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Literacy development is important for children's academic, social, and economic well-being (Annie E. Casey Foundation, 2019). Yet racial inequities in reading proficiency persist: 82 percent of Black fourth graders did not read proficiently in 2019, compared to 55 percent of White students (National Assessment of Educational Progress, 2019).

System-level interventions are necessary to improve literacy outcomes, particularly for children of color. Systemwide approaches view learning and development as unfolding within learning ecosystems. A learning ecosystem is the "dynamic interaction among individual learners, diverse settings where learning occurs, and the community and culture in which they are embedded" (National Research Council, 2015, p.

5). The learning ecosystem model has been applied to STEM (Allen et al., 2020; Falk et al., 2015; Traphagen & Traill, 2014) and art (Akiva et al., 2021; Clark-Herrera et al., 2022) settings. Similarly, a literacy ecosystem is the overlapping, multilayered sectors that support literacy development in a specific region (Falk et al., 2015; Jaeger, 2016). In a literacy ecosystem model, improving literacy outcomes in a region would involve coordinating efforts among overlapping and multilayered sectors to generate systemwide changes in reading outcomes that individual teachers or parents might not achieve alone (Jacobson, 2019; Rutter et al., 2017; Senge et al., 2012).

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One important yet overlooked sector in a literacy ecosystem is informal education (Kirkland & Hull, 2010). Informal learning organizations (ILOs) provide structured but voluntary (Akiva et al., 2022) literacy services to a community. Examples include public libraries, literacy nonprofit organizations, afterschool programs, and educational media organizations (Falk et al., 2015; Kirkland & Hull, 2010).

Research on the impact of individual ILOs on literacy development is growing, but less attention has been paid to the collective roles ILOs play in literacy ecosystems. A systemwide perspective can clarify the unique ways in which ILOs support literacy development in relation to other actors, such as schools and homes, and can identify ways in which ILOs support community development beyond literacy. Further, seeing ILOs as part of a system can help identify leverage points among them for driving community-wide changes to address inequities in literacy outcomes (Weigel et al., 2005). Identifying and leveraging the collective roles of ILOs may be especially important for advancing equity and edging literacy ecosystems toward democratic ends. Our study used qualitative analysis to explore the roles ILOs collectively play in their literacy ecosystems and the extent to which ILOs perceive themselves as part of a larger community ecosystem.

### Methodology

We conducted this study in 2020 as part of a larger community-engaged study focused on K-3 literacy development in an ecologically based initiative called the 3Rs: Reading, Racial Equity, and Relationships (Moye & Wanless, 2022). To explore the collective roles of ILOs in the literacy ecosystem, we surveyed and interviewed representatives from 11 organizations in a midsize Midwestern city and its surrounding county. Participating ILOs either had an explicit focus on supporting literacy development in children or identified reading support as a significant aspect of their youth programming. Included were two library systems; two literacy programs connected to larger educational organizations; one national, one regional, and one local literacy organization; one universitycommunity partnership; one media corporation; one literacy lab; and one large afterschool organization. We relied on these ILO representatives as practitioner experts (Baars, 2011) who could illuminate their perceived roles in the literacy ecosystem and any perceived role of their ILO in a larger ecosystem of organizations. We analyzed ILO survey responses and interviews using qualitative theory-guided content analysis (Hsieh & Shannon, 2005).

# Thirteen Roles in the Literacy Ecosystem

We found that ILOs discussed 13 roles they play in the literacy ecosystem, outlined in Table 1. Only three of these roles were directly related to literacy; 10 reflected broader community ends. Of these 10 broader roles, nine aligned with the principles of community-based education outlined by Galbraith (1995). One additional role was supporting social justice efforts. Table 1 divides the 13 roles into direct service and indirect service coordination roles. Direct service roles are those organizations play in direct relation to children, families, and communities. Indirect service coordination roles involve coordinating services, either internally or externally with other organizations, in ways that indirectly support literacy development (Akiva et al., 2022).

Of the roles cited by our respondents, the first three roles in Table 1 are specific to literacy. In these direct service roles, ILOs saw themselves as not only increasing access to reading materials, but also expanding and redefining what literacy is. They also focused on enabling children to develop a positive relationship with reading. In fact, nine of the 11 ILO respondents said that expanding a culture of literacy and nurturing a love of reading were among their primary roles in the ecosystem.

The next 10 roles in Table 1 go beyond literacy; they involve supporting broader democratizing social processes in learning and development. Nine of these roles align with Galbraith's (1995) principles of community-based education, as noted in Table 1. ILO representatives discussed these roles in relation to their work with literacy—for example, supporting lifelong and lifewide literacy learning—but the roles could be relevant to ILOs in other fields.

The roles ILOs identified encompassed both direct service and indirect service coordination roles. Direct service represents the inner core of the literacy ecosystem, where organizations directly support children and families; indirect service roles reflect an outer layer of the ecosystem where coordinated efforts support organizations' work at the inner layer (Child and Family Research Partnerships, 2018). Direct service included both literacy-specific and more

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Table 1. Roles Informal Literacy Organizations Play in a Literacy Ecosystem

Role (Number of respondents)	Definition	Example	
Direct Service Roles			
Increase access to books (10)	Organizations actively increase access to books throughout the community through programming, services, lending, and so on.	"We connect children with free books and programming."	
Expanding the culture of literacy (9)	Organizations (a) promote a conceptualization of literacy as going beyond reading and writing to include indirectly related content areas such as music, arts, or science and (b) incorporate this conceptualization into their practices, beliefs, and attitudes about what literacy is and should be.	"We tend to think about literacy is just reading a book, but it is everything that we do—you know, literacy, math There's music, there's singing there's a lot of things."	
Love of reading (9)	Organizations aim to nurture a love of reading and literacy in children, families, teachers, and all community members.	"If I see kids loving reading, I don't care if they score higher or lower, as long as I see them having that excitement when they have a new book and then talking about it to their teacher afterwards."	
Lifelong and lifewide learning* (11)	Organizations develop contexts, relationships, interactions, and values that give individuals opportunities and resources for learning and achievement across home and community contexts (Jackson, 2013) and across the lifespan (Galbraith, 1995).	"Our role is to help children to become lifelong enthusiastic readers, and I like to add on 'by any means necessary.'"	
Inclusion and diversity* (9)	Organizations honor diversity and inclusion of people without discrimination on the basis of age, income, social class, sex, race, ethnicity, religion, or ability.	"Our free educational programs allow all children to participate, regardless of socioeconomic background."	
Self- determination* (10)	Organizations support the power of communities and individuals (including children) to determine their own identities, identify their own literacy needs, access resources and skills to address those needs, and promote shared visions for their communities (Galbraith, 1995).	"You can't go in and tell a neighborhood what they need or what's important to them. You really need to embed yourself in that space and be the connector of the people that live there and raise up what their concerns are and what their needs are, and what's important to them."	
Self-help* (10)	Organizations support the capacity of communities and individuals (including children) to help themselves and others with literacy development and other skills (Galbraith, 1995).	"We provide some early literacy tips, just simple things [parents] can do at home to help [their] child get ready to learn and get ready to read."	
Social justice (10)	Organizations promote culturally responsive, anti- racist, and anti-classist pedagogies to actively address equity in literacy.	"We specifically work to mitigate the literacy and achievement gaps that many children from low-income households face even before they start kindergarten."	
Leadership development* (7)	Organizations train youth or adult community members to be leaders, mentors, or advocates for children's literacy development (Galbraith, 1995).	"We have a pretty significant tutoring program.  All of those tutors we train and we support throughout the year, they're all pretty committed literacy advocates."	

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Table 1. Roles Informal Literacy Organizations Play in a Literacy Ecosystem (Cont.)

Role (Number of respondents)	Definition	Example
Indirect Service Coordination Roles		
Institutional responsiveness* (11)	Organizations respond and adapt to the changing literacy needs, wants, and contexts of the people they serve.	"We always believe that there's room to evolve and develop in order to meet the needs of the community."
Integrated services* (11)	Organizations cooperate and collaborate with other organizations and schools through resource exchange, co-creation of resources, and/or brokering relationships (Tuma, 2020) to provide wraparound literacy experiences and programming.	"By familiarizing themselves with the programs, services, and staff of community organizations and libraries, each professional [in our organization] is better positioned to refer customers and clients to early learning supports across the county."
Localization* (10)	Organizations meet children and families where they are by providing literacy opportunities in specific neighborhoods and diverse community spaces (beyond the spaces where these organizations typically operate) and/or by providing infrastructure to accommodate travel to programs (Galbraith, 1995).	"One of the big things that organizations really need to do is to get into the communities to penetrate the faith groups or wherever the families are, the housing authority They need to get into those places in order to be able to support families the way they need support and build those relationships."
Reduced duplication of services* (1)	Organizations work with other organizations to ensure that resources are being spent efficiently and impact is maximized by reducing duplicate literacy services (Galbraith, 1995).	"How can we [collectively as organizations] make sure to not just do the same thing over and over every year, every five years, every 10 years."

<sup>\*</sup> One of Galbraith's (1995) nine principles of community-based education

general roles. The four indirect service coordination roles align with Galbraith's (1995) principles of community-based education. All 11 respondents identified integrating services across organizations and institutional responsiveness as roles played by their organizations. Localization of efforts—that is, meeting children and families where they are—was mentioned by 10 respondents. Only one mentioned reduced duplication of services.

We found three types of overlap among the categories of roles:

- Overlap among literacy-specific direct service roles.
   For example, ILOs might be expanding a culture of literacy while also nurturing a love of reading.
- Overlap between literacy-specific and non-literacyspecific direct service roles. Some non-literacyspecific direct service roles could guide literacyspecific roles. For example, ILOs might promote social justice and lifelong and lifewide learning by

increasing access to culturally affirming books.

 Overlap between direct and indirect service roles. ILOs' direct service roles often seemed to influence the indirect service collaborations, and vice versa. For example, ILO respondents discussed localization, an indirect role, in relation to building relationships with communities and meeting families where they are—areas that could, according to Morris (2002), reflect the direct service role of supporting social justice.

### The Ecological Niche of ILOs

In ecology, an ecological niche is "the relational position of a species or population in an ecosystem" (Elliot & Davis, 2020, p. 5). The ecological niche of the ILOs in the literacy ecosystem is to support these 13 roles. Identifying this niche helps distinguish the roles of ILOs in relation to those of other ecosystem actors, such as schools and families.

The breadth and depth of these roles uniquely position ILOs to advance equity in literacy and social outcomes and to edge the literacy ecosystem toward democratic ends. Nine of the 13 roles identified by organizations align with Galbraith's (1995) principles of community-based education: self-help,

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based on books. This observation aligns with previous literature on the importance of nurturing a love of reading in school and community-based settings (Lopez et al., 2017; Minor & Harden, 2020). It also reflects the idea that thinking about literacy as more than just reading books is important for addressing racial

inequities in literacy outcomes (Acosta & Duggins, 2018; Yosso, 2005).

self-determination, leadership development, lifelong and lifewide learning, inclusion and diversity, localization, institutional responsiveness, integrated services, and reduced duplication of services. Individually, these roles demonstrate the value that ILOs, as forms of community-based education, contribute to the literacy ecosystem (Baldridge et al., 2017). Collectively, these roles indicate that ILOs may be particularly important in edging a literacy ecosystem toward democratic ends (Baldridge et al., 2017; Kirkland & Hull, 2010). By fulfilling these roles, ILOs may offer individuals and communities hope, dignity, and a sense of responsibility, which bears, in Galbraith's (1995) assessment, "an inclusionary and liberating significance" (p. 19). The literacy support ILOs offer is intertwined with support for leadership, lifelong and lifewide learning, self-help, self-determination, and diversity and inclusion. Because ILOs' literacy efforts are embedded within aims to support broader democratic ends, they may be particularly helpful in disrupting systemic racial inequities in literacy outcomes. Thus, these roles highlight the potential of ILOs to contribute to inclusive and equitable community-wide literacy development.

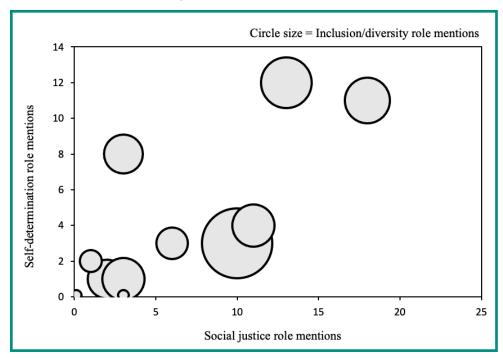
Four roles identified by ILO respondents are not included in Galbraith's (1995) framework. The broadest of these, social justice, is explored in the next section. The other three are literacy-specific: increasing access to books, nurturing a love of reading, and expanding the culture of literacy. While all three may have implications for addressing racial inequities in literacy outcomes for children in grades K to 3, the latter two may be especially important (Severino et al., 2022). For example, increasing access to books may have the strongest impact on early reading outcomes when combined with nurturing a love of reading, ensuring access to diverse and inclusive books, and expanding the culture of literacy to incorporate other forms of literacy engagement, such as art projects

# Social Justice, Inclusion and Diversity, and Self-Determination

Our respondents described promoting social justice as a distinct role their ILOs play in the literacy ecosystem. This finding aligns with previous literature highlighting the role of community-based educational spaces in disrupting educational inequities and challenging deficit narratives (Baldridge et al., 2017).

In our analyses, two roles stood out as being related to social justice: inclusion and diversity and self-determination (see Table 1). Figure 1 illustrates relationships among mentions of social justice, self-determination, and inclusion and diversity. In the figure, each of the 11 respondent ILOs is represented by a circle. Placement on the horizontal axis tracks the number of mentions of social justice; the vertical axis shows mentions of self-determination. The upand-right tendency of the circles demonstrates that ILOs that discussed social justice also tended to discuss self-determination. Previous theory also has related social justice to the idea of honoring the power of individuals and communities to determine their own values and needs (e.g., Watts, 2004). In Figure 1, the size of circles corresponds to the ILOs' mentions of inclusion and diversity—which were not necessarily associated with either social justice or self-determination. Only two organizations, those whose large circles appear in the upper right side of Figure 1, balanced inclusion and diversity, social justice, and self-determination. The rest were off balance; the larger circles in the lower left corner had several mentions of inclusion and diversity but not much mention of social justice or self-determination. However, recent literature calls for attention to the differences between social justice on the one hand and inclusion and diversity on the other. Social justice, because it is required for

Figure 1. Respondent References to Social Justice, Self-Determination, and Inclusion and Diversity



transformative social change (Stewart, 2017), should be an educational goal (Goriss-Hunter et al., 2023) distinct from efforts toward inclusion and diversity.

Our literacy ILO respondents often discussed social justice in broad terms, such as, "We embed social justice into the work we do," or "We really stand alone in serving exclusively the underserved community." Some went further to discuss economic inequities in literacy development. For example, one respondent said, "We specifically work to mitigate the literacy and achievement gaps that many children from low-income households face even before they start kindergarten." These respondents seemed to be aware of persistent disparities in reading outcomes based on economic inequities, which have been documented for decades (Annie E. Casey Foundation, 2010). However, inequities in reading outcomes for students of color are equally persistent. Racial and economic inequities have intersecting impacts on reading outcomes (Becares & Priest, 2015; Henry et al., 2020). Few of our ILO respondents explicitly addressed racial inequities in their discussions of social justice or diversity and inclusion.

The exceptions were two of the smallest ILOs in terms of annual budget and number of children served. Both organizations focused on supporting Black children specifically, and their respondents

were the only ones to discuss deficit racialized ideologies and systemic racism. One said that if "we're doing traditional things, thinking that our kids are going to get it, then essentially, we're still coming from that deficit mindset.... We're not coming from an asset mindset." This respondent also described opportunity gaps in literacy "as an opportunity to create transformative learning experiences for Black children."

The second respondent, when discussing their ILO's

role in the ecosystem, described an interaction at a parent-child literacy program. The event brought community members, including police officers, together with program families at a local barbershop. A father told the ILO representative that he was "not too comfortable" sitting next to a police officer. Asked why, the father said "I've never sat by a police officer, a white police officer too, who wasn't trying to, you know..."—an indirect reference to police violence against Black men. The ILO respondent described this event as one of the ILO's efforts to "try to change the perspective ... of 'them' and 'us."

These two respondents clearly expressed an understanding of their ILOs' roles within what Ray (2019) calls racialized institutions: "organizations as constituting and constituted by racial processes that may shape both the policies of the racial state and individual prejudice" (p. 27). For these two ILOs, actively dismantling racist policies and processes was an important aspect of social justice, distinct from diversity and inclusion.

### Systems Thinking: Direct vs. Indirect Service Roles

In distinguishing between direct service and indirect service coordination roles, ILO respondents demonstrated

a systems view of literacy development. A systems view sees an outer layer of organizational networks and learning communities (Akiva et al., 2022) that surrounds the inner layer of people, places, and processes where literacy development happens (Akiva et al., 2022; Jaeger, 2016). In the outer layer, organizations fulfill higher-order roles such as integrating literacy services, responding to communities' evolving literacy needs, and localizing efforts. By fulfilling these indirect roles in the outer layer, ILOs enable direct service workers to serve children and families effectively. As the Child and Fam-

ily Research Partnerships (2018) notes, "direct service programs should be embedded within a larger system of support to have an impact large enough to change community-level indicators" (p. 1). Service coordination at the outer indirect service level helps to address complex inequities in literacy development at the inner direct service level (Akiva et al., 2022).

In distinguishing between direct service and indirect service coordination roles, ILO respondents demonstrated a systems view of literacy development.

ILO representatives showed evidence of systems thinking in their discussion of two layers of roles in the ecosystem. They noted that literacy development occurs across organizational and program settings. They also identified the value of coordinating efforts to support children's literacy development. For example, one ILO respondent commented, "There has to be some continuity [across organizations], or else [the learning] gets disjointed." Respondents also discussed barriers to indirect service coordination. For example, one said, "The biggest support missing is collaboration in terms of spaces where similar organizations can come together to combine their resources to effectively address issues such as poverty, racism, and educational inequity." Viewing literacy development as a community-wide process and elaborating on barriers suggest that organizations may be ready for system-level interventions (Akiva et al., 2017). System-level interventions would move beyond collaboration between ILOs to collaboration across sectors where ILOs, schools, and other sites of learning coordinate literacy efforts strategically (Falk et al., 2015).

Interestingly, only one ILO respondent mentioned the indirect role of reduced duplication of services. The next least-mentioned role was leadership development, which was discussed by seven of

11 respondents. Furthermore, many ILOs reported offering similar services in the same neighborhoods. One explanation for duplication of services may be a top-down approach similar to what is called the "helicopter" or "parachute" approach to science. In this approach, scientists from resource-rich institutions, such as universities or wealthy nations, "drop in" to communities with less resources to carry out research activities (Adame, 2021). Helicopter science is characterized by lack of engagement of local communities, a practice that reflects the power imbalance be-

tween "haves" and "have-nots" and may perpetuate colonization practices (Haelewaters et al., 2021). The ILOs in our sample may be employing a similar approach: using prior research or anecdotal observations to identify a need, such as low reading scores among children of color, and then addressing that need by bringing resources to underserved communities.

### **Recommendations**

Three recommendations for literacy ILOs, researchers, and funders arise from this study:

- · Distinguish social justice from inclusion and diversity.
- Form cross-sector networks.
- Pursue community-engaged research and program development.

# Distinguish Social Justice from Inclusion and Diversity

Respondents from literacy ILOs seemed to use the terms *social justice* and *inclusion and diversity* interchangeably, despite conceptual differences between these constructs (Stewart, 2017). As Kendi (2019) asserts, social justice work requires clear and consistent language and definitions. To promote clearer language and concepts, staff of literacy ILOs may benefit from professional development that focuses on explicit definitions and clear, consistent language. Effective professional development would involve active learning and collective participation over an extended period to enable participants to clarify and then apply definitions of key terms (Desimone, 2011). This professional development could be even more effective if it led participants to

consider how they both constitute and are constituted by racialized social identities and how these identities intersect with their work (Ray, 2019). How has race affected the creation of their ILO, the services it offers, and its impact on literacy development in its region? Clarifying social justice language within a racialized framework will support ILOs' direct service efforts to provide intentional and responsive literacy support for children and families.

#### Form Cross-Sector Networks

Our interviewees' responses suggest that their indirect service may benefit from strategic efforts to transform their literacy ecosystem by connecting literacy ILOs with one another and with other sectors, including homes, schools, and nonliteracy organizations, as research recommends (e.g., Allen et al., 2020). These ecosystem management efforts (Akiva et al., 2017) could look like network learning communities (Knutson & Crowley, 2022) or execution networks (Gomez

et al., 2016). An example of a network learning community is the Tulsa Regional STEM Alliance, which leverages cross-sector partnerships to improve STEM outcomes (Allen et al., 2020). An execution network is Philadelphia's Read By 4th Campaign, whose goal is to have every child reading proficiently by fourth grade. To achieve this goal, Read By 4th fosters collaboration among homes, schools,

and community organizations to shift systems toward equitable changes in reading outcomes (Read by 4th, 2021).

These and similar strategic cross-sector efforts go beyond mere interorganizational collaboration to impact literacy development at multiple layers of the ecosystem. Such efforts may be especially critical for addressing persistent structural racial inequities in literacy learning environments (Flowers, 2007; Merolla & Jackson, 2019). To get started with system-level interventions, ILOs may consider partnering with researchers and stakeholders to conduct a network analysis of their ecosystem. Examples include Russell and Smith's (2011) analysis of afterschool programs in Dallas or Orman and colleagues' (2021) analysis of literacy organizations in Pittsburgh.

# Pursue Community-Engaged Research and Program Development

To avoid a helicopter approach to informal literacy efforts in historically marginalized communities, ILOs may benefit from engaging communities in research and program development (Dostilio et al., 2012). Community-engaged research is defined as a collaborative enterprise between community members and researchers that seeks to "democratize knowledge by validating multiple sources of knowledge" with the goal of "social action for the purpose of achieving social change and social justice" (Strand et al., 2003, p. 6).

The principles of academic community-engaged research can be employed by literacy ILOs and community stakeholders working together to identify unmet literacy needs and define the resources and programming that would best meet these needs. Community-engaged research to strengthen direct service roles might include convening a community

advisory board or hosting focus groups with children, families, and teachers to find how well programming is meeting the community's literacy needs. To strengthen indirect service coordination, literacy ILOs might invite community stakeholders, and perhaps academic researchers, into their network learning community or execution network. In both cases, reciprocal relationships with

community partners connect literacy ILOs with the communities they serve (Dostilio et al., 2012) and avoid the helicopter approach to research and program development. Such organizational efforts can have important real-world impacts on youth literacy development and community well-being (Adame, 2021).

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