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OST Program Strategies to Promote Literacy Skill-Building

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Research indicates that struggling readers are more likely than proficient readers to have long-term negative outcomes. Hernandez (2011) found that children who scored low on literacy tests in third grade were four times less likely to finish high school by age 19 than higher-scoring peers.

Poverty and race have a compounding effect: Children who experienced poverty and were not proficient readers by the end of grade 3 were six times more likely to fail to graduate from high school than proficient readers. Graduation rates for Black and Hispanic students who were not proficient readers in third grade lagged far behind those for White students with the same reading skills (Hernandez, 2011).

Out-of-school time (OST) programs can play an important role in fostering the development of literacy skills among children and youth (Rasco et al., 2013). Research suggests that OST programs can help build reading skills (Afterschool Alliance, 2015, 2021; Reading Roadmap, 2018) and that summer learning programs can strengthen reading skills in ways that carry over to school days (McCombs et al., 2020). In fact, participation even in OST programs that do not specifically focus on literacy development has been associated with improved reading scores (Afterschool Alliance, 2015).

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Debate about the *best* way to teach literacy skills has been vigorous (e.g., Bowers, 2020; Buckingham, 2020). Still, OST programs can help children enhance and practice their literacy skills in formal and informal ways that do not require large investments of resources, planning, or staff training. For example, "light-touch" literacy practices, such as reading aloud and sustained silent reading, have been shown to engage children and foster their love of reading as well as their reading skills and vocabulary (Wilson-Keenan et al., 2018).

To investigate the variety of literacy skill-building strategies OST programs use, researchers from the National Institute on Out-of-School Time (NIOST) examined the practices of 31 programs in Massachusetts. This exploration was part of a larger four-year project (2016–2020) with the American Institutes for Research, in collaboration with the Massachusetts Department of Elementary and Secondary Education (MA DESE) and the Minnesota Department of Education, funded by the Charles Stewart Mott Foundation. This study, Quality to Youth Outcomes, followed two cohorts of elementary-aged children during two years of sustained participation in 21st Century Community Learning Center (21st CCLC) programming at 54 centers in Massachusetts and Minnesota to investigate the relationship between high-quality OST programs and the development of social-emotional and literacy skills. Findings from this larger study are under review and will be reported later in 2022.

Our sub-study focused specifically on literacy activities. We went beyond the comprehension and vocabulary skills typically measured by elementary-age reading assessments to incorporate writing and speaking skills in our investigation. The resulting compendium of literacy-building strategies can help OST programs consider how to grow intentionally as literacy-rich learning environments.

Methods

Researchers examined archival data: four years (FY16 to FY21) of funding requests to MA DESE from 31 Massachusetts 21st CCLC programs serving elementary school children. MA DESE had classified these programs as "exemplary": They met quality benchmarks and were mentoring or coaching other OST programs. Although the application format varied slightly from year to year, all applicants were required to reflect on their program goals, their past accomplishments, their plans to build on prior experience, and their proposed activities for the upcoming year. Our review of these programs' literacy-building activities thus included both activities that had previously been executed and planned activities for the next year. Literacy activities, though critical, were not the only programming component in the applications. Many programs also offered, for example, STEM, arts, and physical activities.

To find the strategies and instructional practices these 31 programs used to support literacy-rich environments, we reviewed the section of the applications that focused on activities the programs proposed to use to address needs, priorities, and child outcomes for the coming year. This section required programs to list, in a table, what activities they proposed to do; what needs and priorities or outcomes would be addressed; and whether the activity was new, enhanced, or ongoing. Activities that specifically targeted "English language arts" or "ELA" as an outcome were coded thematically (Braun & Clarke, 2019) using NVivo 11 software.

Next, researchers read each application in full to look for additional references to strategies to support literacy development and teach ELA. These strategies were located in various parts of the application, such as descriptions of programs run in the past, explanations of literacy-building strategies used or planned, descriptions of staff professional development, and family engagement plans.

The coding team derived themes and categories inductively and coded some data in multiple categories, as appropriate. To maximize reliability and validity, the initial codes were reviewed by two members of the research team, and consensus on category names was built through discussion and revision.

Sample

Most (87 percent) of the 31 Massachusetts 21st CCLC programs were located in urban school districts. Four of the 31 host schools had been designated as requiring assistance or intervention from the state based on assessment scores, progress toward improvement goals, accountability percentiles, and graduation rates.

The average size of the population of host schools was 595 students. In those schools, English language learners (ELLs) averaged 21 percent of the population, students with disabilities 19 percent, and economically disadvantaged students 51 percent. Overall, the students in the schools were 40 percent White, 38 percent Hispanic, 10 percent Asian, 8 percent African American, 4 percent multi-race/non-Hispanic, and less than 1 percent each Hawaiian/Pacific Islander and Native American. On average, these schools had more

students of color, more ELLs, and more economically disadvantaged children—but not more students with special needs—than the Massachusetts average (Massachusetts Department of Education, 2019).

These demographic data come from the host schools and do not necessarily reflect the participants in the co-located 21st CCLC programs. The OST programs may have had, for example, more economically disadvantaged students or special needs students than their host schools.

Results

Our study found three main types of strategies the exemplary Massachusetts 21st CCLC sites used to promote literacy development:

1. **Direct literacy instruction** strategies offered children direct instruction and practice in using literacy skills. Specifically, children had hands-on opportunities to speak or perform publicly, read independently or as a group, write, and get homework support.
2. **Broad literacy strategies** engaged children in activities that were not direct literacy instruction but were broadly tied to literacy skills. For example, children had opportunities to conduct research, analyze what they read, learn new vocabulary, make interdisciplinary connections, and capitalize on strategies known to promote learning.
3. **Contextual supports for literacy learning** fostered effective literacy development by supporting the adults who work with children. Programs provided professional development for OST staff, coordinated with school staff, and involved families in literacy-building activities.

Some of these strategies overlap. All are described below with examples of activities described in the applications. Most programs served a range of student grade levels (for example, K–5), but few activity descriptions specified what groups of children would be targeted. Under each of the three broad types of strategies, the specific strategies are listed in order of their frequency in the applications.

1. Direct Literacy Instruction Strategies

The most commonly mentioned strategy for supporting literacy learning was direct instruction to build foundational reading, writing, and speaking skills.

Engage Children in Speaking or Performing Publicly

Encouraging children to speak in front of other people, whether in a formal group presentation or performance or simply by participating in group discussion, was described by 23 of the 31 programs. Of these, 18 focused on formal presentations, such as presenting research, performing poems and plays, conducting radio or TV news broadcasts, speaking in public to advocate for a cause, and telling stories. Preparing for the debut was a key part of the experience. Two specific activities from applications are described below.

Rainforest Adventures. Working in teams with computer tablets, students research rainforest animals and plants, the layers of the rainforest, and the importance of rainforests. They present the resulting report, with an accompanying visual component such as a shadow box, to their peers.

Poetry Slammers. Each week, children review, discuss, and practice reading aloud poems from a selected genre, such as acrostic poems, diamante poems, haikus, sonnets, and limericks. Then children select a favorite piece of poetry, practice it, and perform it for their families at a program celebration.

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Promote Group and Independent Reading

Reading was the second most frequently mentioned literacy-building activity in the applications. Two-thirds of the programs (22) explicitly described reading as an activity that they had done or planned do with children, who would either read aloud in a group or engage in sustained silent reading. Often, reading was described as being embedded in another activity, for example, as the precursor to a STEM, art, theater, or history project. Examples are described below.

Running an Animal Shelter. After reading Ann Martin's novel *A Dog's Life*, children bring the book to life by visiting a local animal shelter, learning how to create an animal shelter, and developing a fundraising plan for a local shelter.

Rube Goldberg. Students read about the many

talents of Rube Goldberg: cartoonist, author, engineer, and inventor. After reading about complicated machines that perform simple tasks and watching related videos, they design and create their own Rube Goldberg machine using everyday items.

Ancient Egypt. Students study ancient Egypt by reading books about pyramids, mummies, hieroglyphics, and other ancient artifacts. Then they work individually and in teams to craft their own versions of these artifacts.

Therapy Dogs. Reading aloud to a social-emotional support dog encourages reluctant readers. Students take 15-minute turns reading to their canine friend. The goals of this activity are to enhance literacy skills and attitudes, improve well-being, improve school climate, build a sense of community, and reduce absenteeism.

Encourage Writing

Writing activities were described by 21 of the 31 programs. Activities ranged from making a book to writing a story, play, legend, script, letter, email, book report, or thank-you card. Students also recorded observation logs and did research-based writing such as essays or tourism brochures. Three projects in which writing plays a role are described below.

The Leadership Club. Students interview community and school leaders, research historical leaders, and write about what being a leader means to them. The program partners with a local publisher that helps to produce a book of the children's essays, which is presented to families and used for community outreach.

Discovery Club. This project-based learning program tasks students with finding a way to improve the school climate. The students came up with the idea of writing a book to welcome new students. They wrote the text—in both English and Spanish—illustrated it, and published copies. The school principal still gives the book to new kindergartners and features it at open houses.

There's a Lot to Like About Our City. Students learn about their city's place in the Industrial Revolution and the role of newcomers then and now. They take field trips to local parks and museums and document their visits with photography, art, and short movies. The children write scripts and interview community members. They also read and write about the city in the past and contrast these stories with life today.

Provide Homework Help

Of the 31 programs, 22 provided intentional homework support. A few specifically targeted literacy development; others described more general homework support. Some programs provided extra staffing—school-day teachers or inclusion specialists, or sometimes adult volunteers—to give struggling children individualized attention. Some program staff checked in with school-day teachers to find out what they expected and which children needed help. Homework help was facilitated by providing bilingual staff and by giving parents information on assisting their children with homework. We identified three models for homework help from the funding applications.

Homework Time. Students work in small, multiage groups, focusing on reading along with homework assignments. Skill building for sight words is incorporated, and students help each other to reach benchmarks. The goal is to teach children how to learn from one another rather than rely on adults to lead all activities.

Tutoring. Academic specialists work in the OST program for one hour, three days per week, providing small-group instruction or one-on-one academic support to enable underperforming or at-risk students to complete homework assignments, master school subjects, and build competence.

Learning Centers. Students get help as needed in doing their homework. Once they finish, they can choose from a variety of stations that offer activities in math, reading, expressive writing, sketching, and word puzzles.

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2. Broad Literacy Strategies

This second category of strategies engaged children in practicing literacy skills; some activities were explicitly related to literacy development, while others were implicitly related.

Engage Children in Conducting Research

A total of 17 programs described programs or plans in which children conducted research as a means of strengthening literacy

skills. Most programs implied that the research would be conducted online, although five specifically described having children interview someone.

Liberty and Justice for All. Students research significant figures and events of the Civil Rights Movement, sequence the events in a timeline, discuss the importance of appreciating individual differences, and build vocabulary. As a final product, students select one figure from the Civil Rights Movement to bring to life in a program showcase.

Biography Buddies. After exploring different types of biographies, students research a person of their choice, their "buddy." They write and decorate biographical flip books on their person. As a culminating activity, students present five-minute talks on their buddy and answer questions from the group, thereby practicing speaking skills as well.

Help Children Analyze What They Read or Watch

Sixteen of the programs engaged children in some type of analysis of what they read or watched. Activities in this category included analyzing text, comparing and contrasting, exploring themes in books and videos, discussing big ideas and essential questions, and connecting with teen mentors who read the same book.

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Author Study. Students read aloud several books by a local author who is the son of an immigrant. They create a class chart, make text-to-self connections, and discuss the author's viewpoint and characters' traits. Students simultaneously study the elements of a good story and make personal connections to the author.

Folk Tales. Students read and compare five versions of the Cinderella story from different cultures, listing common elements. As a whole group, the students create their own Cinderella puppet show, for which they design and sew the puppets.

Teach Vocabulary and Facilitate Practice

Vocabulary building, both learning new words and practicing already-learned words, was mentioned by 15 programs as a means to build literacy.

Acting Out. Students act out stories, vignettes, and presentations, learning ways to express themselves artistically and to take risks in a safe and supportive environment. They develop ELA skills by memorizing lines, reading scripts, improvising, and learning new vocabulary.

Kickboxing. As they learn and practice kickboxing techniques, students learn three new associated vocabulary words each week. At the end of each session, children journal their feelings about the kickboxing workout and then participate in an open discussion on subjects that come up in their journals.

Women's Suffrage. Students read about the quest by women around the world to win the right to vote, building vocabulary skills in the process. As a final product, students prepare a news report on a woman who voted for the first time, including the history of the movement and challenges facing women voters.

Make Interdisciplinary Connections

Fifteen programs described activities designed to make explicit links between literacy and other disciplines such as the arts, math, science, engineering, history, and physical education. Their goals typically included stimulating learning and promoting children's engagement in and enjoyment of literature while building awareness of the relevance of literacy skills to a broad array of topics and activities.

African Folktales. Students explore the connections among art, dance, literature, and culture, focusing on Africa and specifically on Cape Verde. They work to understand African-American history and the connections between African and American forms of storytelling and dance.

Food Adventures. Assisted by staff of a nutrition center, children experiment with new foods and cooking techniques, calculate appropriate portions, and learn about local food ecosystem producers and decomposers. They write about their family food traditions, exercise habits, and ideas about sustainable agriculture. At the end of the course, they compete in an *Iron Chef*–style cook-off.

CSI. As they work to examine "crime scenes" and question "suspects," students use science knowledge to investigate physical evidence, oral communication and collaboration skills to discuss with their groups what they know and what they need to learn, reading skills to decipher written clues, and writing skills to record and analyze evidence in their notebooks. Ultimately, students get hands-on experience using critical thinking skills to solve problems.

Fun with Yoga. Students learn and play yoga games and create yoga poses to words. Students read books and write stories on their own, and then com-

municate the content orally to their peers. They learn how to make reading an interactive activity, which allows them to better understand their books.

Capitalize on Strategies Known to Promote Learning

Programs mentioned a variety of other strategies, some of which were specific to literacy learning. Other strategies fostered learning in general, but applicants recognized that these activities contributed to literacy skill-building and motivation.

Promote Reflection. Thirteen program applications named reflection as a technique for enhancing literacy development and learning in general. One program with six sites dedicated the last 15 minutes of every class to a reflection discussion. Other programs fostered reflection through journaling or other written or oral means, including "connection notebooks that travel with a student from class to class."

Use a Formal Literacy Curriculum. Eight programs used published curricula to teach literacy; some of these were technology-based literacy skill-building programs.

Set Up Peer and Cross-Age Mentoring. Six programs described the use of some type of mentoring. One engaged the oldest children, fourth and fifth graders, in helping kindergartners and first graders with math and reading. Another connected program participants with college students to discuss books. Yet another had children write letters to students at a local college; this pen-pal connection culminated in a face-to-face meeting. High school students also came into this program to reinforce the importance of attendance and effort.

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3. Contextual Supports for Literacy Learning

The third set of strategies focus on the experiences and preparation of activity leaders and other adults.

Offer Formal, Structured Staff Development

Of the 31 sites, 22 described professional development forums in which their staff participated; some were designed specifically to enhance skills in fostering literacy development, others were more generally focused on improving teaching skills. MA DESE, school districts, and the programs themselves all provided trainings. Training topics mentioned in applications included picture writing, literacy and ELA programs, coding, and integration of literacy with other disciplines.

Some applications noted that staff appreciated the exposure to new resources such as printable biographies written at varying grade levels, read-aloud websites, and writing resources. Staff also enjoyed the chance to learn new techniques for building literacy skills, such as use of picture writing, and instructional suggestions from coaches.

Coordinate with School Personnel

Twenty-two programs aimed to coordinate with school personnel so they could reinforce what children were learning during the school day and could meet children's needs in ways that support positive child growth and development. Some of these strategies were mentioned specifically in the context of teaching literacy; many were not, but appeared to be likely to improve learning and literacy practices. Strategies included working with school staff to identify and recruit students who would benefit most from the program; hiring school staff to work in or with the OST program; sharing data on student needs and outcomes; working together to develop and implement consistent strategies for meeting the needs of individual children; aligning priorities and strategies; linking curricular themes and strategies; coordinating homework help; and attending one another's professional development trainings.

Shared Pedagogy. After becoming aware that many afterschool staff were not familiar with the reading and writing methodologies used by the school district, one program is working with the city's literacy coach to develop guides that explicitly outline these methodologies. Site-based trainings for all OST staff are also planned.

Connection to Academics. One program that includes school staff carefully connects OST projects and activities to the academics taught during the school day. The OST project-based, service, and experiential learning opportunities build on the academic skills students learn in school.

Engage Families in Literacy-Building Activities

Fifteen programs mentioned activities to raise awareness among families of the importance of literacy building and to engage families in developing their children's literacy. For example, some programs invited families to program events or exhibitions of student work such as readers theater presentations. One program invited family members to volunteer as reading partners. Some encouraged parents to read with their children and either gave them appropriate books for a home library or suggested visiting the public library. Others had children interview family members for projects involving, for example, local history, family trees, family recipes, or cultural backgrounds. A few promoted websites where children could practice literacy skills.

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Many applicants emphasized the importance of creating a program environment that feels welcoming and culturally relevant to families. They described the significance of having bilingual staff and translating all materials that are sent home. To reach all families, some programs work with their school's family engagement director, a couple have hired an OST family liaison or family engagement director, and one created a volunteer family liaison position. Because 21st CCLCs focus on serving low-income students, working with underperforming schools, and engaging families, they may be especially well positioned to address equity issues in literacy skill-building.

Literacy Night. Families read stories aloud to children, act out the stories with their children, and participate in a family spelling bee. Families are invited to join program story time sessions and to read to the younger program participants.

Family Forum, Showcase, and Dinner. This event combines an educational session for parents on the power of storytelling with craft activities for children, a student exhibit of work completed during the semester, and a traditional family-style Caribbean meal prepared by community members. During dinner, the student theater group performs the play on which the group has worked all semester. Spanish interpreters enable Hispanic families to participate fully.

Implications and Conclusions

Funding application documents described the activities OST programs implemented to support children's development of literacy skills. Throughout the documents reviewed, direct literacy instruction was paired with activities and games that provided opportunities to practice literacy skills in fun, creative ways. Many of these activities would not be as likely to occur during the school day. In their applications, program leaders noted that supporting children to develop literacy skills is not enough; contextual supports are also needed. Adults who facilitate learning activities need support, training, and time for planning and coordinating.

The activities we identified come from a sample of OST programs located in Massachusetts that, as 21st CCLC programs, are mandated to provide academic enrichment to students who attend high-poverty and low-performing schools. All programs in the sample were designated by MA DESE as exemplary. It is not possible to know whether or how the strategies these programs use would be relevant or useful to programs that are located elsewhere, that serve different populations of students, that have other priorities, or that operate at a different level of quality. Furthermore, the programming and activity data were all self-reported.

Despite these limitations, our review of program funding applications revealed a plethora of activities that can involve children in literacy skill building and interactive experiences in a supportive OST environment. We noted seven themes that OST programs may consider when striving to foster literacy development:

1. Programs should foster writing and speaking skills as well as reading skills.
2. Although children need structured literacy instruction, they also benefit from creative games and project-based learning that can make learning literacy more fun and less intimidating.
3. Using a variety of approaches helps programs meet children's diverse needs and accommodate a variety of learning styles.
4. To stimulate interest and motivation, programs can implement culturally responsive practices and prioritize youth choice in the selection of reading, writing, and speaking content as well as presentation medium.

5. Literacy can be woven into almost any type of OST program activity.
6. Literacy learning doesn't need to be a solitary activity.
7. School-day educators and families are key partners in teaching literacy skills.

One avenue for future research would be to investigate how operationalizing these themes or implementing the strategies the Massachusetts 21st CCLC programs described affects children's literacy skills or attitudes. In the meantime, we hope that OST programs nationwide find some of these activities helpful in planning their own literacy-building strategies.

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