy team. She has become an active participant in the professional lives of our staff members. She has gained their professional trust and has created an environment of support and mutual respect.*
>
> *Teachers who were struggling in the area of instruction: Domain 3-Danielson Rubric are now effective and highly effective in that domain. Teachers are willing to take the initiative and try new strategies.*

A small number of school building leaders wrote about their negative experiences.

> *If the Universal Literacy Coach is not allowed to be flexible to adjust when administration truly needs support, then the Universal Literacy Coach can't really be a member of the school community and thus a disconnect … will limit the impact of this position.*

The most frequently cited implementation challenge, selected by just over a third of respondents (36%), was that the coach was out of the building too often for professional learning. The next most frequent challenge, selected by almost a quarter of respondents (24%), was that teachers in the building were resistant to working with the reading coach. Some administrators felt that coaches did not have sufficient time to work in the school (21%) or that they did not have enough autonomy over the coach's work (20%). About 30% of administrators reported no implementation challenges.

*Reading Coaches*

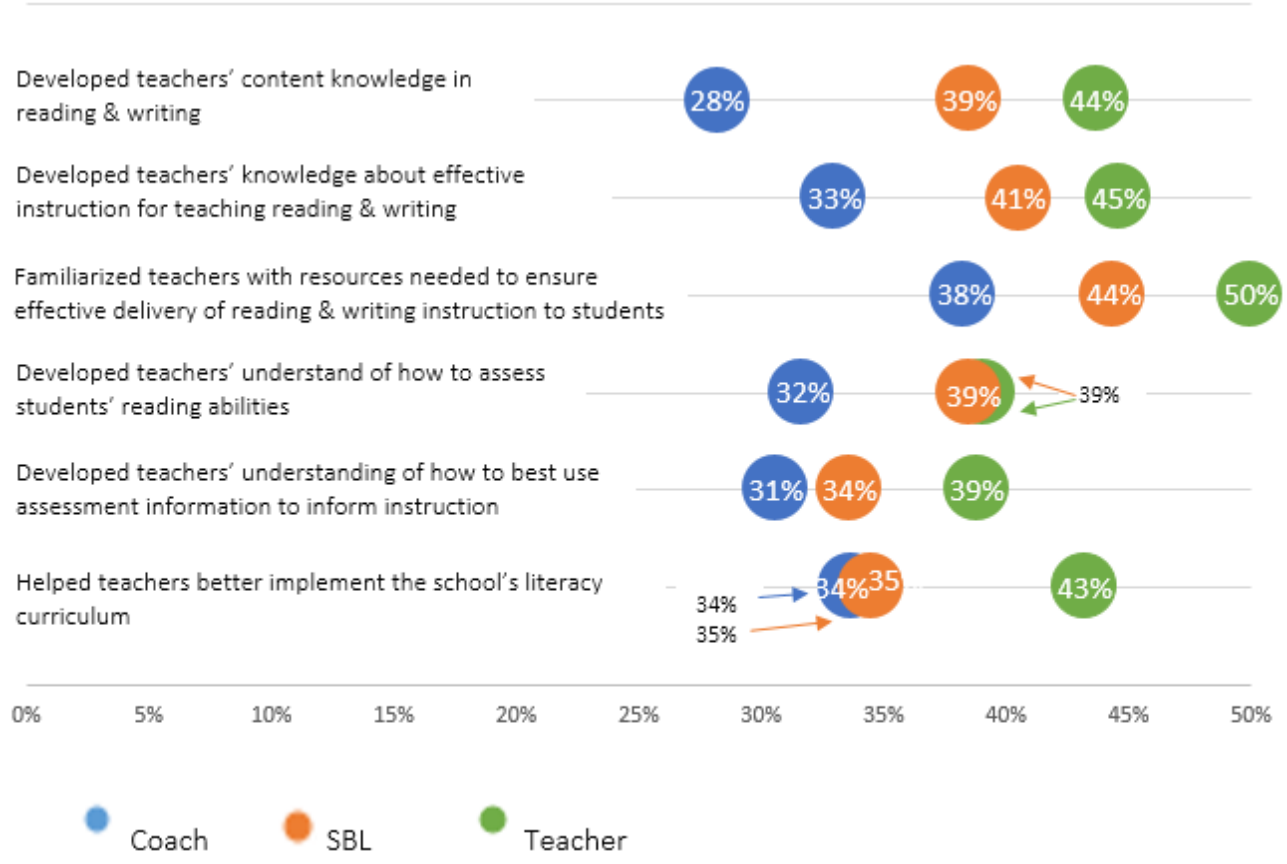
Across survey items that asked coaches to share their perspectives on their work with teachers, the majority of coaches believed they had helped teachers to a "moderate extent" or "great extent." The greatest challenge they named by far was teachers who were reluctant to working with the coach. Because working with the coach is not mandatory, coaches need to gain the trust of teachers in order to be invited in to their classrooms to work together.

Coaches were asked about their overall opinion of the Professional Learning Series (PLS) as well as the extent to which the PLS helped them with specific knowledge, skills, and coaching practices. Coaches' responses were generally positive, with Cohort 2 coaches providing much stronger positive responses.

*Comparative Responses from Teachers, Administrators, and Coaches*

The survey asked respondents from all three groups—teachers, administrators, and coaches—their perceptions about the extent to which the ULit Reading Coach helped K–2 teachers in a variety of key areas: developing their content knowledge about reading and writing and instruction; familiarizing them with resources for effective delivery of reading and writing instruction; developing their understanding of reading assessments and how to use the data to inform instruction; and supporting implementation of the school's literacy curriculum. The majority of respondents (two-thirds or more, on average) indicated that the ULit Reading Coach helped to a moderate or great extent. Figure 1, below, shows the percent of respondents who felt the coach helped "to a great extent" for each item. See Table 5 for details.

Figure 1. Responses to item about how ULit Reading Coach helped teachers "to a great extent," by respondent group (Reading Coach, School Building Leader, Teacher)




The survey asked coaches and school building leaders about their perceptions of what administrators did to support coaches. Survey results show gaps between coach and administrator perceptions. For example, 55% of administrator respondents reported speaking to their coaches about their work with teachers on a weekly basis, versus only 35% of coach respondents. Similarly, 17% of administrators reported never helping the reading coach deal with reluctant teachers, versus 51% of coaches. An important part of administrator support of coaches is setting the tone at the beginning of the year. Figure 2 shows coach versus SBL perceptions of what support actions administrators took at the beginning of the school year.

Figure 2. Responses to item, "At the beginning of the year, [administrator] did the following…," by respondent group (Reading Coach vs. School Building Leader/SBL)

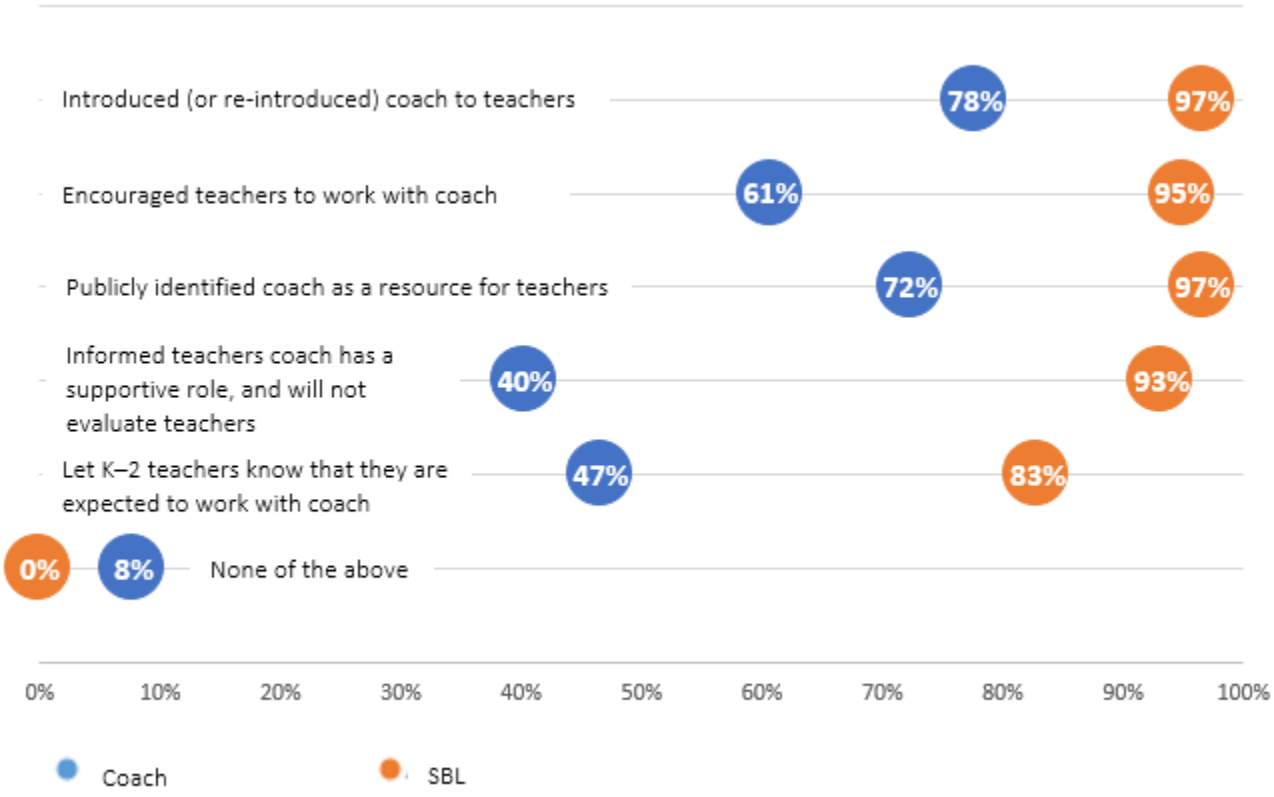


Table 5. Extent to which teachers, administrators, and coaches say ULit coaching helped in them/their school

| | Not at all | To a small extent | To a moderate extent | To a great extent |
|---|---|---|---|---|
| **Teachers** | | | | |
| Developed teachers' content knowledge in reading and writing | 10.7% | 16.6% | 28.9% | 43.7% |
| Developed teachers' knowledge about effective instruction for teaching reading and writing | 8.3% | 17.3% | 29.8% | 44.6% |
| Familiarized teachers with resources (books, materials, graphic organizers) needed to ensure effective delivery of reading and writing instruction to students | 7.9% | 16.0% | 26.1% | 50.0% |
| Developed teachers' understanding of how to assess students' reading abilities | 12.9% | 16.4% | 31.6% | 39.1% |
| Developed teachers' understanding of how to best use assessment information to inform instruction | 13.2% | 17.1% | 30.9% | 38.8% |
| **Administrators** | | | | |
| Developed teachers' content knowledge in reading and writing | 6.8% | 23.1% | 31.6% | 38.5% |
| Developed teachers' knowledge about effective instruction for teaching reading and writing | 6.0% | 25.9% | 27.6% | 40.5% |
| Familiarized teachers with resources (books, materials, graphic organizers) needed to ensure effective delivery of reading and writing instruction to students | 4.3% | 18.8% | 32.5% | 44.4% |
| Developed teachers' understanding of how to assess students' reading abilities | 6.0% | 29.9% | 25.6% | 38.5% |
| Developed teachers' understanding of how to best use assessment information to inform instruction | 7.8% | 26.7% | 31.9% | 33.6% |
| **Coaches** | | | | |
| Developed teachers' content knowledge in reading and writing | 0.0% | 17.5% | 54.4% | 28.2% |
| Developed teachers' knowledge about effective instruction for teaching reading and writing | 1.0% | 10.2% | 55.8% | 33.0% |
| Familiarized teachers with resources (books, materials, graphic organizers) needed to ensure effective delivery of reading and writing instruction to students | 0.5% | 15.0% | 46.1% | 38.3% |
| Developed teachers' understanding of how to assess students' reading abilities | 0.5% | 20.0% | 47.8% | 31.7% |
| Developed teachers' understanding of how to best use assessment information to inform instruction | 1.0% | 19.9% | 48.5% | 30.6% |

### Implementation Perspectives: Portraits of Practice

In order to better understand the implementation of the coaching cycle, RPSG conducted qualitative research to understand coach-teacher interactions in five Universal Literacy schools in a case-study approach we call Portraits of Practice. The research team interviewed coaches, teachers, and school building leaders, and closely observed coach interactions with one focal teacher. Highlights of the "portraits of practice" findings included:

- Coaches believed that building relationships with teachers is essential for coaching to be successful and consequently put efforts into forging those relationships.
- The focus of coaching cycles was highly dependent on the school's literacy ecosystem as well as coaches' individual perspectives on coaching.
- There was more variation than consistency in terms of what constituted a coaching cycle.
  - Coaches articulated a need to individualize their coaching for different teachers and "be flexible" because teachers do not always progress as planned.
  - All coaches had routines for starting the cycle and working in the middle of the cycle (co-planning, modeling, side-by-side coaching); most also collected student data at some point during the cycle.
  - There was inconsistency around why and how a cycle ended.
- All coaches made purposeful coaching moves.
  - They actively engaged teachers, using questioning strategies to elicit next steps and help teachers name their own practices, and enacted a "think aloud" technique to help teachers understand lesson decision points in the moment.
  - Coaches were also skilled in altering initial plans for coaching sessions when necessary, combining more than one coaching move.
- Attention to five essential components of effective reading instruction ("pillars")—phonics, phonemic awareness, vocabulary, fluency, and comprehension—was embedded in cycles as opposed to being the explicit focus of cycles; programs, curriculum, or strategies (e.g., guided reading, Fundations) were frequently the cycle focus and most coaches believe that teachers were learning the components of reading acquisition while they are learning to teach those programs, curricula, or strategies.
- Most coaches worked in schools where other literacy coaches, staff developers, or consultants were also working with teachers on literacy practices, curriculum, and/or content. Each school engaged literacy partners differently.

- All coaches participating in this study reported principals were supportive of the initiative and their work; coaches had varying levels of autonomy regarding literacy decision-making in the schools they support.

## Early Indicators of Impact

To answer research question 3, about the impact of the initiative, we used data collected by the initiative on the Gates-MacGinitie Reading Test (GMRT), Level 2. Universal Literacy offered the GMRT to second graders in a sample of schools in the original ULit districts (Cohort 1) and a matched comparison sample of schools that joined the initiative in SY 2017–18 (Cohort 2), as well as schools that joined the initiative in SY 2018–19 (future-ULit). Highlights of findings about early indicators of impact include:

- Overall average GMRT scores, as well as scores on each of the subtests (word decoding, word knowledge, and comprehension), of students at 110 schools with access to a Universal Literacy coach grew more than those of their peers in the 57 future-ULit comparison schools. The difference in change scores in the comprehension subsection was statistically significant.
- Students of teachers who received ULit coaching grew more than students of teachers who did not. Moreover, the more coaching a teacher received, the more growth the students had, on average. The difference between students whose teachers had more coaching and those who did not was statistically significant.

These results are small but encouraging indicators of impact.

Given that sampling occurred on the school level, we looked at change scores across schools, grouped by ULit cohort. Overall average scores, as well as scores on each of the subtests (word decoding, word knowledge, and comprehension), grew slightly more at the 110 schools with access to a Universal Literacy coach than at the 57 future-ULit comparison schools (which were slated to receive a ULit coach in SY 2018–19). The difference in change scores in the comprehension subtest (22.5 for ULit schools versus 18.9 for future-ULit schools) was statistically significant. There was a similar trend across the other subtests, but no statistically significant difference. Despite purposeful sampling of comparison schools, school demographic characteristics varied slightly across sample groups, because ULit prioritized giving coaching access to the districts most in need of early literacy support (see Appendix B for more detail). In order to account for this variation, as well as any changes that occurred between sampling and analysis, we controlled for ELL status, poverty, students with disabilities, and ethnicity. Even with these controls, the greater growth of schools with ULit coaching was statistically significant on the comprehension subtest. See Table 6, page 16 for details.

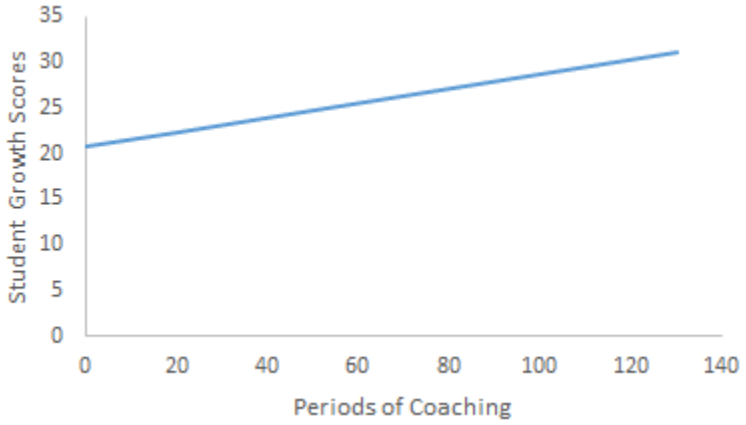
In addition to looking at the differences between schools in each cohort, we looked across all the classrooms tested, to see if there was a relationship between the number of periods that teachers were coached and their students' achievement. When looking across these classrooms, students of teachers who received coaching grew more than students of teachers who did not; the more periods of coaching the teachers received, the more students' scores grew, on average ($p < 0.001$). This relationship held true when looking across teachers[10] in all three cohorts, and when looking at cohort 1 and 2 schools only. In order to account for the differences in classrooms and teachers, we controlled for classroom type (ICT, self-contained, and ENL), student characteristics (ELL status, disability status, poverty status, and ethnicity) and teacher characteristics (years of experience). These findings persisted even when we included controls.

For each period of coaching, students had a 0.079 point higher Fall-Spring change score, on average. An average student whose teacher received no coaching grew 20.8 points overall from spring to fall administrations. Based on the relationship between periods coached and student change scores on the GMRT, an average student whose teacher had 20 periods of coaching would grow 22.37 points, roughly equivalent to half a month of instruction more than their peers whose teachers had no coaching. 50 periods of coaching would equate to an extra month of growth compared to their peers whose teachers had no coaching, while a student whose teacher received 130 periods of coaching would equate to two extra months of growth compared to their peers whose teachers had no coaching. See Figure 3 below for an illustration of the linear relationship between student growth scores and periods of teacher coaching.

For more information about our analytic methods, please see Appendix B.

[10] The analysis included teachers who did not receive coaching, both those in schools that did not have a ULit Reading Coach and those in ULit schools who did not receive coaching. The results were the same when we looked at the whole sample and when we looked just at Cohort 1 and 2 schools.

Figure 3. Illustration of relationship between average student growth scores and periods of teacher coaching




## Conclusion

At the end of its second year, the overall evidence on the Universal Literacy initiative is largely positive. It is meeting its objectives in terms of reach and it is showing positive early trends related to impact.

That findings on the Universal Literacy initiative show early trends of improving student achievement is noteworthy. A large body of empirical research in education points to multiple factors that influence improvement, such as principal leadership, teacher quality, instructional improvement approaches, and external support from district, state, and federal sources. This research shows that improvement is incremental, occurs over years, and involves a complex interplay of these components. A study on the Comprehensive School Reform Program implementation and outcomes suggests, for example, that "implementation for at least three to five years is typically the time necessary to see student achievement improve" (Aladjem et al., 2006; Borman et al., 2003; Desimone, 2000; Zhang et al., 2006, as cited in Aladjem, et al., 2010, p. 4).

In addition, there is a consensus in the research literature that elementary teachers enter the profession lacking adequate preparation for effectively teaching students to read, and that intensive support and learning is necessary for them to acquire the requisite knowledge (Moats, 1999, 2009; Snow, Griffin & Burns, 2007). By hiring and training a cadre of Reading Coaches and deploying them to schools, the Universal Literacy initiative is building the capacity of the NYC Department of Education to teach all children to read on grade level by the end of Grade 2. The hundreds of educators who become ULit Reading Coaches not only apply their knowledge to

supporting the educators they currently work with, but they will also take that knowledge to future positions, whether as school building leaders, master teachers, or central office staff.

Finally, research shows that the role of principals is critical for instructional coaching to be successful (Matsumura, Sartoris, Bickel & Garnier, 2009). Because the supervisory structure of ULit has coaches reporting to the central office, ongoing efforts are needed to communicate about and support school building leaders' understandings of reading acquisition and the role of the reading coach.

Table 6. GMRT Grade 2 scale scores, 2017–18

| | | # of schools | Overall | | | Word Decoding | | | Word Knowledge | | | Comprehension | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Fall 2017 | Spring 2018 | **Change Score** | Fall 2017 | Spring 2018 | **Change Score** | Fall 2017 | Spring 2018 | **Change Score** | Fall 2017 | Spring 2018 | **Change Score** |
| ULit | Cohort 1 | 59 | 398 | 421 | **+23.0** | 399 | 434 | **+34.5** | 397 | 415 | **+17.4** | 394 | 416 | **+22.5*** |
| | Cohort 2 | 51 | 400 | 423 | **+23.0** | 401 | 435 | **+34.1** | 400 | 418 | **+17.5** | 396 | 418 | **+22.5*** |
| Future ULit | | 57 | 403 | 424 | **+20.6** | 404 | 436 | **+32.6** | 404 | 419 | **+15.0** | 399 | 417 | **+18.9** |

**Difference in change scores between ULit cohorts and the future-ULit cohort are statistically significant at $p < 0.05$.*

*Note: Cohort 1 are schools that received a Reading Coach in SY 2016–17; Cohort 2 are schools that received a Reading Coach in SY 2017–18; Future ULit are schools slated to receive a Reading Coach in SY 2018–19.*

# References

Aladjem, D. K., Birman, B. F., Orland, M., Harr-Robins, J., Heredia, A., Parrish, T. B., & Ruffini, S. J. (2010). *Achieving Dramatic School Improvement: An Exploratory Study. A Cross-Site Analysis from the Evaluation of Comprehensive School Reform Program Implementation and Outcomes Study*. Office of Planning, Evaluation and Policy Development, US Department of Education. Retrieved from: https://www2.ed.gov/rschstat/eval/other/dramatic-school-improvement/exploratory-study.pdf

Coburn, C. E., & Woulfin, S. L. (2012). Reading coaches and the relationship between policy and practice. *Reading Research Quarterly, 47*(1), 5–30.

Deussen, T., Coskie, T., Robinson, L., & Autio, E. (2007). "Coach" can mean many things: five categories of literacy coaches in Reading First (Issues & Answers Report, REL 2007–No. 005). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northwest. Retrieved from http://files.eric.ed.gov/fulltext/ED497517.pdf

Elish-Piper, L., & L'Allier, S. K. (2010). Exploring the relationship between literacy coaching and student reading achievement in grades K-1. *Literacy Research and Instruction, 49*(2), 162–174.

Foorman, B., Beyler, N., Borradaile, K., Coyne, M., Denton, C. A., Dimino, J., Furgeson, J., Hayes, L., Henke, J., Justice, L., Keating, B., Lewis, W., Sattar, S., Streke, A., Wagner, R., & Wissel, S. (2016). *Foundational skills to support reading for understanding in kindergarten through 3rd grade* (NCEE 2016-4008). Washington, DC: National Center for Education Evaluation and Regional Assistance (NCEE), Institute of Education Sciences, U.S. Department of Education. Retrieved from https://ies.ed.gov/ncee/wwc/PracticeGuide/21

Gibbons, L. K. & Cobb, P. (2017). Focusing on teacher learning opportunities to identify potentially productive coaching activities. *Journal of Teacher Education, 68*(4), 411–425.

Heineke, S. (2013). Coaching discourse: Supporting teachers' professional learning. *The Elementary School Journal, 113*(3), 409–433. DOI:10.1086/668767

L'Allier, S., Elish-Piper, L. and Bean, R. M. (2010), What matters for elementary literacy coaching? Guiding principles for instructional improvement and student achievement. *The Reading Teacher, 63*(544–554). doi: 10.1598/RT.63.7.2

Mangin, M. M., & Dunsmore, K. (2015). How the framing of instructional coaching as a lever for systemic or individual reform influences the enactment of coaching. *Educational Administration Quarterly, 51*(2), 179–213.

Matsumura, L. C., Sartoris, M., Bickel, D. D., & Garnier, H. E. (2009). Leadership for literacy coaching: The principal's role in launching a new coaching program. *Educational Administration Quarterly, 45*(5), 655–693.

Moats, L. C. (1999). *Teaching reading is rocket science: What expert teachers of reading should know and be able to do.* (AFT Position Paper.) Washington, DC: American Federation of Teachers.

Moats, L. C. (2009). Knowledge foundations for teaching reading and spelling. *Reading and Writing, 22*(4), 379–399.

National Institute of Child Health and Human Development (NICHD). (2000). *Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups* (NIH Publication No. 00-4754).

Washington, DC: U.S. Government Printing Office. Retrieved from https://www.nichd.nih.gov/sites/default/files/publications/pubs/nrp/Documents/report.pdf

National Research Council. (1998). *Preventing Reading Difficulties in Young Children.* Washington, DC: The National Academies Press. https://doi.org/10.17226/6023.

Phillips, D., Nichols, W. D., Rupley, W. H., Paige, D., & Rasinski, T. V. (2016). Efficacy of professional development: Extended use of focused coaching on guided reading instruction for teachers of grades one, two, and three. *International Research in Higher Education, 1*(2). doi:10.5430/irhe.v1n2p12

Scott, S.E., Cortina, K.S., & Carlisle, J.F. (2012). Understanding coach-based professional development in Reading First: How do coaches spend their time and how do teachers perceive coaches' work? *Literacy Research and Instruction, 51*(1), 68–85.

Snow, C., Griffin, P., & Burns, M. S. (Eds.). (2007). *Knowledge to support the teaching of reading: Preparing teachers for a changing world.* John Wiley & Sons.

Zigmond, N., Bean, R., Kloo, A., & Brydon, M. (2011). Policy, research, and Reading First. In A. McGill-Franzen & R.L. Allington (Eds.). *Handbook of Reading Disability Research* (pp. 464–476). New York: Routledge Publishing.

# APPENDIX A: Data Sources

The evaluation used the following data sources:

- *DOE institutional data* – administrative data on district schools that contain grades K–2, such as schools' Economic Need Index, ELA scores, school and student demographic information, and numbers of students and teachers in K–2 classes.
- *Program data* – data collected by the Universal Literacy initiative, including *Digital Daily Coach Log* data and GMRT assessment data. The *Digital Daily Coach Log* data runs from December 2017 – June 2018 and contains coaches' self-reported responses about how they spent their time in schools, measured by how they spent the majority of each period in school including which classrooms they worked in.
- *Survey data* – data from end-of-year online surveys sent to Reading Coaches, teachers, and principals. Surveys focused on perceptions of the ULit initiative. Additionally, school building leaders were asked about their desired communication channels and communication quantity and their perceptions of coach responsibilities. Surveys were anonymous and voluntary. Response rates for each group were:
    - Reading Coaches: 86% (206 out of 239 sent)—one-third of them Cohort 1 coaches (72 out of 86 sent; 84% response rate) and two-thirds Cohort 2 (134 out of 150 sent; 89% response rate);
    - School building leaders: 39% (117 out of 303 sent); and
    - Teachers: 25% (1,026 out of 4,149 sent).
- *Ethnographic data* – data from site visits in SY 2017–18 to learn more about coach-teacher dyads in five schools with Cohort 1 coaches. Sites were purposefully selected to be representative of Cohort 1 district schools, with varied school sizes, ELL/SPED demographic characteristics, and geographical locations in the Bronx and Brooklyn, and coaches who planned their work with teachers in coaching cycles. Data collection activities included observations, interviews, and artifact reviews.

# APPENDIX B: GMRT – Technical Report

This appendix provides technical information about the processing and analysis of Gates-MacGinitie Reading Test (GMRT) data from the Universal Literacy (ULit) initiative.

ULit administered the GMRT in order to learn more about students' reading abilities, since there are no city- or state-wide reading tests administered in Grades K–2. Literacy leaders selected the GMRT Level 2 because the assessment could be administered to an entire class at once, as opposed to each student individually. School-based educators receive scores directly from the test vendor, Houghton-Mifflin Harcourt (HMH), via an interactive online reporting system. The designated educator, usually the ULit Reading Coach or the school's testing coordinator, receives an email with login information that teachers can use to access their students' scores. Information from the GMRT about individual students can be used along with other sources of information as the basis for organizing students into instructional groups, identifying students who are ready for more advanced instruction, and selecting students for individual instruction. The designated school-based educators also receive training in terms of implementing the GMRT and interpreting the results and using them for instruction. Selected schools administer the GMRT in the fall and spring of each year.

### About the GMRT, Level 2

The Gates-MacGinitie Reading Tests are timed, norm-referenced assessments that measure reading achievement from pre-reading to adult levels.[11] From Level 2 (corresponding to Grade 2) and above, the tests are administered in group settings. The GMRT, Level 2 provides information about reading achievement in three domains:

- *Word Decoding* — Student must accurately identify isolated words in grade word lists that correspond to an illustration; "the test format and tested words measure primarily decoding skills and word identification, rather than knowledge of word meanings" (MacGinitie, et al., 2002, p. 6).
- *Comprehension* — Student must read a passage of text and correctly answer relevant comprehension questions, which in Level 2 are in the form of illustrations.
- *Word Knowledge* — Student must select an appropriate word based on given cues in a simple illustration; vocabulary words are those GMRT authors judged as "likely to be known in speech and print by Grade 2 students who possess good reading vocabularies" (MacGinitie, et al., 2002, p. 9).

The GMRT, Level 2 takes 75 minutes in total; students are given 20 minutes to complete the Word Decoding and Word Knowledge subtests and 35 minutes for the Comprehension subtest. Universal Literacy recommended that teachers administer the GMRT on three different days at their convenience, within a two-week window. The GMRT, Level 2 comes in two parallel forms, S and T. Students received one version in the fall and the other in the spring. Students mark their answers directly in the test booklet.

[11] Source: GMRT test administration materials and https://usny.nysed.gov/rttt/teachers-leaders/assessments/docs/hmh-gmrt-forms-c-and-g.pdf

A designated person at the school shipped completed GMRT booklets to the vendor's scoring center. HMH machine-scored each box as it arrived and sent an email with information about how to access results to the school's designated GRMT coordinator, typically the ULit Reading Coach or school's testing coordinator. The DOE received a roll-up file with results after all test booklets were processed.

### School Selection

School selection occurred in SY 2016–17, when schools were sampled from the original four districts. Universal Literacy offered the GMRT to a random sample of schools in the original ULit districts (Cohort 1). Each of those schools was then matched to a school that was slated to join the initiative in SY 2017–18 (Cohort 2), as well as a school that joined the initiative in SY 2018–19 (Future ULit). The matched schools were offered the GMRT in advance of receiving coaching. The variables used for the matching included the SY 2014–15 Grade 3 ELA proficiency rate; the trend in the Grade 3 ELA proficiency rate, 2013–2015; and a neighborhood disadvantage index. A few schools were added in SY 2017–18 in order to ensure equal representation among the three cohorts of ULit schools. *Note:* the selected schools are not representative of schools across the city; ULit cohorts differ in terms of size, student demographics, and student achievement. In addition, though the GMRT sample was created by matching schools, variation still exists between schools across cohorts.

### GMRT Scores

The GMRT reports student scores in a variety of ways, and in this report we use extended scale scores. In previous reporting, we used grade equivalent scores. Scale scores refer to the continuous scale on which GMRT results are measured, from Pre-Reading to Adult Reading. While grade equivalents are more easily understandable, scale scores are more precise and are used for analyses. Scale scores on the GMRT capture students' reading ability on a linear scale that is useful for both comparison across grades and for analysis.

### GMRT SY 2017–18 Administration

In SY 2017–18, 171 schools administered the GMRT to students in the Fall and Spring. A total of 14,255 Grade 2 students took the GMRT in SY 2017–18, defined as completing a minimum of one section. Of the 11,758 students completing both the Fall and Spring GMRT tests, 10,215 students attempted at least 90 percent of the items in both administrations. The analyses in this report use the growth scores of this latter population, although results are similar when analyses are run with the former. Student characteristics were similar for this analytic sample, when compared with the original universe of students (see Table below).

**Table B1. GMRT sample characteristics SY 2017–18 – All students vs. analytic sample**

| | All Students (N = 14,255) | | | Analytic Sample (N = 10,255) | | |
|---|---|---|---|---|---|---|
| | Cohort 1 | Cohort 2 | Future ULit | Cohort 1 | Cohort 2 | Future ULit |
| Number of Schools | 59 | 53 | 59 | 59 | 51 | 57 |
| Number of Students | 5,371 | 4,345 | 4,539 | 3,981 | 3,085 | 3,149 |
| ELL | 26% | 20% | 17% | 25% | 19% | 18% |
| SWD | 21% | 20% | 22% | 20% | 18% | 20% |
| Low-Income | 91% | 90% | 85% | 90% | 88% | 83% |
| Asian | 2% | 6% | 15% | 2% | 6% | 17% |
| Black | 26% | 32% | 33% | 25% | 32% | 31% |
| Hispanic | 68% | 58% | 43% | 69% | 57% | 43% |
| White | 2% | 3% | 5% | 2% | 3% | 5% |

## Multilevel Models

Our GMRT analyses rely primarily on multi-level models, which are used in many education studies. Multi-level models account for the fact that the many students who took the GMRT are grouped together in a smaller number of schools. We determined that this approach was appropriate because we did not sample students randomly from across the city. Rather, ULit sampled schools from the initial cohort of Universal Literacy and offered access to the GMRT to matched comparison schools across the city; Grade 2 students in those comparison schools then took the GMRT. One effect of using these multi-level models is that the results of schools with larger numbers of students do not outweigh those of other schools with smaller numbers of students.

These multilevel models allowed us flexibility in controlling for student characteristics. We ran models without controls, as well as models with student-level controls for poverty, ELL status, disability status, and ethnicity. The outcome for these models was Fall-to-Spring Growth in GMRT scale scores, both overall and for each of the three GMRT subtests. The predictor of interest was ULit cohort membership, whether a school was in Year 1 of ULit, in Year 2 of ULit, or not yet part of ULit.

We ran teacher-level models in addition to the school-level models to learn more about the effect of coaching. Using data from coach logs, we were able to determine how many periods of coaching each teacher received. We used this variable as our predictor of interest in a multi-level model wherein students were clustered by classroom teachers, instead of schools. Similar to the school-level models, we controlled for student characteristics as well as teacher characteristics and classroom type.

## References for Appendix B

MacGinitie, W. H., MacGinitie, R. K., Maria, K., Dreyer, L. G. (2002). *Gates-MacGinitie Reading Tests Technical Report – Forms S and T.* Riverside Publishing, Rolling Meadows, IL.