

# Afterschool Matters

Number 30 • Fall 2019

**Creative Youth Development in  
the Context of Homelessness  
*Supporting Stability While  
Creating Structural Change***  
Alexandra E. Pavlakis

**Raising Real Leaders Using  
Virtual Worlds  
*Blending Minecraft, Leadership,  
and Creativity***  
Kristin H. Javorsky

**Youth Perspectives on Staff  
Turnover in Afterschool  
Programs**  
Patricia McGuiness-Carmichael

**Using Screen Time to Promote  
Green Time  
*Outdoor STEM Education in  
OST Settings***  
Christine Andrews Paulsen &  
Jessica Rueter Andrews

**VOICES FROM THE FIELD**  
Stone Soup  
*Creating an Arts-Based  
Afterschool Program in  
Rural Maine*  
Valerie Zapolsky

**VOICES FROM THE FIELD**  
Muggle Magic  
*Learning Through Play in  
Harry Potter's World*  
Leigh Anne Wilson &  
Brittany R. Jacobs



National  
Institute on  
Out-of-School  
Time

AT THE WELLESLEY  
CENTERS FOR WOMEN

**Afterschool Matters**  
**Editorial Review Board**

Ken Anthony  
*Connecticut Afterschool Network*

Annessa Bontrager  
*Alliance for a Healthier Generation*

Rudy Garcia  
*Pussycat Foundation &  
BridgeUP OST Program*

Ian Hippensteele  
*Sea Education Association*

Anne Lawrence  
*OST learning specialist*

Rebecca Lee  
*Harvard School of Public Health*

Denise Montgomery  
*CultureThrive*

Anthony Pound  
*New Victory Theater*

Julia Rugg  
*Wings*

Emily Ustach  
*New Urban Arts*

Jocelyn Wiedow  
*Sprockets Saint Paul*

**Photo Credits**

Page 33, 35: Rangeley Friends of the Arts, Rangeley, Maine

Page 37, 39, 40: Carol Stream Public Library, Carol Stream, Illinois

See the inside back cover for the call for papers for future issues  
of Afterschool Matters.

# table of contents

Afterschool Matters Number 30, Fall 2019

## ii

### Welcome



1

#### **Creative Youth Development in the Context of Homelessness Supporting Stability While Creating Structural Change** Alexandra E. Pavlakis

An arts-based center shows how the principles of creative youth development can be used to support teens who are experiencing homelessness.

#### **Raising Real Leaders Using Virtual Worlds Blending Minecraft, Leadership, and Creativity**

Kristin H. Javorsky

Combining the educational application of

*Seven Habits of Highly Effective People* with a popular online game helped children develop both creative and leadership skills.



10

#### **Youth Perspectives on Staff Turnover in Afterschool Programs** Patricia McGuiness-Carmichael

As the field works on long-term strategies for staff retention, what can we do today to support youth when staff leave? First we need to find out how they feel about staff changes.



19



24

#### **Using Screen Time to Promote Green Time Outdoor STEM Education in OST Settings**

Christine Andrews Paulsen & Jessica Rueter Andrews

Surprisingly, technology can be part of the answer to the troubling reality that children spend too little time outdoors.

#### **VOICES FROM THE FIELD Stone Soup Creating an Arts-Based Afterschool Program in Rural Maine**

Valerie Zapolsky

Even a small community can pool its resources to create an amazing arts-based afterschool program.



33

#### **VOICES FROM THE FIELD Muggle Magic**

#### **Learning Through Play in Harry Potter's World**

Leigh Anne Wilson & Brittany R. Jacobs



37

Narrative and play support collaborative science learning in a recreation of a Hogwarts Potions class.



Some of us from NIOST celebrating Lights on Afterschool, October 2019

## WELCOME

At the beginning of September, NIOST welcomed a new group of 16 Afterschool Matters Fellows to our campus for a two-day retreat filled with reflection, thoughtful writing, and inquiry-focused discussion. A sentence one of the fellows wrote has stuck with me: “Relevant OST programming never loses sight of its role as an entity where youth and their families are connected to the best promises of a civil and caring society.”

Yes, OST practitioners and researchers want to see ourselves as relevant! We value our role as caretakers of children and youth, but we also strive for relevance as we support healthy development, social and emotional wellness, and academic achievement. These aspirations are our contribution to a civil and caring society.

As this issue of *Afterschool Matters* goes to print, the field is celebrating the 20th anniversary of Lights On Afterschool. Launched in October 2000 by the Afterschool Alliance, Lights On Afterschool is the only nationwide event celebrating the role of afterschool programs in the lives of children, families, and communities. We salute the Afterschool Alliance and look forward to the next 20 years of celebrating the quality learning and growing experiences that OST programs provide.

This issue explores some of the most important underpinnings of high-quality OST experiences: intentional staff practices focused on building relationships, co-creation of youth-driven programming, an asset-based approach to service. We also continue to explore the benefits of applying a creative youth development framework in OST. I especially hope you will read, enjoy, and reread the two Voices from the Field papers, which capture the magic and hope of OST programs.

GEORGIA HALL, PHD  
Director & Senior Research Scientist, NIOST  
Managing Editor, *Afterschool Matters*

## Afterschool

## Matters

Georgia Hall  
Managing Editor

Sara Hill  
Senior Research Consultant

Jan Gallagher  
Editor

Daniella van Gennepe  
Designer

*Afterschool Matters* is a national, peer-reviewed journal dedicated to promoting professionalism, scholarship, and consciousness in the field of afterschool education. Published by the National Institute on Out-of-School Time with legacy support from the Robert Browne Foundation, the journal serves those involved in developing and running programs for youth during the out-of-school hours, in addition to those engaged in research and shaping policy. For information on *Afterschool Matters* and the Afterschool Matters Initiative, contact Georgia Hall  
Director &  
Senior Research Scientist  
National Institute on  
Out-of-School Time  
Wellesley Centers for Women  
Wellesley College  
106 Central Street  
Wellesley, MA 02481  
asmsubmission@wellesley.edu



# Creative Youth Development in the Context of Homelessness

Supporting Stability While Creating Structural Change

Alexandra E. Pavlakis

More than one million U.S. students experience homelessness (National Center for Homeless Education, 2019).

Although homelessness affects all racial groups, young people experiencing homelessness disproportionately identify as Black or Latinx (Hallett & Skrla, 2017).

These youth, most of whom live in poverty, tend to face a variety of educational challenges (Hallett & Skrla, 2017). Community-based out-of-school time (OST) programs, which often have more flexibility to innovate and meet local needs than traditional schools do, can provide critical support for youth who are overlooked in mainstream educational settings (Baldrige, Beck, Medina, & Reeves, 2017; Ginwright & Cammarota, 2002; Hirsch, Deutsch, & DuBois, 2011). Community-based OST programs and centers may provide young people who are experiencing homelessness not only with a break from their adverse living conditions but also with access to community resources and opportunities to build relationships.

In particular, creative youth development (CYD) OST programs, which blend a focus on skills, assets, relationships, and development with a purposeful emphasis on creation, inquiry, and expression, may be particularly helpful in contexts of housing instability. Using an afterschool center I refer to as “Metrohaven,” this study explores the potential of CYD in OST programming to support the development of young people experiencing homelessness. Overviews of student homelessness and of the Metrohaven context are followed by findings from my qualitative study of Metrohaven, built around the defining characteristics of CYD programming. My findings lead to recommendations that can help CYD-oriented

---

**ALEXANDRA E. PAVLAKIS**, PhD, is an assistant professor in the Department of Education Policy and Leadership in the Simmons School of Education at Southern Methodist University. A former New York City public school teacher, she addresses in her research the social contexts of education, often focusing on poverty and homelessness. Her work has been published in *Educational Researcher* and *Urban Education*.

OST programs to work effectively with and for youth experiencing homelessness.

## Student Homelessness

Students who experience homelessness tend to move homes and change schools often (Miller, 2011). The moves, which are often unplanned, can interrupt learning and end relationships with friends, educators, mentors, and service providers (Miller, 2011). Students experiencing homelessness often have difficulty finding places where they can store schoolbooks, clean their laundry, use a computer, or get a good night's sleep (Hallett & Skrla, 2017; Pavlakis, 2018). Like their peers who also live in poverty, they may experience hunger and face stigma at school (Hallett & Skrla, 2017; Miller, 2011). These challenges can culminate in poor educational outcomes such as low achievement, poor attendance, and high rates of dropout and social isolation (Miller, 2011). However, some students experiencing homelessness exhibit resilience—persisting and achieving in school and remaining connected to their schools and communities (Aviles de Bradley, 2015; Hallett & Skrla, 2017; Miller, 2011).

In U.S. schools, the rights of students identified as homeless are protected by the McKinney-Vento Homeless Assistance Act, which was reauthorized in the Every Student Succeeds Act of 2015. McKinney-Vento defines “homeless children and youths” as “individuals who lack a fixed, regular, and adequate nighttime residence” (U.S. Department of Education, 2015, p. 5). The act covers diverse settings such as shelters, motels, campgrounds, abandoned buildings, and cars; it also includes students who are doubling up with friends, acquaintances, or extended family out of economic necessity (U.S. Department of Education, 2015).

According to U.S. Department of Education guidance (2015), McKinney-Vento prohibits segregation of students by housing status, secures the right to immediate school enrollment, and aims to ensure equal access to educational resources and opportunities. Students often have the right to remain in the same school when they move (U.S. Department of Education, 2015). However, research (Miller, 2011;

National Center for Homeless Education, 2017; Pavlakis, 2018) has found that the policy can be implemented unevenly and that many students and families are unaware of their rights. For instance, despite McKinney-Vento, students experiencing homelessness can still face barriers attending school-based extracurricular activities, such as sports and clubs, due to residency requirements or equipment fees (National Center for Homeless Education, 2017).

Factors that affect students' experience of homelessness include their age, race or ethnicity, sexual orientation, personality, family composition, and geographic location, as well as the duration of their homelessness and where they sleep (Miller, 2011; Pavlakis, 2018). Scholars aiming to address student

homelessness suggest that schools create safe and stable atmospheres; build close relationships between youth and adults; collaborate to connect families to wide-ranging resources; and use varied practices tailored to individual students' needs, assets, and situations (Hallett & Skrla, 2017; Miller, 2011; Pavlakis, 2018).

Youth experiencing homelessness may spend their time at community-based drop-in centers designed for their needs, in after-school programs held at family homeless shelters, or in the same

OST programs as their stably housed peers. Existing research (Baldrige et al., 2017; Ginwright & Cammarota, 2002) highlights ways in which community-based OST programs can support youth of color by building their social networks, fostering their identities, and encouraging their awareness of and engagement in social and political concerns. However, more research is needed on community-based OST programs that emphasize youth development and arts education in the context of homelessness.

## Positive Youth Development

According to its strategic plan, “Metrohaven,” the center where I did my research, is built on a positive youth development (PYD) model. Scholars note that the PYD model is based on the assumption that, as human beings develop, their behavior can shift as the result of two-way interactions with their surroundings. A PYD approach aims to support young people's competencies

Youth experiencing homelessness may spend their time at community-based drop-in centers designed for their needs, in afterschool programs held at family homeless shelters, or in the same OST programs as their stably housed peers.

and strengths rather than fix their perceived weaknesses. The model assumes that, if young people have trusting, two-way relationships with other people and with institutions, they will become productive and healthy adults. PYD focuses on supporting youth as they grow by recognizing and building their character, confidence, connections, and competence (Hirsch et al., 2011; Jenson, Alter, Nicotera, & Forrest-Bank, 2013; see also Ginwright & Cammarota, 2002).

Some scholars have critiqued PYD, suggesting that this approach takes the experience of White, middle-class youth as normative, thus discounting the varied identities and experiences of youth of color. PYD approaches may expect young people to change their behavior in order to achieve healthy development—even when political, social, or economic issues, such as racism or classism, stand in the way. These critiques suggest that PYD models, even though they may attempt to focus on assets, can nevertheless ignore the effects of oppression on youth and their development (Baldrige et al., 2017; Ginwright & Cammarota, 2002).

## Creative Youth Development

Sources (Montgomery, 2017; Whinnery, Rafa, & Wolff, 2018) suggest that CYD combines PYD with arts education or other forms of creativity in the arts and sciences. CYD connects PYD's emphasis on asset-based development with an intentional focus on creation, inquiry, and expression. CYD programs move beyond one-time introductions to creative ventures such as taking youth to see a play. Instead, they focus on deep involvement over time, enabling young people to master skills while providing a sense of belonging to a community of practice. The creative element facilitates growth and development (Montgomery, 2017; Whinnery et al., 2018).

Programs based on CYD principles have been around for decades. However, the term has only recently come into use to define a set of program characteristics. The Massachusetts Cultural Council (MCC, 2018), among others, defines six characteristics of CYD programming:

1. Creating spaces for youth that are emotionally and physically safe

2. Helping youth forge positive relationships with peers and adults
3. Setting high expectations for learning and growth in the arts, humanities, and sciences
4. Framing youth as assets, resources, and partners rather than as problems
5. Valuing participants' voices and being youth-driven
6. Addressing broad community and social contexts (MCC, 2018)

Though CYD programs generally share these characteristics, each is unique. Some CYD programs provide wraparound services to help meet young people's needs for housing, food, healthcare, or other resources—much as Metrohaven does. Some are driven by social justice and equity concerns (Montgomery, 2017); racial equity and social justice are “core values” of the CYD movement (Creative Youth Development, 2018). CYD can be effective in developing young people's artistic, creative, and academic skills; their self-image and identities; and their social networks and community engagement (Whinnery et al., 2018).

## Research Context

Located in a large Southwestern city, Metrohaven is a secular, community-based afterschool center designed to provide wraparound services for youth experiencing homelessness. All Metrohaven youth experience homelessness alongside at least one parent or guardian; all attend the same low-performing high school. Nearly all identify as

Latinx, Black, or multiracial.

With a large open-plan kitchen and living room, comfortable furniture, a large-screen television, and stainless steel appliances, Metrohaven feels like a home. Besides offering summer programs and special field trips, it is open weeknights from 4 p.m. to 8 p.m. The center provides meals, academic tutoring and college counseling, healthcare, skills development, and arts education. For some of its programming, Metrohaven partners with a number of community organizations. The work of three full-time staff members is supplemented by volunteer art educators, musicians, therapists, college counselors, academic

Though CYD programs generally share these characteristics, each is unique. Some CYD programs provide wraparound services to help meet young people's needs for housing, food, healthcare, or other resources—much as Metrohaven does.

tutors, and mentors. Metrohaven receives financial and in-kind support from private individuals, companies, and a local church.

Although Metrohaven does not explicitly refer to itself as a CYD program, it embraces many of the foundational characteristics of CYD. It houses an arts studio, a music recording studio, and a grand piano. Art educators and professionals lead projects, mentor participants, and offer music and photography lessons. In addition to providing programming itself, Metrohaven also partners with third-party organizations. For instance, Metrohaven built a strong collaborative relationship with “Lightup” (another pseudonym), an arts education organization that has received national attention for its CYD model. Lightup provides regular and intensive poetry, arts, and creative team-building activities.

## Methods

This study is part of a larger qualitative research project I conducted in 2016 during Metrohaven’s first year of operation. For this project, I conducted 12 interviews with 10 Metrohaven staff members and volunteers and gathered data from 21 young people through a combination of group and individual interviews. During the nine months of this research, I spent 44.5 hours observing programming and meetings. Along the way, I collected documents including Metrohaven’s strategic plan and student rules, as well as ad hoc materials such as flyers.

With respondents’ permission, I audio-recorded all interviews. To analyze the data, I uploaded interview transcripts into NVivo 11, a qualitative analysis software program. I began by reading all the transcripts closely, line by line, to allow themes to emerge. Then I grouped and organized my themes into codes and considered how they connected to the foundational characteristics and values of CYD.

My intersecting identities as a White, middle-class, female university faculty member undoubtedly shaped the research. My race, class, profession, and age most likely created distance between me and the young people I interviewed, none of whom were White. Our differences may have shaped how the respondents spoke with me and what they said. However, I spent many afternoons at Metrohaven and sometimes even participated alongside the youth in activities such as rock climbing, so most of the interviewees knew me. A few young people connected more deeply by chatting with me regularly about their day; a couple

even introduced me to their parents. These bonds may have engendered trust and allowed youth interviewees to speak more openly with me than they might have otherwise. Meanwhile, in many ways my race, class, and age probably facilitated data collection with the majority–White staff and volunteers.

## Creative Youth Development at Metrohaven

My research revealed ways in which Metrohaven applied the six foundational characteristics of CYD (MCC, 2018) in its work with youth experiencing homelessness.

### 1. Safe Space

CYD emphasizes providing safe and healthy spaces for youth (MCC, 2018). Metrohaven had a state-of-the-art physical facility. As participants walked down the hall, they passed the art studio, music recording studio, and counseling rooms. They then arrived at a big open-plan kitchen and living room space with couches, a bookshelf, and framed pictures of the participants and staff. Large tables accommodated communal dinners; at any time, participants could help themselves to healthy snacks, a cabinet full of food, and an oversized fridge. Off the open-plan room were a computer lab, two quiet rooms, a laundry room, showers, and a piano room. Because youth experiencing homelessness often lack a place to store personal belongings, participants had their own decorated cubbies. A dry-erase board that shared the weekly program provided a sense of stability. Written across the wall in large metal letters was the word “HOME,” a powerful term in homelessness contexts.

To Metrohaven staff, the quality of the physical facilities was vital. One staff member noted that the space sent participants the message that “These people do care about me, they want me to succeed”—just like their own parents do.” In informal conversations and interviews, staff said they wanted only the best for participants; all in-kind donations had to be new and of high quality. The goal was to reduce shame and buffer youth from stigma.

Youth participants described Metrohaven as “home-like” because of the “setting that’s in here.” They said in interviews that they felt, as one put it, “It’s safe here.” Participants often noted the importance of access to plenty of good food. The communal dinners typically came from local high-quality restaurants. Sometimes a volunteer family brought in fresh

groceries and cooked dinner with the youth. Some young people noted that they loved being able to cook at Metrohaven—something that families without access to a kitchen often are not able to do (Hallett & Skrla, 2017).

## 2. Positive Relationships

Another CYD characteristic is a focus on positive relationships and social skills (MCC, 2018). Metrohaven often excelled in this area. The high mobility that accompanies homelessness means that, at some point, most Metrohaven youth had moved away from close friends and trusted mentors. Relationship building is particularly important in such a context (Miller, 2011). Beyond the athletic coaches that a few students cited as being important mentors, many Metrohaven youth said that they did not feel particularly close to adults or peers at school. However, they said that trusting relationships were commonplace at Metrohaven.

Metrohaven built strong peer relationships through group activities and challenges that fostered trust. Participants noted that “[we] act like we are siblings,” even though they rarely saw one another at school. They said that Metrohaven had improved their peer relationships. As a staff member noted, “They’ve formed a family.”

Metrohaven also fostered strong relationships between staff and youth. Participants said they voluntarily shared their grades and course plans; staff said that they knew who had exams coming up. Some participants noted that staff members were, as one put it, “like our big mom and ... like our dad.” Many young people said that, because of Metrohaven, they felt more confident and better prepared to negotiate their relationships with adults both at school and with family.

## 3. High Expectations

CYD programs encourage youth to take risks while providing support to enable them to meet high expectations (MCC, 2018). Many Metrohaven youth excelled in the arts; staff said that some were “very talented artists” and musicians who had won state-level awards. Others embraced the arts simply as a way

to express themselves. One Latinx participant noted, “I’m in poetry club. That’s my outlet. I put a huge emphasis on my art.”

Participants consistently praised how Metrohaven shaped their artistic skills. A Latinx youth noted in an interview, “I’ve never had an art room, a place where I could just go do art.... In here, they give you all the materials, and you can express and go more in-depth.... They’ve developed my art skills.” Other young people noted that the art programming was “lots of fun” and that they “love[d] it.” One participant had “gotten very good” at the piano while another had “learn[ed] how to cut and edit videos.”

Beyond extending participants’ artistic skills, arts education at Metrohaven served several other purposes. For one thing, it built community and created a sense of belonging. An art educator explained:

When you are sitting around a table all working on something, you become a community. It’s like a meal.... It’s like anything communal: You become a community, and the economic and age [differences] and everything sort of melts a bit.

Arts education at Metrohaven also allowed youth to “get in the zone” and provided an escape from daily realities. The arts educator noted that work in the arts “transports you out of your problems really for a while. I found, whether you’re a high-paid executive or somebody that doesn’t have a penny, everybody ... needs a release to be transported out of your worries.”

Another benefit of creating art was that participants made physical products that were theirs alone. An arts educator elaborated:

[The art work is] physical. You can throw it away; it belongs to you. That’s the best part. Especially in homelessness, they don’t have a place to put [their art], but it belongs to them. It’s your work, so it’s good to have a place to keep their work that they know it’s safe.

Finally, the arts helped participants learn skills they could apply in other parts of their lives. The arts educator noted that the work “helps them ... to take on challenges that are new and to solve problems.” Working

A dry-erase board that shared the weekly program provided a sense of stability. Written across the wall in large metal letters was the word “HOME,” a powerful term in homelessness contexts.

alongside professional arts educators, she continued, enabled participants to receive “encouragement” and to get to know role models who “make a life in art.”

Metrohaven staff encouraged participants to take risks while providing them with necessary supports. Some participants entered local poetry contests, for example, after working for an extended time on original poems. Some participants went rock climbing and engaged in trust-building activities and games that not only built bonds among participants but also forged a supportive environment. A staff member explained:

You have all these growth things you need them to learn. At the same time, that fun and exploring needs to be there as well. In all our activities, whether it's the art room or the recording studio or playing board games, we try to add this exploration piece to it by encouraging new forms of art, by teaching them skills in the recording studio—asking questions, learning new fun skills, learning how to interact with your peers, and make a group project.

Thus Metrohaven blended skills development with opportunities for creative exploration.

In keeping with the CYD focus on high expectations, many CYD program cycles culminate in final products or performances presented to an audience. These culminating products allow youth to demonstrate their mastery and be proud of their accomplishments (MCC, 2018). However, Metrohaven's program did not include culminating arts projects. The high mobility and stress of homelessness would complicate the design and implementation of long-term projects. For example, the arts educator I interviewed mentioned one participant who was “a really good artist and a good person, but then he just kind of disappears for a while,” saying that the teen was “feeling really stressed” and worried about his mother. Although most of the young people I interviewed felt that they could turn to at least one adult in their household for advice, research suggests that parents experiencing homelessness can be burdened by the daily challenges of finding housing, food, employ-

ment, transportation, and childcare (Hallett & Skrla, 2017). The unpredictable moves and stress that often accompany homelessness could keep participants or their families from attending final events or hinder participants from finishing their work on time.

#### 4. Asset-Based

In contrast to deficit framings, which highlight youths' risks or perceived weaknesses, asset-based CYD programs frame youth as individuals whose strengths add value to their communities (MCC, 2018). In many ways, Metrohaven tried to emphasize assets. The center's programming focused on uncovering and extending participants' strengths, engaging young people in community service and skill-building activities. Metrohaven's strategic plan saw participants as “the next great composers, artists and thinkers.” In interviews, staff often spoke of participants' wide-ranging talents and sometimes recognized the structural challenges the young people faced because they attended a struggling school.

However, in other ways, Metrohaven fell victim to deficit thinking. For instance, according to the strategic plan, Metrohaven could “help transform [young people] out of the pattern into which they were born or gravitated towards.” Similarly, a volunteer noted, “I really think they want to change.” An emphasis on young people needing to “change”—an underlying concept in some PYD models—can be problematic when working with youth experiencing homelessness. It can ignore the structural obstacles families experiencing homelessness face, such as a lack of affordable housing, racism and discrimination, and labor market obstacles. It can imply that parents choose to be homeless and are unable to care adequately for their children (see Aviles de Bradley, 2015; Hallett & Skrla, 2017). The focus on change can also suggest that youth would be *off-track* without the program (see Baldridge et al., 2017).

By contrast, most Metrohaven youth were close to at least one adult family member, attended school

An emphasis on young people needing to “change”—an underlying concept in some PYD models—can be problematic when working with youth experiencing homelessness. It can ignore the structural obstacles families experiencing homelessness face, such as a lack of affordable housing, racism and discrimination, and labor market obstacles.

regularly, and were engaged in OST programs or sports. If they didn't come to Metrohaven, they said, they would go to the gym to work out, attend tutoring at their school, or spend time with their siblings. While recognizing the important role Metrohaven played in their lives, they painted a picture of themselves as engaged adolescents with diverse support networks. Metrohaven often extended and enriched these networks, rather than creating them from scratch.

## 5. Youth-Driven

In effective CYD programs, young people's opinions and experiences help to shape their program experiences and development. They may, for example, take on leadership roles in the institution (MCC, 2018). Although participants had limited leadership opportunities, staff routinely gathered youth opinions through surveys, feedback forms, and informal conversations. When data suggested that participants did not enjoy the financial literacy programming, staff immediately worked with the external provider to revise it. Similarly, when participants critiqued Lightup's poetry programming, staff not only collaborated with Lightup to alter the programming but also worked with participants to bridge the conceptual gaps among writing, poetry, spoken word, and music.

According to interviews, participants wrote and even enforced Metrohaven's rules, a practice that helped to create a youth-driven atmosphere. Rules included, for example, "no profanity," not using phones during dinner, and cleaning up after oneself. Some of the rules related specifically to coping with housing instability, such as one that prioritized the use of computers for school assignments.

## 6. Broader Context

CYD programs aim to effect change by addressing the context in which youth are situated. To do so, they may coordinate with other community-based organizations or offer activities that respond to local, national, global, or historical concerns (MCC, 2018).

Through partnerships with more than 20 organizations and a range of volunteers, Metrohaven responded to many of its participants' immediate needs, particularly those related to housing instability. For instance, a medical and dental care truck visited routinely. Other partners provided school supplies, clothing, and shoes. The fact that Metrohaven was specifically designed to meet the unique and varied needs of youth experiencing homelessness highlights

its responsiveness to the broader context. Its extensive community collaborations were aligned with research-based best practices on responses to homelessness (see Hallett & Skrla, 2017; Miller, 2011).

Still, though participants engaged in community service projects and prioritized "giving back," Metrohaven had not yet provided opportunities for youth to deeply explore or act on the root causes of issues that mattered to them. For instance, some Metrohaven youth had deep interests in complex topics such as racism and discrimination, voter disenfranchisement, police brutality, homelessness, and immigration reform. One Latinx participant discussed how she thought Latinx people should respond to the debate on building a wall between the United States and Mexico: "What I think is the worst mistake Hispanics could do, like us, would be to make ourselves the victims and not stand up ... like cry about it. I don't want to cry about it. I want to go against it."

With limited exceptions, Metrohaven's programming did not encourage participants to discuss, explore, or act on sociopolitical issues. Exacerbating this gap in programming was the racial misalignment between staff, volunteers, and board members, who were majority White, and participants, who were majority Latinx and Black. In keeping with critiques of PYD approaches, in interviews, staff noted that most program role models were "White Anglo-Saxon" and that youth did not see "a lot of people who look like" them.

## Recommendations

Study findings suggest recommendations for OST CYD programs that serve children and youth experiencing homelessness, whether they are specifically designed for homelessness contexts or not. These recommendations highlight the importance of collaborating, adapting CYD to the context, and harnessing CYD's core values.

### Prioritize Collaborations

In order to support youth experiencing homelessness, Metrohaven collaborated extensively with individuals and organizations. Research suggests that cross-sector collaborations are vital to providing holistic supports for children and youth experiencing homelessness (Miller, 2011). OST centers can support participants by building deep neighborhood connections and thinking creatively about ways to foster mutually beneficial partnerships with individuals, nonprofits, and for-profit companies. They can also learn about the needs and assets of families and can co-design partnership

opportunities with adults whom youth identify as important to them.

### **Adapt CYD to Program Contexts**

As Metrohaven often demonstrated, to serve youth experiencing homelessness, CYD programs have to remain flexible and responsive. Rather than forgoing culminating events, as Metrohaven did, programs may instead consider adapting culminating events or performances to allow for the transience that often comes with housing instability. Perhaps they could use technology to enable both young people and audiences to participate remotely, both asynchronously and in real time. To ensure that events are convenient and welcoming, providers could consult with youth and families about location and about needed supports such as childcare, food, and transportation. Culminating events could also be opportunities to assist and to learn from participants and their families. A provider might, for example, have a medical van stationed outside the event venue, hand out information on employment and training opportunities, or distribute feedback forms adults could use to share insights about their families' needs and assets.

CYD programs should learn as much as possible about participants' housing status through such means as in-house surveys or data sharing agreements with schools or other providers. Furthermore, the Metrohaven example demonstrates the importance of providing access to food, places to cook and store belongings, hygiene items, and showers. CYD programs should consider the importance of these resources to ensure that youth experiencing homelessness can fully participate in the programming. To foster feelings of belonging, providers should consider extending "lifelong membership" to young people who attend at any point—even if they move. Safe social media outlets, such as the closed forums Metrohaven uses, can be helpful in connecting alumni to staff and peers regardless of distance. In order to advocate for participants, providers should also learn about McKinney-Vento.

OST centers can support participants by building deep neighborhood connections and thinking creatively about ways to foster mutually beneficial partnerships with individuals, nonprofits, and for-profit companies.

### **Harness CYD's Core Values**

Art and arts education have been used to heal trauma and facilitate social reform (see Eaton, Doherty, & Widrick, 2007). According to the CYD National Blueprint (2018), "racial equity and social justice, youth voice, and collective action" are "core values of the CYD movement" (p. 3).

In some ways, Metrohaven youth were already applying the arts in restorative ways. Still, Metrohaven may have been missing opportunities to tap the action-oriented potential of the creative arts. If youth in CYD centers are interested in addressing local housing instability, for example, they could use art, multimedia, and historical sources to build awareness of the history of racism and discrimination in housing. Alongside artists, scientists, and educators, they could create maps of affordable housing, foreclosures and evictions, and public transportation. They could examine local policies; devise potential solutions; and produce creative works to share their lived experiences, knowledge, and action plans for housing stability.

Such opportunities, co-designed thoughtfully and flexibly by programs and youth together, can enable young people to develop skills through creative inquiry, connect with their communities, and act on contextual barriers that shape their development. In this way, CYD programs can support stability while creating structural change.

### **References**

- Aviles de Bradley, A. M. (2015). *From charity to equity: Race, homelessness and urban schools*. New York, NY: Teachers College Press.
- Baldrige, B. J., Beck, N., Medina, J. C., & Reeves, M. A. (2017). Toward a new understanding of community-based education: The role of community-based educational spaces in disrupting inequality for minoritized youth. *Review of Research in Education*, 41(1), 381–402.
- Creative Youth Development National Partnership. (2018, March). *National blueprint executive summary*. Retrieved from <https://www.creativeyouthdevelopment.org/wp-content/uploads/2018/03/BlueprintExecutiveSummary.pdf>

Eaton, L. G., Doherty, K. L., & Widrick, R. M. (2007). A review of research and methods used to establish art therapy as an effective treatment method for traumatized children. *The Arts in Psychotherapy, 34*(3), 256–262.

Ginwright, S., & Cammarota, J. (2002). New terrain in youth development: The promise of a social justice approach. *Social Justice, 29*(4), 82–95.

Hallett, R., & Skrla, L. (2017). *Serving students who are homeless: A resource guide for schools, districts, and educational leaders*. New York, NY: Teachers College Press.

Hirsch, B. J., Deutsch, N. L., & DuBois, D. L. (2011). *After-school centers and youth development: Case studies of success and failure*. Cambridge, UK: Cambridge University.

Jenson, J., Alter, C., Nicotera, N., Anthony, K., & Forrest-Bank, S. (2013). *Risk, resilience, and positive youth development*. Oxford, UK: Oxford University.

Massachusetts Cultural Council. (2018). *Creative youth development: Key characteristics*. Retrieved from <https://massculturalcouncil.org/creative-youth-development/key-characteristics/>

Miller, P. M. (2011). A critical analysis of the research on student homelessness. *Review of Educational Research, 81*(3), 308–337.

Montgomery, D. (2017). The rise of creative youth development. *Arts Education Policy Review, 118*(1), 1–18.

National Center for Homeless Education. (2017). *Ensuring full participation in extracurricular activities for students experiencing homelessness*. Retrieved from [https://nche.ed.gov/wp-content/uploads/2018/10/extra\\_curr.pdf](https://nche.ed.gov/wp-content/uploads/2018/10/extra_curr.pdf)

Pavlaklis, A. E. (2018). Spaces, places, and policies: Contextualizing student homelessness. *Educational Researcher, 47*(2), 134–141.

U.S. Department of Education. (2015). *Education for Homeless Children and Youths Program, non-regulatory guidance*. Retrieved from <https://naehcy.org/wp-content/uploads/2018/04/McKinney-Vento-Act-as-Amended-by-the-Every-Student-Succeeds-Act.pdf>

Whinnery, E., Rafa, A., & Wolff, K. (2018). *Creative youth development: Transforming the learning environment*. Retrieved from <https://www.ecs.org/wp-content/uploads/Creative-Youth-Development-Transforming-the-Learning-Environment.pdf>



# Raising Real Leaders Using Virtual Worlds

## Blending Minecraft, Leadership, and Creativity

**Kristin H. Javorsky**

Two third-grade boys sit hunched over a shared tablet, animatedly discussing how to start a structure they are building in the virtual Minecraft world on their screen. To decide whether to use wood, stone, or brick, they are placing a few blocks of each type on a field of green grass to compare the materials visually. An afterschool teacher who has stopped to listen praises them for using one of the leadership habits the class has been discussing, “Begin with the end in mind.” Nearby, two other third graders are taking turns using their tablet to place a sidewalk and light fixtures outside a multistory building in the same virtual world. The teacher observes as the girls deliberately balance the fixtures evenly along the sidewalk. Proudly, they tell her that they are remembering to

“Synergize,” using another of the leadership habits the class has discussed.

This article describes how a federally funded afterschool program serving an elementary-age population in a rural southern community used the creative affordances of Minecraft and a creative youth development (CYD) framework to support the local school district’s character education program, The Leader in Me (LiM). On receipt of a 21st Century Community Learning Centers (21st CCLC) grant in 2017, the program began serving students in grades 1 through 4 four days a week, with priority given to students performing at or below the 25th percentile on the state’s standardized literacy assessment. I was involved first as the writer of the 21st CCLC grant and then as a co-originator and observer of the Minecraft LiM curriculum.

---

**KRISTIN H. JAVORSKY**, PhD, is an assistant professor in Curriculum, Instruction, and Special Education at Mississippi State University. Her research interests center on teacher preparation for 21st century schools and how appropriate and effective technology integration can improve literacy and life outcomes for young students.

The afterschool program incorporated five different interest clubs, through which groups of 25 students at a time rotated during the year. In the first year of implementation, Minecraft LiM was one of these five clubs, serving 24 first graders and 25 second graders in the spring semester and 75 third and fourth graders during a month in the summer. In addition to using Minecraft for creative design work, students created art using various media, read high-quality diverse literature about leaders and leadership, kept daily writing journals, participated in conversations with community leaders, toured local public buildings, and prepared leadership presentations for family engagement events.

## Leadership and Creativity

Creativity and innovation continue to gain importance as necessary leadership skills in the 21st century (DiLiello & Houghton, 2006; Hughes, Lee, Tian, Newman, & Legood, 2018; Smith, Montagno, & Kuzmenko, 2004). Though educational standards have begun to reflect the need to develop these skills, actual educational practices lag behind (Soulé & Warrick, 2015). Research finds that classroom use of multimedia can encourage some forms of creativity (Chiang, Chiu, & Su, 2016; Yilmaz & Goktas, 2017). Meanwhile, digital design is now recognized as a viable form of creative expression (Vaidyanathan, 2012).

### **The Leader in Me and Minecraft**

LiM is a character-building curriculum based on Stephen Covey's *Seven Habits of Highly Effective People* (2004) and *The Leader in Me: How Schools Around the World Are Inspiring Greatness, One Child at a Time* (2008). LiM aims to teach K–12 students 21st century leadership and life skills by introducing seven leadership habits:

1. Be proactive.
2. Begin with the end in mind.
3. Put first things first.
4. Think win-win.
5. Seek first to understand, then to be understood.
6. Synergize.
7. Sharpen the saw. (Covey, 2008)

One of the stated goals of LiM, which is billed as a schoolwide transformation program, is to increase school attendance and reduce student referrals. Several studies have found correlations between LiM implementation and reductions in behavioral incidents (Bryant, 2016; Pascale, Ohlson, & Lee, 2017; Stella, 2013). Other studies have found correlations with improved student achievement and leadership skills (Corcoran, Reilly, & Ross, 2014; Cummins, 2015).

After the school district discussed in this article adopted the LiM curriculum, the principals and teachers recognized that, in order to achieve results like those cited in the research, students would need time and opportunities to engage authentically with the curriculum. Simply hanging new banners and memorizing new slogans was likely to be ineffective. This view was consistent with research showing that teachers correlated classroom behavioral improvements with students' levels of interaction with LiM (Humphries, Cobia, & Ennis, 2015). Another study found that when students in the early grades participated in LiM to the extent that they internalized the leadership values, those students showed behavioral gains for up to three years (Ishola, 2016). During a district needs analysis I conducted before writing the grant, I saw that, although the school district was excited about this research, its staff recognized that solid implementation required coordinated efforts on the part of teachers, staff, and students.

In response to this need, I proposed adding Minecraft LiM to the afterschool program. To fully engage students in LiM while encouraging creativity, I worked with the lead afterschool teacher to embed the leadership program in the popular and relatively inexpensive virtual platform Microsoft Minecraft. The goals of LiM align with research linking collaborative student use of Minecraft to positive effects on social and emotional learning (Zolyomi & Schamlz, 2017) and specifically on collaboration, critical thinking, and problem-solving skills (Nebel, Schneider, & Rey, 2016). Combining LiM with Minecraft construction and role play would allow children to apply their new leadership habits both to challenges in the virtual world and to collaboration with their real-world peers.

Research finds that classroom use of multimedia can encourage some forms of creativity (...). Meanwhile, digital design is now recognized as a viable form of creative expression....

## Creative Youth Development

LiM names *creativity* and *vision* among its values (Covey, 2008). Encouraging creative expression thus seemed like a good way to build afterschool participants' individual and group leadership skills. The afterschool lead teacher and I decided to integrate CYD into the Minecraft LiM club. According to the Creative Youth Development National Partnership (2018), the CYD framework "integrates creative skill-building, inquiry, and expression with positive youth development principles, fueling young people's imaginations and building critical learning and life skills." The framework's theory of practice involves using creativity to develop critical personal, social, and intellectual skills (Montgomery, 2017). The CYD National Partnership (2018) defines six key elements of CYD:

1. Youth are engaged in safe and healthy spaces.
2. Programs focus on positive relationship-building.
3. Programs are artistically rigorous and set high expectations of youth participants.
4. Programs are asset-based and help youth to build upon their inherent strengths and talents.
5. Programs are youth-driven and honor student voice.
6. Program approaches and outcomes are holistic, recognizing a range of youth needs and often integrating with other service providers to create a coordinated community response to those needs. (CYD National Partnership, 2018)

How Minecraft LiM incorporated these six key elements of CYD is outlined in the next section.

## Minecraft and Creativity

Set in creative mode, Minecraft offers users the ability to build original structures; to craft geographical features such as mountains, caves, and rivers; and to populate their worlds with humanoid and animal characters who can then interact in various ways. Minecraft thus enables original, creative expression (Morgan & Mungan, 2014; Voiskounskaya, Yermolova, Yagolkovskiy, & Khromova, 2017) and allows children to role-play and solve problems in ways that may not be immediately possible for them in the real world (Cipollone, Schifter, & Moffat, 2014; Dezuanni, 2017; Lane & Yi, 2017). Checa-Romero and Gomez

(2018) found measurable gains in student creativity when Minecraft was employed in the classroom. In their work on progressive pedagogy, Fanning and Mir (2014) conclude that Minecraft:

contains enormous social and creative value somehow greater than its constituent parts. The alchemy of the game's unrestrictive mechanics, the labor and originality of its players, and the participatory spirit ... all foster a vast array of inventive constructions and bring together a diverse community of crafters in a horizonless digital landscape. (p. 53)

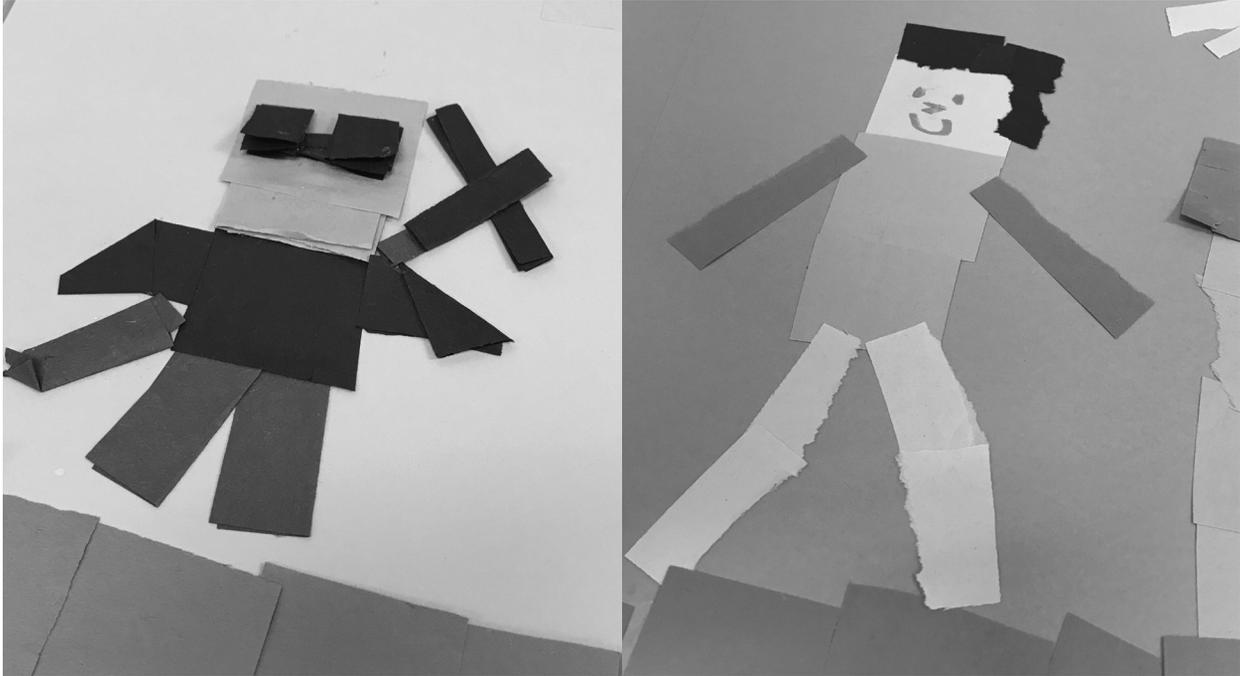
To work toward this vision of creative education, our Minecraft LiM program fostered the six key elements of CYD where possible. To help children feel safe, as required by the first key element, the lead afterschool teacher set the virtual Minecraft world to "peaceful" mode. Adults monitored participant chat boxes and supervised collaborative activities in the real-world classroom. The group as a whole defined—and enforced—rules for what could and couldn't be done in Minecraft, such as "no fighting" and "no blowing up other people's structures."

The second key element, relationship building, was a key part of the curriculum: The seven LiM habits explicitly address interactions with others. The lead teacher identified relationships as an early strength of the club, in part because she and the other teachers also worked in the school during the regular day. The lead teacher said that she greeted LiM club students by name in the hallways during the day and could connect school events to club content.

In keeping with the third key element, artistic rigor and high expectations, staff were encouraged to view Minecraft unequivocally as a tool for creative expression. However, to introduce Minecraft LiM to each new group of students, the lead teacher first asked children to create their avatars as paper montages, as shown in Figure 1.

Next, to help students get familiar with the virtual platform, the staff purchased handbooks of Minecraft tips and tricks at appropriate reading levels. Staff demonstrated use of these handbooks, showing students how to use the table of contents and glossary.

Combining LiM with Minecraft construction and role play would allow children to apply their new leadership habits both to challenges in the virtual world and to collaboration with their real-world peers.



**Figure 1. Paper avatars created by second-grade students**

With these skills in hand, children were given a great deal of autonomy in crafting their virtual worlds, in keeping with the fourth CYD element, which focuses on youth voice.

Keeping the program artistically rigorous, as recommended by the CYD National Partnership, the teacher encouraged students to “dream big” in their designs. For example, when the teacher charged the students with building a virtual version of a structure in their community, she emphasized that, rather than merely recreating what already existed, they should interpret the structure in a personally meaningful way:

I told the students to think about what is in a community. We had a discussion about the things that are in our own community, and then I challenged the students to create their own version of a building that is within a community.

As club teachers circulated around the room observing the small groups at work, they encouraged children to explain what they were creating and why. To some extent, these informal conversations served as rehearsals for the more formal presentation participants would give during the family event at the end of the eight-week club rotation.

Continuing the emphasis on artistic rigor and on children’s assets and voice, toward the end of the eight-week cycle, the lead teacher gave the students writing

prompts to help them evaluate their own creative processes. One third grader, who had chosen to create a train system, wrote:

I always wanted to ride a train or roller coaster in real life, so I know other people would, too. I wanted people to do things they never saw. I wanted them to explore my whole world and have fun! They could take things from me and make it themselves.

This student’s response suggests that he understood the power of creative expression to affect other people as well as himself.

Similarly, a club teacher reported that, after reading a book about animals in a zoo, the students “have become obsessed with building zoos, because we don’t have one here, and they think that we should, so they’re creating zoos for their friends to be able to visit.” These students were, as recommended in the fifth key CYD element, determining on their own and in discussion with partners what to include in their virtual worlds.

The Minecraft LiM program was holistic, as recommended in element 6, in that it tapped the expertise of local community members. Participants met with police and fire personnel, a hometown heroine who had recently won the state pageant, and the curators of two local history museums, either

during field trips or in visits to the program site where these leaders described their roles in the community.

## Demonstrating Leadership in a Virtual World

LiM itself is a holistic approach to teaching leadership. As new groups of children rotated into the Minecraft LiM club, teachers reviewed with them the seven habits that were being covered during the school day.

Each iteration of the club began with a read-aloud of a high-quality children's book with a leadership theme. Some first and second graders heard *Pig the Pug* (Blabey, 2016), the story of a dog who refused to share, and then debated which habit the pug should develop in order to get along with his furry friends. Third- and fourth-grade students worked through *Dream Big: Michael Jordan and the Pursuit of Excellence* (Jordan, 2014), identifying how Jordan used leadership habits to reach his goals. Other groups read other grade-appropriate fiction and nonfiction books.

After discussing these books and the choices their characters made, the children were ready to demonstrate their own creativity and decision-making skills in Minecraft. The teachers helped each cohort establish group norms and practice checking out and returning the iPads and Minecraft handbooks. Once the students were engaged in creation, the lead teacher and assistants roamed two spaces: the physical room, where they listened to student conversations and occasionally facilitated peer interactions using the leadership habits, and the digital world, where their avatars traveled the Minecraft town, which was based on the real town in which the students lived. Students chose leader-themed names for their avatars, such as Synergizer, Team Builder, and Ice Cream Helper.

This extract from my field notes offers examples of leadership behaviors I observed:

Working in pairs and small groups, the 25 students are logged into a virtual world where they are recreating and reimagining the downtown of their rural southern community. A few days earlier, they had taken a walking field trip downtown and met community members who shared stories of the

buildings' histories and significance. Now, as the children work, the teacher's eyes and ears are tuned for evidence that students have internalized and are using the ideas from the LiM curriculum.

A hand goes up. The teacher heads over to where three children are excited to show her the water feature they've added to the historic hotel downtown, now renamed The Greatest Hotel. Deciding on modifications hasn't necessarily been an easy task for the students. They had to apply LiM habits such as "Seek first to understand, then to be understood" and "Think win-win" to incorporate all three students' ideas into the design. The teacher smiles and compliments the trio's creation before moving on to another set of raised hands across the room.

Some of the students were able to articulate their use of the LiM habits in conversation with the teacher, whereas others seemed to need the teacher to explain their behaviors to them. In keeping with the CYD framework, the teacher took responsibility for making students aware of their own growing creative abilities, even as she asked them to connect their creative work to the leadership behaviors of characters in the books they had read.

A club teacher reported that, after reading a book about animals in a zoo, the students "have become obsessed with building zoos, because we don't have one here, and they think that we should, so they're creating zoos for their friends to be able to visit."

Across all of these activities, the CYD framework guided instructional decision-making so that children could incorporate their existing strengths into their responsibilities in their small groups. For example, a child who was comfortable with oral reading might be asked to read aloud from the Minecraft handbook, while another participant used her number knowledge to locate the correct page numbers in the table of contents. Students who had been to a zoo or another kind of structure with which other participants were not familiar shared what they knew with the rest of the group. In similar ways, the teachers gave all children opportunities to experience success as they worked toward internalizing the seven key habits of LiM.

For the club's culminating event, the students helped to write and present a narrated tour of their



**Figure 2.** This montage captures creative choices one group made in recreating a local grocery store.

cohort's Minecraft hometown for their families and visitors, explaining how they had used the seven LiM habits in its creation. Figure 2 is a montage of screenshots from one of these leadership presentations. Although the degree of student responsibility for the presentations varied by grade levels, in all cases the teacher set, and the students met, high standards for creativity and the ability to discuss creative choices, as recommended by the CYD framework.

### Behavioral Outcomes

Working with the school district, I used multiple measures to evaluate the effectiveness of Minecraft LiM in the afterschool program, including field notes from my observations of club activities, ongoing discussions with the lead teacher and teaching assistants, a club staff survey I administered, behavioral reports from school-day teachers, school attendance records, and data on office referrals.

All of these data have limitations. My field notes and the tools I developed to survey club teachers may have been influenced by my involvement in funding the afterschool program and creating the club. The usefulness of the school data is impaired by the fact that I could not compare Minecraft LiM participants with similar non-participants with low test scores or

correlate data over time. Furthermore, it is not possible to separate the effects of Minecraft LiM from those of the other interest clubs in the afterschool program or, for that matter, from any other aspect of the students' lives. Another limitation is that school-year data were available only for first- and second-grade participants; the third and fourth graders participated in this club during the summer session.

Of the 49 first- and second graders served in the first year, two had received multiple office referrals in the eight-week period before each of them rotated into the Minecraft LiM club. Once these students began the club, neither received an office referral for the remainder of the school year. In fact, no club participant received an office referral for the remainder of the school year.

School attendance is an important metric in our state, where school funding is directly tied to average daily attendance. Of the 49 first- and second-grade children who participated in Minecraft LiM, only 30 percent met or exceeded the district average of 95 percent daily attendance during the school year. Chronic absenteeism has been identified as common cause for student underachievement (Carroll, 2010; Coelho, Fischer, McKnight, Matteson, & Schwartz, 2015; Gottfried, 2009). Low attendance may have

played a role in the low literacy test scores that qualified these students for the afterschool program. Additional analysis of the same attendance data found that on the days these students did attend school, 94 percent of them had perfect attendance at the afterschool program. Apparently the struggle for these students was not participating in the afterschool program, but making it to school in the first place.

At the end of the school year, the afterschool program manager asked first- and second-grade classroom teachers to complete an online survey about observed changes in the behavior, homework completion, and classroom engagement of students who had participated in Minecraft LiM. Not all classroom teachers responded; I received data on 72 percent of the students. Only three students were reported as not improved in homework completion, a behavior connected to the LiM habits “Put first things first” and “Sharpen the saw.” Similarly, only three students were reported as not improved in classroom behavior; the rest were classified as either having improved or showing no need. Finally, only two students were identified by their classroom teachers as showing no improvement in classroom engagement, an area the LiM habits “Be proactive” and “Begin with the end in mind” might influence.

After working with the first- and second-grade students, one of the Minecraft LiM teachers wrote in the year-end survey that students “had great suggestions on the ways they could incorporate the seven habits” and displayed “enthusiasm with sharing and writing their ideas.” All three club teachers reported having observed the students making better choices during their time together. The lead teacher wrote, “I remember at the beginning of the rotation, students were not interested in writing at all. After a few days of writing, they always looked forward to it.” Thus, club teachers and classroom teachers alike reported signs of increased student engagement. Additionally, in the end-of-year survey, staff reported strong feelings of connectedness to others in the program, providing evidence of positive relationship building, one of the key elements of CYD.

Applying technology to develop leadership in a CYD framework gave afterschool teachers instructional decision-making guidelines for tasks that encouraged the children’s creativity and autonomy.

## Applying Leadership and Creativity in a Virtual World

Applying technology to develop leadership in a CYD framework gave afterschool teachers instructional decision-making guidelines for tasks that encouraged the children’s creativity and autonomy. The evidence, limited though it may be, suggests that Minecraft LiM participants had begun to internalize the LiM curriculum in the program, in the classroom, and even in the community. In their writing, students showed awareness that their creations could affect the experiences of others. Protected by safe, healthy spaces—both virtual and real—participants seized opportunities to express their creativity and demonstrate their understanding in personally meaningful ways. Collaborating with peers to articulate project goals and solve problems while sharing equipment gave children opportunities to apply their leadership strengths while stretching to become better at the seven LiM habits. As in the sixth key CYD element, community connections were important. The club teachers attributed the students’ success, in part, to the assistance of community leaders in providing local context for the application of good leadership habits.

Minecraft and similar virtual reality platforms that facilitate creation and experimentation can be important spaces for learning. However, their strong appeal could lead elementary-aged children to overuse or misuse these platforms, with no clear educational return on the time invested. The teacher’s role in structuring learning, monitoring use of the tools, and providing feedback is a critical piece of instructional design. Elementary-aged children are likely to need more clearly defined guidelines for technology use than older students.

As can happen in any extended activity in early childhood settings, children did not always follow all the rules. Discussions over where to place a door or how tall to make a structure could grow heated and even draw tears. In such situations, the club teacher and her assistants drew on LiM’s seven habits to help students resolve the conflict. On any given day, as club teachers watched lines of text scrolling on the chat windows and listened to the animated conversations happening around the

room, they were continually reminded that Minecraft's open-ended creative potential can require cocreators to rely heavily on one LiM habit in particular: "Seek first to understand, then to be understood." Adult leaders and young participants in Minecraft LiM formed positive relationships, as emphasized in CYD's key elements. When that happens, then all voices can be heard during the process of creating and learning.

## References

- Blabey, A. (2016). *Pig the Pug*. New York, NY: Scholastic.
- Bryant, N. (2016). *Administrators and principals and the implementation process of the Leader in Me initiative* (Doctoral dissertation). Retrieved from ERIC (EDE575425).
- Carroll, H. C. M. (2010). The effect of pupil absenteeism on literacy and numeracy in the primary school. *School Psychology International, 31*(2), 115–130.
- Checa-Romero, M., & Gomez, I. (2018). Minecraft and Machinima in action: Development of creativity in the classroom. *Technology, Pedagogy and Education, 27*(5), 625–637.
- Chiang, F. C., Chiu, C. Y., & Su, Z. H. (2016, November). Using digital storytelling to enhance elementary school students' creative thinking. In *2016 International Conference on Advanced Materials for Science and Engineering (ICAMSE)* (pp. 505–508). Retrieved from IEEE Xplore Digital Library (ed-see.7840183).
- Cipollone, M., Schifter, C., & Moffat, R. (2014). Minecraft as a creative tool: A case study. *International Journal of Game-Based Learning, 4*, 1–14.
- Coelho, R., Fischer, S., McKnight, F., Matteson, S., & Schwartz, T. (2015). *The effects of early chronic absenteeism on third-grade academic achievement measures*. Retrieved from <https://www.lafollette.wisc.edu/images/publications/workshops/2015-dpi-absenteeism.pdf>
- Corcoran, R. P., Reilly, J. M., & Ross, S. M. (2014). *Achievement outcomes of the Leader in Me (TLIM) program*. Baltimore, MD: Center for Research and Reform in Education, Johns Hopkins University.
- Covey, S. R. (2008). *The leader in me: How schools and parents are inspiring greatness, one child at a time*. New York, NY: Free Press.
- Covey, S. R. (2004). *Seven habits of highly effective people: Restoring the character ethic*. New York, NY: Free Press.
- Creative Youth Development National Partnership. (2018). What is CYD and its impact? Retrieved from <https://www.creativeyouthdevelopment.org/national-action-blueprint/what-is-cyd-and-its-impact>
- Cummins, K. (2015). *A mixed methods study on the Leader in Me process: How does fostering student leadership capacity influence behavior, efficacy, and achievement?* (Doctoral dissertation). Retrieved on July 11, 2019, from <https://pqdtopen.proquest.com/pubnum/10002402.html?FMT=AI>
- Dezuanni, M. (2017). Material and discursive learning in Lego and Minecraft. In C. Beavis, M. Dezuanni, & J. O'Mara (Eds.), *Serious play: Literacy, learning, and digital games* (pp. 280–295). New York, NY: Routledge.
- DiLiello, T. C., & Houghton, J. D. (2006). Maximizing organizational leadership capacity for the future: Toward a model of self-leadership, innovation and creativity. *Journal of Managerial Psychology, 21*(4), 319–337.
- Fanning, C., & Mir, R. (2014). Progressive pedagogy and the history of construction play. In N. Garrelts (Ed.), *Understanding Minecraft: Essays on play, community and possibilities* (pp. 38–56). Jefferson, NC: McFarland.
- Gottfried, M. A. (2009). Excused versus unexcused: How student absences in elementary school affect academic achievement. *Educational Evaluation and Policy Analysis, 31*(4), 392–415.
- Hughes, D. J., Lee, A., Tian, A. W., Newman, A., & Legood, A. (2018). Leadership, creativity, and innovation: A critical review and practical recommendations. *Leadership Quarterly, 29*(5), 549–569.
- Humphries, A., Cobia, F., & Ennis, L. (2015). Perceptions of the Leader in Me process in regard to student discipline. *Journal of Education and Human Development, 4*(3), 93–104.
- Ishola, C. (2016). *Key life lessons: Learning to lead self and others in primary school* (Unpublished doctoral dissertation). Benedictine University, Lisle, Illinois.
- Jordan, D. (2014). *Dream big: Michael Jordan and the pursuit of excellence*. New York, NY: Simon & Schuster.
- Lane, C., & Yi, S. (2017). Playing with virtual blocks: Minecraft as a learning environment for practice and

research. In F. Blumberg & P. Brooks (Eds.), *Cognitive development in digital contexts* (pp. 145–166). San Diego, CA: Academic Press.

Montgomery, D. (2017). The rise of creative youth development. *Arts Education Policy Review*, 118(1), 1–18.

Morgan, M., & Mungan, Y. (2014). Fine arts, culture, and creativity in Minecraft. In N. Garrelts (Ed.), *Understanding Minecraft: Essays on play, community and possibilities* (pp. 175–190). Jefferson, NC: McFarland.

Nebel, S., Schneider, S., & Rey, G. D. (2016). Mining learning and crafting scientific experiments: A literature review on the use of Minecraft in education and research. *Educational Technology & Society*, 19(2), 355–366.

Pascale, A., Ohlson, M., & Lee, J. (2017). The habits of highly effective schools: Analyzing the impact of “Leader in Me” schools in Florida. *Florida Association of Teacher Educators Journal*, 2(1), 6–22.

Smith, B. N., Montagno, R. V., & Kuzmenko, T. N. (2004). Transformational and servant leadership: Content and contextual comparisons. *Journal of Leadership & Organizational Studies*, 10(4), 80–91.

Soulé, H., & Warrick, T. (2015). Defining 21st century readiness for all students: What we know and how to get there. *Psychology of Aesthetics, Creativity, and the Arts*, 9(2), 178.

Stella, R. (2013). *Program evaluation of a school leadership program in an elementary school* (Doctoral dissertation). Retrieved from ERIC (ED559747).

Vaidyanathan, S. (2012). Fostering creativity and innovation through technology. *Learning & Leading with Technology*, 39(6), 24–27.

Voiskounskya, A., Yermolova, T., Yagolkovskiy, S., & Khromova, V. (2017). Creativity in online gaming: Individual and dyadic performance in Minecraft. *Psychology in Russia: State of the Art*, 10(4), 144–161.

Yilmaz, R. M., & Goktas, Y. (2017). Using augmented reality technology in storytelling activities: Examining elementary students’ narrative skill and creativity. *Virtual Reality*, 21(2), 75–89.

Zolyomi, A., & Schamlz, M., (2017). Mining for social skills: Minecraft in home and therapy for neurodiverse youth. *Proceedings of the 50th Hawaii International Conference on System Sciences*, Waikoloa, HI.



# Youth Perspectives on Staff Turnover in Afterschool Programs

## Patricia McGuiness-Carmichael

Relationships with staff are crucial to participants' growth in youth development programs. These programs help young people develop social and emotional competencies including relationship building, defined as "the ability to establish and maintain healthy and rewarding relationships with diverse individuals and groups" (Collaborative for Academic, Social, and Emotional Learning, 2017). In my work in afterschool programs, I experience firsthand how lasting relationships between staff and the youth and families they serve are central to the work. Staff become a touchpoint and a steady presence: connecting youth to opportunities, listening to them, and supporting them simply by being there.

However, staff are not always there. Rates of staff turnover in youth-serving organizations are extremely high—as high as 40 percent per year, according to the Next Generation Youth Work Coalition (2010).

This level of turnover leads to challenges not only for the employers, but also for participating youth. Efforts have been made to address the root problem by finding ways to retain staff. The nonprofit sector has discussed, among other strategies, offering higher pay, incentives, professional development, upward mobility, and other benefits that would encourage staff to stay (Parker, 2018). In the meantime, however, we have not spent much time finding out how young people feel about staff transitions or thinking about ways to support them when staff leave their program.

To help fill this need, I conducted research in the program in which I was working during my participation in the National Afterschool Matters Fellowship, asking youth and staff about participants' perspectives on staff transitions and on what they need

---

**PATRICIA MCGUINESS-CARMICHAEL**, MSW, is the program officer at Strong Women, Strong Girls Boston. She is a licensed certified social worker with a master's degree in social work from the University of South Carolina. Patricia is a fellow in the National Afterschool Matters Fellowship, in which she conducted out-of-school time research. She has spent 13 years in Boston's nonprofit sector.

to make transitions easier. My findings suggest ways programs can support youth through staff transitions to bolster their ability both to persist in the program and to build relationships with new staff.

## Research on Relationships and Staff Turnover

Many positive outcomes for youth are attributable to relationships with caring adults. According to Murphey, Bandy, Schmitz, and Moore (2013), the benefits of positive relationships with caring adults include lower rates of bullying and of mental health issues, greater likelihood of engagement in school and afterschool opportunities, and improved persistence. Young people who have a relationship with at least one adult outside their family learn to overcome adversity, show a desire to learn new things, and have strong communication skills (Murphey et al., 2013). The study did not look at the longevity of adult–youth relationships or whether the consistency of the relationship affects outcomes; still, the findings support the focus youth programs put on building positive youth–staff relationships.

Grossman and Rhodes (2002) focused on how the duration of relationships with nonfamily adults affects positive youth outcomes. In a study of urban youth participants in Big Brothers Big Sisters programs, the authors found that youth–adult relationships lasting for 12 or more months elicited more social and emotional improvement than did shorter relationships. Young people who had shorter-term relationships of less than six months with their adult volunteers showed negative effects on well-being, including increased alcohol abuse. The researchers call for further examination of young people’s feelings of rejection when mentors move on (Grossman & Rhodes, 2002).

Understanding the benefits of youth–adult relationships, youth development workers invest a lot of energy in building relationships that young people find trustworthy, supportive, and consistent. We also encourage program participants to invest in relationships with staff. What happens when those relationships come to an end because staff members leave their jobs?

Laroche and Klein (2008) suggest that staff turnover affects participants by damaging their ability to build trust with adults. Borden, Schlomer, and Bracamonte Wiggs (2011) agree that regular staff turnover forces young people to try over and over again to create relationships with new staff. This negative experience affects new staff members as they come up against the challenge of trying to build relationships with youth who have developed a sense of mistrust. Sustained employment, these researchers suggest, could lead to stronger relationships between participants and staff (Borden et al., 2011).

A study by America’s Promise Alliance (Center for Promise, 2015) explored the impact of adult–youth relationships on school persistence. Unlike the studies cited above, this one also explored young people’s perspectives on their relationships with adults. The study suggests that youth who experience inconsistent and unstable relationships avoid seeking out relationships with adults, as they do not trust that the adults will be there in a supportive way over time (Center for Promise, 2015).

## Context

To add to the field’s understanding of the effects of staff turnover, and specifically of young people’s own experience of staff turnover, I conducted research at my own program, a sports-based youth development program operating five sites in the Boston Public Schools. This program offered academic, athletic, and social and emotional development programming, as well as family engagement, for about 250 participants, ages 11 to 14, per year. It also worked with students from sixth grade all the way through their post-secondary pursuits.

One part of my job as family engagement coordinator was to help participants deal with staff turnover. My participation in the National Afterschool Matters Fellowship sponsored by the National Institute on Out-of-School Time gave me the opportunity to conduct research in my program on how youth experienced staff turnover.

My program was not unusual in experiencing significant staff turnover every year. Like many

Regular staff turnover forces young people to try over and over again to create relationships with new staff. This negative experience affects new staff members as they come up against the challenge of trying to build relationships with youth who have developed a sense of mistrust.

programs, it relied on volunteers and service positions. Of 40 staff members, only 40 percent were full-time permanent employees. The other 60 percent were AmeriCorps volunteers, who typically stayed with the program for just a year. Turnover thus was built into the program structure. Full-time staff, meanwhile, faced long hours, demanding work, and other factors that led to burnout—which in turn led 10 percent or more of staff to leave every year.

## Methods

Realizing that program leaders were expecting participants to accept staff changes without asking how they experienced those changes, I held three focus groups with eighth-grade students in the afterschool program. All 13 focus group participants were Boston Public Schools students who had participated in the afterschool program for two or three years during middle school and had expressed to me their willingness to discuss their program experiences. Parents also gave permission. These students hailed from the two program sites that had the highest rate of staff and AmeriCorps turnover between 2016 and 2018. I developed a focus group protocol that asked participants to reflect on their experiences when staff members left, to share their opinions, and to recommend ways the program could make staff transitions easier. I recorded the focus group discussions and then transcribed them. I then reviewed the transcriptions to identify common themes in the data, followed by another review to code the responses manually.

To get another perspective, I developed an online survey for program staff to ask about their experiences with students who were processing staff transitions. I recruited current and former staff by sharing the online survey with 48 staff and AmeriCorps volunteers who had been with the program between 2016 and 2018. In all, 23 current and former staff and AmeriCorps volunteers completed the survey, which was hosted on SurveyMonkey. About one-third of staff respondents worked at one of the two sites from which I recruited student focus group participants. Almost half (48 percent) said on the survey that they had been with the organization for more than one year and 43 percent that they had been with the organization for

six months to one year. Nine percent were no longer with the organization. I supplemented SurveyMonkey's automatic tally of results with manual coding of responses to open-ended questions and with analysis of responses. The results illuminated participants' feelings about staff turnover and staff members' experience of how these feelings manifested in behavior. The responses also generated suggestions of ways to support students as they experience staff transitions.

## Youth Perspectives

In the focus groups, I asked program participants about their feelings when staff left their site or the organization, how they responded to the loss, and what would have been helpful for them.

Participants reported on the range of emotions they felt when staff left. Young people in all three focus groups (nine of the 13 respondents) reported having negative feelings, including devastation, sadness, anger, frustration, loss, and lack of trust. One participant said, "I felt like I was losing a family member. It's hard to see them leave and see someone else come in and try to fill their space." Even though they experienced negative feelings, a few students also reported that they had at least some positive feelings about the transitions: They were happy for the staff member for moving on to something else or looking forward to the opportunity to meet new people. These findings indicate that at least some participants had

One participant said, "I felt like I was losing a family member. It's hard to see them leave and see someone else come in and try to fill their space."

mixed emotions about staff turnover.

When asked about the challenges they faced after staff turnover, the students in all three groups named changes in relationships or lack of connections with new staff. Some students expressed the opinion that the program felt different in some way after the departure of staff members.

In response to questions about what would make transitions easier, respondents agreed that they needed advance warning so they could prepare for changes, though they did not agree on how much time they would need. About a third of focus group participants said that they had considered quitting the program when staff members left. All focus group respondents were current program participants, so obviously they had remained in the program. All reported that they were happy with their decision. When asked to elaborate on factors that

influenced their decision to stay in the program, students cited the importance of facing challenges in life, sticking to the commitment they had made to the program, and giving new staff a chance.

### Staff Perspectives on Youths' Experience

The challenges identified by the 23 staff who completed the complementary survey about youth responses to staff turnover were consistent with the challenges the students identified. The most common student behaviors or feelings staff selected from a list of possibilities were resistance to building relationships,

Both students and staff agreed that giving young people a role in selecting new staff would make staff transitions a little easier on students. Students suggested practices that would allow them to get a sense of the candidates' personalities and how they interact with young people, such as being a part of interviews or mock program sessions with candidates. To these high-stakes strategies, focus group respondents added low-stakes ways they could be involved in finding candidates with whom they could feel comfortable, such as outlining the staff qualities that are important to them.

Similarly, staff expressed interest in including participants without making them part of final decisions—for example, by having them participate in interviews and practice program sessions or by having them meet candidates in advance. These suggestions could be considered high stakes, as participants could be disappointed if they build connections with candidates who do not actually get the job. Staff also suggested some lower-stakes

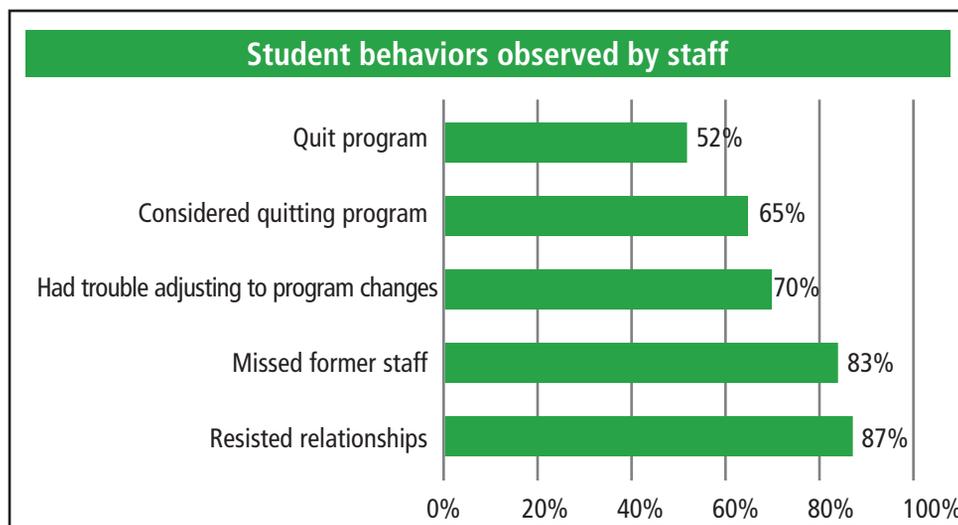


Figure 1. Staff observations of participant reactions to staff turnover

missing former staff, and trouble adjusting to program changes, as shown in Figure 1. More than half of the staff surveyed said that at least some students had quit the program after staff changes.

Asked about their own challenges in dealing with students after staff transitions, more than half of the staff respondents cited difficulties in building relationships with students. Other challenges included managing student behavior and maintaining student buy-in with the program, each of which was cited by more than one-third of staff respondents.

### Strategies to Help Youth Deal with Staff Turnover

The youth focus group questions and staff survey both asked about strategies to help program participants handle staff turnover. The suggested strategies, shown in Table 1, focused on program consistency, communication, and relationship building.

ways to involve students in the hiring process, such as helping to create job descriptions and interview questions.

### Limitations and Next Steps

The most important limitation of this study is that it focuses on one program and taps only a small number of respondents. In addition, comparison of data on staff turnover and youth attendance would more fully illuminate the connections focus group and survey participants made between staff turnover and youth dropout.

Larger and more rigorous studies on the effects of staff turnover on youth would be of enormous benefit to the field. Another area for further research is exploration of youth involvement in hiring practices and the results of that involvement. The specifics of involvement could include, for example, how many and which young people are included in hiring practices,

| Topic Area            | Strategy  | Suggested by       |
|-----------------------|---|--------------------|
| Program consistency   | Maintain program elements that students identify as important                           | Students and staff |
|                       | Seek student input on program changes   | Students           |
| Communication         | Make sure outgoing and new staff share information with each other                      | Students and staff |
|                       | Provide as much notice as possible about staff transitions                              | Students and staff |
|                       | Communicate clearly and honestly with students  | Staff              |
| Relationship building | Provide opportunities for students to meet new staff along with staff they already know | Students and staff |
|                       | Offer intentional time for students and staff to get to know each other                 | Students and staff |
|                       | Establish celebrations or rituals to say goodbye  | Staff              |
|                       | Create and maintain strong relationships among remaining staff and students             | Staff              |

**Table 1. Strategies for supporting program participants through staff transitions**

the extent of their involvement, how much influence have on final decisions, and many other questions.

The youth development field needs to work on the root causes of high staff turnover, such as low pay and staff burnout. In the meantime, we should also take measures to support young people during staff transitions rather than assuming they will easily adjust. The practices outlined in this article may help participants cope when they lose staff who are important to them. Particularly as we value afterschool programs as places where young people can build strong connections that will help them thrive, we must not take lightly the effect of the loss of relationships that matter to program participants.

## References

Borden, L. M., Schlomer, G. L., & Bracamonte Wiggs, C. (Fall 2011). The evolving role of youth workers. *Journal of Youth Development*, 6(3). Retrieved from <https://jyd.pitt.edu/ojs/jyd/article/view/179/165>

Center for Promise. (2015). *Don't quit on me: What young people who left school say about the power of relationships*. Washington, DC: America's Promise Alliance. Retrieved from <http://www.americaspromise.org/report/dont-quit-me>

Collaborative for Academic, Social, and Emotional

Learning. (2017, January). Core SEL competencies. Retrieved from <https://casel.org/core-competencies/>

Grossman, J. B., & Rhodes, J. E. (2002). The test of time: Predictors and effects of duration in youth mentoring relationships. *American Journal of Community Psychology*, 30(2), 199–219. Retrieved from <https://www.rhodeslab.org/files/testoftime.pdf>

Laroche, H., & Klein, J. D. (2008). Lessons from the front lines: Factors that contribute to turnover among youth development workers. *Journal of Youth Development*, 2(3). Retrieved from [https://ncfy.acf.hhs.gov/sites/default/files/docs/16913-Lessons\\_From\\_the\\_Front\\_Lines.pdf](https://ncfy.acf.hhs.gov/sites/default/files/docs/16913-Lessons_From_the_Front_Lines.pdf)

Murphey, D., Bandy, T., Schmitz, H., & Moore, K. A. (2013). *Caring adults: Important for positive child well-being*. Child Trends Research Brief 2013-54. Retrieved from <https://www.childtrends.org/wp-content/uploads/2013/12/2013-54CaringAdults.pdf>

Next Generation Youth Work Coalition. (2010). *The case for investing in America's youth workers*. Retrieved from [http://www.niost.org/pdf/Youth\\_Worker\\_Case\\_Statement\\_March\\_2010.pdf](http://www.niost.org/pdf/Youth_Worker_Case_Statement_March_2010.pdf)

Parker, G. (2018). *Strategies for retaining employees in the nonprofit sector*. Walden University ScholarWorks. Retrieved from <https://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=6219&context=dissertations>



# Using Screen Time to Promote Green Time

## Outdoor STEM Education in OST Settings

**Christine Andrews Paulsen and Jessica Rueter Andrews**

Addressing the myriad developmental and academic needs of young children is no “walk in the park.” But what if it could be? Too many of today’s children spend too much time indoors, often interacting with screens. They don’t get enough physical exercise. Their learning about nature comes from books and teachers rather than from firsthand exploration of natural phenomena. These issues affect most modern American children, but they are particularly prominent among low-income children in high-need neighborhoods. Walks (and other activities) in the park, if properly designed, could go a long way toward improving children’s health and developing their cognitive skills.

Many out-of-school time (OST) programs already serve low-income children; many incorporate physical activity, STEM (science, technology, engineering, and mathematics), or both. But dealing with these and other

priorities while keeping children safe, aligning with school learning goals, and sometimes being held responsible for academic outcomes such as grades and test scores can overwhelm the most dedicated afterschool professionals. When and how can outdoor exploration of natural phenomena fit in, especially in urban neighborhoods?

As surprising as it may seem, technology can provide part of the answer. This article describes *PLUM LANDING*, an all-digital PBS program that helps OST programs and families get outdoors to explore nature. Findings from the program evaluation suggest lessons for OST programs that want to incorporate outdoor STEM learning, no matter what curriculum or resources they use.

---

**CHRISTINE ANDREWS PAULSEN**, PhD, has been conducting evaluation research since 1990. She routinely directs evaluations of STEM-related projects in informal settings, focusing on learners and on practitioners.

**JESSICA RUETER ANDREWS**, project director at WGBH Educational Foundation, has been working in children’s media for more than 20 years. Many of her projects combine curriculum development and media production with research on learning.

## Children Need More Green Time

According to Richard Louv (2005), children today have less direct experience in nature—less green time—than previous generations had. The reasons include lack of unstructured time, worries about safety, inadequate access to outdoor space, and the lure of screens and technology. With his book *Last Child in the Woods*, Louv put a name to this phenomenon—*nature-deficit disorder*—and highlighted its perils for the social, physical, and emotional well-being of children. The resulting “No Child Left Inside” movement and other forces have sparked interest in the long-term effects of lack of green time on children’s health, academic development, and care for the environment.

The effects on child health of exposure to nature are well documented. Reduced green time is associated with high rates of obesity, asthma, attention disorders, self-regulation issues, low self-esteem, anxiety, stress, and depression (Christiana, Battista, James, & Bergman, 2017; Derr & Lance, 2012; Flouri, Midouhas, & Joshi, 2014; Razani et al., 2016). Conversely, time in nature confers physical and mental health benefits (Cleland et al., 2008; Faber Taylor & Kuo, 2009, 2011) including increases in immune system functioning (Li et al., 2007; Li et al., 2009).

Lack of outdoor time means also that children miss powerful learning opportunities. In 2016, the North American Association for Environmental Education guidelines for early childhood environmental programs recommended that “particularly for very young children, environmental education should incorporate exploring woodlands, getting wet feet, climbing rocks, building with sticks, running on grass, turning over rocks, following insects, stomping in puddles, and so forth” (North American Association for Environmental Education, 2016, p. 3). Supporting this approach are studies that identify direct engagement in nature as a factor that improves student outcomes in environmental education programs (Rickinson, 2001; Stern, Powell, & Hill, 2014).

Finally, children’s lack of experience in nature may portend trouble for the earth itself. In order to develop an emotional affinity with nature and to become environmental stewards, children need

personal experiences in the outdoors (Chawla, 1998; Hungerford & Volk, 1990; Sobel, 2001). Studies suggest that children who spend meaningful time playing and learning in nature develop a stronger sense of environmental affinity than others (Collado, Staats, & Corraliza, 2013; Ferreira, 2012; Larson, Castleberry, & Green, 2010) and that, over time, these experiences can translate into conservation behaviors and a stewardship ethic (James, Bixler, & Vadala, 2010; Wells & Lekies, 2006). The well-being of our planet may be jeopardized if adults do not help our children develop an understanding of the natural world, a sense of wonder and love for it, and, therefore, the motivation to protect it.

## How OST Organizations Can Help

OST programs bring important assets in promoting environmental education and outdoor play. For one thing, they are often better able than schools to take children outside. For schools, increasing pressure to improve academic performance often means increased “seat time” and fewer opportunities for recess or other outdoor time, despite evidence that play and learning in nature bring developmental and academic benefits (Jarrett, 2002). OST programs can therefore fill an important gap by bringing children outdoors and connecting them to nature.

Furthermore, OST programs are uniquely equipped to supplement classroom STEM learning. To build their understanding of environmental science, children need multiple opportunities both to learn the explicit skills and knowledge that formal science education can provide *and* to build a body of informal, experiential knowledge through direct exploration in nature. OST activities can provide this direct experience, which has been shown to be critical to children’s persistence and engagement with formal science learning and, over time, with scientific exploration more broadly (National Research Council, 2009). For instance, children can develop their understanding of weather by observing clouds; investigate water flow by following the path of rainwater from the sidewalk to a storm drain; and learn about animal behaviors by watching squirrels, pigeons, and insects.

With his book *Last Child in the Woods*, Louv put a name to this phenomenon—*nature-deficit disorder*—and highlighted its perils for the social, physical, and emotional well-being of children.

OST programs also have a unique opportunity because they tend to serve the most vulnerable populations. They therefore can bring outdoor STEM learning to children, particularly those in urban areas, who may not have other opportunities to explore nature. City children often lack opportunities to explore science outdoors, in part because educators feel that they do not have access to appropriate outdoor spaces or that the outdoor spaces they can access, such as city parks, don't represent "nature" (Bruyere, 2012; Simmons, 1998). Guidance can help urban educators more clearly see and take advantage of the learning opportunities all around them (Flouri et al., 2014).

Once an OST program decides to build in outdoor exploration, how can educators and administrators actually make it happen, without adding to staff workloads? After all, informal education programs are already tasked with a lot. Besides being expected to offer fun programming, they are under increasing pressure to include academics, especially STEM, and physical fitness in their programming (Hynes & Sanders, 2010; Wiecha, Hall, Gannett, & Roth, 2012). An OST organization may specialize in one of these priorities, but achieving multiple priorities is difficult. Incorporating outdoor exploration and environmental science can add another layer of challenge, especially for urban programs that may not recognize local opportunities to explore environmental science or feel prepared to take advantage of them.

## Launching Outdoor Exploration in OST Settings

To overcome these challenges, urban programs need ideas and structure for outdoor exploration, particularly for programming that balances physical activity with learning and enjoyment of the outdoors (Goldstein, Famularo, & Kynn, 2018). Training and guidance have been shown to contribute to successful experiences (Rosenberg, Wilkes, & Harris, 2014).

Perhaps surprisingly, electronic media may provide part of the answer. Though some see technology as a

contributor to reduced green time, digital media can be a tool for learning in nature. It can help to deepen children's engagement with nature, set the stage for learning, and equip families to integrate outdoor exploration into their everyday lives (Anggarendra & Brereton, 2016; Goldstein, Famularo, Kynn, & Pierson, 2018).

One program designed to accomplish these purposes is *PLUM LANDING* (WGBH Educational Foundation, 2017b), a PBS KIDS all-digital environmental science project. Designed to bring active science exploration to children ages 6 to 9 and their families, the project strives to lay a foundation for lifelong commitment to the environment. It features Plum, a curious, nature-loving alien, and her five earthling friends as they embark on epic explorations of Planet Earth. Animated stories,

live-action videos, online games, hands-on activities, and apps offer kids opportunities to wonder and explore, observe and create, and play and discover their way across diverse ecosystems.

Guidance for informal educators provides support in using these materials to foster real-life exploration in children's own neighborhoods. The *PLUM LANDING Explore Outdoors Toolkit* (WGBH Educational Foundation, 2017a) helps OST educators implement programming for their participants and families, addressing common challenges along the way. Funded by a three-year grant from the National Science Foundation, media producers at WGBH and researchers at Education Development Center worked with partner OST programs throughout the U.S. to iteratively create, test, and refine the toolkit. In 2018–2019, Concord Evaluation Group conducted an independent summative evaluation of the toolkit. This research forms the basis for the suggestions offered in this article.

## Methodology

The multimethod evaluation of the toolkit and of its potential to foster science exploration studied three common outdoor education models: afterschool programs that work with children, informal programs that provide facilitated programming for families, and

For instance, children can develop their understanding of weather by observing clouds; investigate water flow by following the path of rainwater from the sidewalk to a storm drain; and learn about animal behaviors by watching squirrels, pigeons, and insects.

programs that encourage families to explore on their own. Participant observations in this article come from surveys and interviews conducted for these three studies.

### Afterschool Study

The first part of the evaluation consisted of an implementation study that compared outcomes among afterschool programs that used the toolkit and those that did not, using a randomized block design. Interested programs were randomly assigned to an intervention group that used the toolkit or a comparison group that did not. A total of 12 afterschool programs participated in the study: six from urban locations in Massachusetts; three from urban areas in South Carolina, New York, and Texas; one suburban location in Maine; and rural locations in Georgia and Kentucky. In the urban and rural programs, participants were predominantly low-income families. The final sample included 12 afterschool educators and 77 students. Students ranged in age from six to 12 years, with an average of 9.8 years. Although the toolkit materials were developed for educators working with six- to nine-year-old children, the evaluators found in pilot testing that many of the younger participants were unable to complete the study surveys. They therefore encouraged programs to try out the materials with kids on the upper end of the target age spectrum.

Participants in all programs were surveyed upon enrollment in the study and again at the end of the study. After the pre-test survey, programs in the intervention group were given the toolkit and related materials; comparison group programs got the materials after the post-test survey. Researchers also conducted observations in three Boston-area programs.

### Facilitated Family Study

The second component of the evaluation was a qualitative study that included data from six one-day facilitated events at five nature-based family education programs. The five programs, based in Alabama, Georgia, Massachusetts, Utah, and California, all served primarily low-income families; three were in urban locations. Programs in the study received *PLUM LANDING* toolkits and were asked to collect post-participation surveys from children and parents or caregivers. Informal educators were also surveyed at the end of the program. The final sample included 10 educators (five from one location, two from another, and one from each of the other three), 27 parents, and 22 children, who completed surveys either alone or

with help from their parents. Kids ranged in age from five to 12 years, with an average of 7.6 years.

### Self-Facilitated Family Study

The third part of the evaluation was conducted with families who used the toolkit on their own. Researchers conducted Skype interviews with nine families. Three of these had participated in the facilitated family program. The other six families were recruited from the evaluation firm's national research panel to try out toolkit activities at home and provide feedback. These six families were located in diverse settings (urban, rural, and suburban). All classified themselves as low income, and all had children ages 6 to 9.

### Materials

The *PLUM LANDING Explore Outdoors Toolkit* included materials focusing on four urban ecology themes: water, weather, plants, and animals. The toolkit was designed to be modular, so that programs could pick and choose the components that would work best for their audiences, the weather, and the available time and outdoor space. The toolkit featured:

1. An introductory video and guide for program directors.
2. Instructions for hands-on activities designed to blend fun, science learning, and physical fitness: eight activities for afterschool programs, eight for facilitated family programs, and 10 for families exploring on their own. Family activities were available in English and Spanish.
3. Twelve animated webisodes, featuring Plum and her friends, that are intended to get kids excited about the science concepts in the hands-on activities.
4. An online game that complements and extends the science learning from the webisodes and hands-on activities.
5. Seven videos, hosted by a veteran outdoor educator, intended to guide OST educators in leading outdoor activities in urban settings.
6. A free app that helps families build the habit of fun, active outdoor exploration.
7. An online site where children can document their completion of real-life outdoor missions to receive digital badges.
8. Eight parent videos, in English and Spanish, that offer tips and inspiration to help parents get the most out of their time outside with their kids.
9. Nineteen "learning pathways" for OST educators: suggestions for combining the activities and digital

media into programming blocks suited to the program's audiences and time constraints.

### Lessons Learned

The evaluation of the toolkit identified important principles that OST programs may want to consider when implementing nature-based programming:

1. Science learning can happen anywhere.
2. Home connections can reinforce learning.
3. Science learning doesn't have to be complicated.
4. Games make science less intimidating.
5. Technology can promote engagement with nature.
6. Physical activity can motivate outdoor science exploration.
7. Digital exploration and outdoor play can enhance science learning.

### Science Learning Can Happen Anywhere

Our findings demonstrated that urban dwellers don't have to travel far to find suitable locations for science games and activities. Researchers observed educators and families conducting activities on sidewalks, in school playgrounds paved with concrete, and in an abandoned parking lot. Children and families blew bubbles and tracked where the wind took them, investigated animal habitats, collected plant seeds, and experimented to see how quickly water evaporates in sun versus shade—all within their local neighborhoods.

Parents in the study shared details about their experiences. One reported, "My child learned about the diversity we can experience in even a very small area, and how teeming with life even a small patch of grass can be." Another said, "My child learned how to hear the hidden animals." Still another told us, "[I was surprised to learn] what is around us in our town."

Educators who worked with children and families also reported that they used the materials to explore science in their local neighborhoods. One said, "Although we live in a suburban setting, there is still so much to learn about the creatures, plants, and environment in general." Another said that the project "made me more aware of my environment, and [now] I pay closer attention to details around us."

"My child learned about the diversity we can experience in even a very small area, and how teeming with life even a small patch of grass can be."

### Home Connections Can Reinforce Learning

For OST programs, take-home activities enabled parents to participate with their children in continued learning connected to OST experiences. Even for families who participated together in facilitated activities at nature centers or community learning programs, take-home activities encouraged them to continue exploring on their own. All take-home activities in the toolkit were available in English and Spanish. The self-guided, hands-on activities enabled families to do science anywhere, anytime, and to involve siblings or extended family members. The handouts prepared caregivers to answer children's "how" and "why" questions, gave them ideas on spending more time outdoors, and provided instructions for easy science experiments.

Study families who tried the activities at home provided positive feedback. For example, one parent said, "It involves activities [my child] can do in the classroom and [we can do] at home. I learned a lot!" Other parents and educators reported that the activities helped them connect indoor learning with outdoor exploration. For example, one mom said at pre-test that she did "indoor science" with her son, but that she "shied away from messy science" activities outdoors. After trying the toolkit activities, she reported that "seeing how much fun he had and how easy they were (and not messy)," she realized that "we can do this kind of thing more often, and we should do it more often."

### Science Learning Doesn't Have to Be Complicated

Designed for programs with limited budgets and minimal storage space, the *PLUM LANDING* activities required only everyday supplies that are lightweight, easy to carry, and affordable, such as jump ropes, toothpicks, and yarn. This approach not only eased the burden on educators to find and purchase supplies, but also helped children understand that science is a part of their lives. One educator reported, "*PLUM* was a great experience for kids for almost no cost." Another reported, "The lessons were inexpensive to execute."

All toolkit activities were designed to enable children to become more familiar with environmental science concepts and to practice foundational science skills, such as making predictions or observing and

comparing results. Even simple activities, like closely examining insect life in a patch of grass, comparing how water flows on different surfaces, or observing clouds to predict the weather, offered valuable lessons in environmental science. For example, one afterschool educator said, “I enjoyed seeing the kids’ interactions and their curiosity to learn new things.” Another reported having “learned some new stuff” alongside the participants.

OST leaders and parents of all experience levels reported that the simplicity of the activities helped them feel more capable of introducing the activities into their regular outdoor programming or outdoor playtime at home. During a pre-test interview, one mom reported that she was uncomfortable doing science-related activities because her daughter “was still too young.” During the post-test interview, this mother said that she was “pleasantly surprised” by the toolkit activities:

Before this, if I was with her at the park, she wouldn’t be wanting to look about nature or learn about [science]. She would want to play with her friends, go on the swings, the slide. So it was definitely a good experience because we never, ever have learning experiences at the park. So this was a first.

One study dad was initially hesitant about because he expected to need a high level of science knowledge to “manage” toolkit activities with his son. After using the toolkit, he said that he was quite relaxed now and realized that he could “do these kinds of things with [his son] outside without any special academic preparation.”

### Games Make Science Less Intimidating

Many adults reported at the beginning of the study that they were uncomfortable or only somewhat comfortable leading science learning and teaching science concepts. Some felt unprepared due to their own lack of knowledge or worried that they wouldn’t be able to communicate complex ideas effectively. However, the *PLUM LANDING* approach, which incorporated science learning into outdoor games, helped educators and parents feel more confident. For instance, one game

“It was definitely a good experience because we never, ever have learning experiences at the park. So this was a first.”

helped children learn about the ways in which animals move through their habitats by trying to match their own skills to those of their animal neighbors. Could they jump 20 times their body length, as a grasshopper can? Or flap their arms 3,000 times in 60 seconds, as hummingbirds do with their wings? A version of hide-and-seek helped children see how camouflage helps animals stay hidden from predators, and a version of Red Rover demonstrated how water moves through permeable and impermeable surfaces.

To help OST staff feel confident leading these games to explore science concepts, the toolkit provided step-by-step instructions. In fact, all six of the afterschool educators who responded to the post-test survey reported that the toolkit gave them ideas for exploring nature with program participants and helped them become more comfortable in doing so. One educator reported, “I loved the rhymes and the games that went along with the unit in helping to remember signs of rain and air pressure.”

Children also reported in post-participation surveys that the games made learning fun for them:

- “[The games were] fun and I got to meet new kids.”
- “I liked the coyote and rabbit game.”
- “Running games were fun.”
- “Games like bee and pollen [were fun].”

### Technology Can Promote Engagement with Nature

Rather than keeping kids glued to their screens, technology can actually contribute to *increased* engagement with nature, according to our findings. The *PLUM LANDING* animated videos sparked children’s interest and appeared to motivate them for outdoor learning. Playing games online helped to reinforce the learning from hands-on outdoor activities. During observations, we noted that children spent only a few minutes at the beginning of each session watching the videos. Most of the time during each session was spent running around, exploring, and observing nature outside.

Educators also appreciated the role of the videos in introducing science concepts and setting the stage for outdoor learning. One educator said, “It was easy and exciting for our educators to be supported by the videos and simple experiments.” During outdoor exploration

time, we repeatedly observed educators reminding the children about concepts covered in the media.

Parents reported that the technology made it easier for them to engage with the activities outside, so they didn't have to, as one put it, "carry around a bunch of handouts" while they were exploring. One mom reported that the toolkit changed her view of how "outdoorsy" she and her son truly were:

I felt like he and I are such outdoorsy people ... until we started, like, going through the activities and actually trying to apply them to our environment. Now, I am, like, "Wow, I don't feel like we're as 'nature-y' as we thought we were." We need to do more of this kind of thing all the time!

### Physical Activity Can Motivate Outdoor Science Exploration

The toolkit included media and hands-on activities to promote physical fitness—a common goal for many OST programs. The evaluation found that, in addition to increasing physical movement, activities such as racing, balancing, mimicking animal movements, and completing scavenger hunts made the science activities appealing and drove children's engagement with science concepts.

The most common responses to a question about the children's favorite part of the project related to being outside and playing in nature:

- "Going out."
- "I like that we got to exercise."
- "I liked the movement."
- "Nature."

Parents also appreciated the connection to physical fitness. Two parents reported that their favorite parts of the project were related to children's outdoor physical activity. One parent enjoyed "watching my kids run around and be excited about God's beautiful creation." Another reported that her favorite part of the project was the chance for child to "play outside."

Using the toolkit seemed to expand families' repertoire of physically active outdoor activities to include such science explorations as nature walks, collecting rocks, and looking for bugs. Before using

the toolkit, families were most likely to report that children's favorite outdoor activities were sports-related or physical activities. In the self-facilitated family study, half of the families provided examples of science-related nature activities they had done with children before engaging with the toolkit, but sports or other physical activities still predominated in children's time outside. For the other half of the children, parents did not mention engaging in science or nature exploration before using the toolkit. After using the toolkit, all the children still reported enjoying the same outdoor activities they reported in the pre-test, but four of the six children reported enthusiastically that they wanted to add science-related nature activities to the things they regularly did outside.

### Digital Exploration and Outdoor Play Can Enhance Science Learning

Our study found that digital exploration and active outdoor play need not supplant science learning. Rather, adding technology and physical activity actually enhanced children's engagement with science.

For example, nearly all (26 of 27) of the parents in the facilitated family study reported that their children were more motivated to learn about science and nature after using the toolkit. Children's responses supported the parents' perceptions: The majority reported that they wanted to learn more about science and spend more time exploring nature. Every one of the afterschool educators in the study said that the toolkit motivated them to explore science and nature with program participants.

The majority of children—100 percent in the facilitated family study and 63 percent in the afterschool study—reported that

they learned something from *PLUM LANDING* that they hadn't known before. All of the OST educators reported that the toolkit helped the children in their programs to learn about science and nature.

In fact, when children were asked what they liked most about the toolkit programming, they often pointed specifically to the fact that it was educational, for example:

The evaluation found that, in addition to increasing physical movement, activities such as racing, balancing, mimicking animal movements, and completing scavenger hunts made the science activities appealing and drove children's engagement with science concepts.

- “It was really fun, and I like that we learned about animals.”
- “Exploring and making a flower was fun.”
- “The game outside [when] we learned about plants [was a favorite part].”

## Taking It Outside

Whether or not an OST organization uses the *PLUM LANDING Explore Outdoors Toolkit* or a similar program, research-driven, ready-to-use programs offer exciting new learning resources and options. Convenient, proven, and effective, such programs can expand and enrich science learning in OST settings while helping OST educators meet an ever-growing list of priorities. OST programs can use such resources to bring active, outdoor science learning opportunities into the lives of urban children, providing them with more green time and thus helping them to grow and thrive.

## References

- Anggarendra, R., & Brereton, M. (2016, November). Engaging children with nature through environmental HCI. In *Proceedings of the 28th Australian Conference on Computer-Human Interaction* (pp. 3103–3115). Launceston, TAS, Australia: Association for Computing Machinery.
- Bruyere, B., Wesson, M., & Teel, T. (2012). Incorporating environmental education into an urban after-school program in New York City. *International Journal of Environmental & Science Education*, 7(2), 327–341.
- Chawla, L. (1998). Significant life experiences revisited: A review of research on sources of environmental sensitivity. *Journal of Environmental Education*, 29(3), 11–21.
- Christiana, R. W., Battista, R. A., James, J. J., & Bergman, S. M. (2017). Pediatrician prescriptions for outdoor physical activity among children: A pilot study. *Preventive Medicine Reports*, 5, 100–105.
- Cleland, V., Crawford, D., Baur, L. A., Hume, C., Timperio, A., & Salmon, J., (2008). A prospective examination of children’s time spent outdoors, objectively measured physical activity and overweight. *International Journal of Obesity*, 32(11), 1685–1693.
- Collado, S., Staats, H., & Corraliza, J. A. (2013). Experiencing nature in children’s summer camps: Affective, cognitive and behavioural consequences. *Journal of Environmental Psychology*, 33, 37–44.
- Derr, V., & Lance, K. (2012). Biophilic Boulder: Children’s environments that foster connections to nature. *Children, Youth and Environments*, 22(2), 112–143.
- Faber Taylor, A., & Kuo, F. E. (2009). Children with attention deficits concentrate better after walk in the park. *Journal of Attention Disorders*, 12(5), 402–409.
- Faber Taylor, A., & Kuo, F. E. M. (2011). Could exposure to everyday green spaces help treat ADHD? Evidence from children’s play settings. *Applied Psychology: Health and Well-Being*, 3(3), 281–303.
- Ferreira, S. (2012). Moulding urban children towards environmental stewardship: The Table Mountain National Park experience. *Environmental Education Research*, 18(2), 251–270.
- Flouri, E., Midouhas, E., & Joshi, H. (2014). The role of urban neighborhood green space in children’s emotional and behavioural resilience. *Journal of Environmental Psychology*, 40, 179–186.
- Goldstein, M., Famularo, L., & Kynn, J. (2018). From puddles to pigeons: Learning about nature in cities. *Young Children*, 73(5), 42–50.
- Goldstein, M., Famularo, L., Kynn, J., & Pierson, E. (2018). *Building broader knowledge: Supporting children’s active, outdoor science exploration in urban environments*. Retrieved from [https://www.informalscience.org/sites/default/files/PLUM%20Project%20Summary%20Report\\_5.6.18.pdf](https://www.informalscience.org/sites/default/files/PLUM%20Project%20Summary%20Report_5.6.18.pdf)
- Hungerford, H. R., & Volk, T. L. (1990). Changing learner behavior through environmental education. *Journal of Environmental Education*, 21(3), 8–21.
- Hynes, K., & Sanders, F. (2010). The changing landscape of afterschool programs. *Afterschool Matters*, 12, 17–27.
- James, J. J., Bixler, R. D., & Vadala, C. E. (2010). From play in nature, to recreation then vocation: A developmental model for natural history-oriented environmental professionals. *Children, Youth and Environments*, 20(1), 231–256.
- Jarrett, O. S. (2002). *Recess in elementary school: What does the research say?* ERIC Digest. Retrieved from <https://www.ericdigests.org/2003-2/recess.html>
- Larson, L. R., Castleberry, S. B., & Green, G. T. (2010). Effects of an environmental education program on the environmental orientations of children from different gender, age, and ethnic groups. *Journal of Park & Recreation Administration*, 28(3), 95–113.

- Li, Q., Morimoto, K., Nakadai, A., Inagaki, H., Katsumata, M., Shimizu, T., ... & Kawada, T. (2007). Forest bathing enhances human natural killer activity and expression of anti-cancer proteins. *International Journal of Immunopathology and Pharmacology*, 20(2 Suppl 2), 3–8.
- Li, Q., Kobayashi, M., Wakayama, Y., Inagaki, H., Katsumata, M., Hirata, Y., ... & Miyazaki, Y. (2009). Effect of phytoncide from trees on human natural killer cell function. *International Journal of Immunopathology and Pharmacology*, 22(4), 951–9.
- Louv, Richard (2005). *Last child in the woods: Saving our children from nature-deficit disorder*. Chapel Hill, NC: Algonquin.
- National Research Council. (2009). *Learning science in informal environments: People, places, and pursuits*. Washington, DC: National Academies Press.
- North American Association for Environmental Education. (2016). *Guidelines for excellence: Early childhood environmental education programs*. Washington, DC: Author.
- Razani, N., Kohn, M. A., Wells, N. M., Thompson, D., Flores, H. H., & Rutherford, G. W. (2016). Design and evaluation of a park prescription program for stress reduction and health promotion in low-income families: The Stay Healthy in Nature Everyday (SHINE) study protocol. *Contemporary Clinical Trials*, 51, 8–14.
- Rickinson, M. (2001). Learners and learning in environmental education: A critical review of the evidence. *Environmental Education Research*, 7(3), 207–320.
- Rosenberg, H., Wilkes, S., & Harris, E. (2014). Bringing families into out-of-school time learning. *Journal of Expanded Learning Opportunities*, 1(1), 1–23.
- Simmons, D. (1998). Using natural settings for environmental education: Perceived benefits and barriers. *Journal of Environmental Education*, 29(3), 23–31.
- Sobel, D. (2001). *Children's special places: Exploring the role of forts, dens, and bush houses in middle childhood*. Detroit, MI: Wayne State University Press.
- Stern, M. J., Powell, R. B., & Hill, D. (2014). Environmental education program evaluation in the new millennium: What do we measure and what have we learned? *Environmental Education Research*, 20(5), 581–611.
- U.S. Department of Education. (2010). *A blueprint for reform: The reauthorization of the Elementary and Secondary Education Act*. Retrieved from <https://www2.ed.gov/policy/elsec/leg/blueprint/blueprint.pdf>
- Wells, N. M., & Lekies, K. S. (2006). Nature and the life course: Pathways from childhood nature experiences to adult environmentalism. *Children, Youth and Environments*, 16(1), 1–24.
- WGBH Educational Foundation. (2017a). *Create an outdoor program with Plum!* Retrieved from <https://pbskids.org/plumlanding/educators/toolkit.html>
- WGBH Educational Foundation. (2017b). *PLUM LANDING*. [homepage]. Retrieved from <https://pbskids.org/plumlanding/>
- Wiecha, J. L., Hall, G., Gannett, E., & Roth, R. (2012). Development of healthy eating and physical activity quality standards for out-of-school time programs. *Childhood Obesity*, 8(6), 572–576.



## Stone Soup

Creating an Arts-Based Afterschool Program in Rural Maine

Valerie Zapolsky

I'm hoping that people in some other small town that is poor in financial resources but rich in talent and heart will read our story and be inspired to develop their own afterschool program. Rangeley Friends of the Arts (RFA) is a nonprofit arts organization in Rangeley, a town of 1,200 souls in the rural western mountains of Maine. Working with existing facilities and a largely volunteer workforce, we have established Creative After School Arts, or CASA—a program that provides a safe home away from home and enriching programming to local students five days a week. Our example shows that communities can build arts programming for youth with few resources, as long as they have the will.

### The Context

The five-town regional school district that includes Rangeley has only 190 K–12 students, all housed in one building. The next biggest town is 40 miles away. That is also the closest traffic light, so our driver ed students travel there to practice. The school district has some of the lowest-paid teachers in a state that has one of the lowest pay scales in the country. The school has a music teacher and an art teacher, but no drama, chorus, or band program; in fact, there are few clubs beyond competitive sports.

Nearly 40 percent of our public school students are considered to be financially at risk. However, financial need is not the only thing that puts students at risk. Most students have no real opportunity to shine. They are not “cool kids,” merit scholars, or star athletes—they are just regular kids. CASA focuses on preteens and teens in grades 5–12. These young

---

**VALERIE ZAPOLSKY**, MD, is president of the board of directors of Rangeley Friends of the Arts in Rangeley, Maine.

people are too old for day care; most participants are too young for work, but old enough for responsibility. Most are latchkey kids, entering adolescence with all its potential dangers but with little supervision. These kids have few opportunities to succeed.

## The Talents

Having recognized this need, we could not look away. Our afterschool program grew out of recognition that RFA, as an arts organization, has access to resources including free space and artists who want to work with disenfranchised students.

RFA, which just celebrated its 50th anniversary, operates the Lakeside Theater as a community arts center. We show movies, present community theater productions, host art shows, underwrite dance and music lessons, and run summer arts camps. Looking at this big building we were heating every day but using only on weekends, we saw an opportunity to serve disadvantaged students by bringing them together to create art. We therefore started CASA in fall 2017.

The theater had lists of willing volunteers in set design, theater lighting and sound, and audio-visual recording. We also knew many people with creative talents—sculptors, watercolor and acrylic artists, writers, radio broadcasters, and more—most of whom pursued their art in time off from their “day jobs.” We asked each and every one to contribute an hour to work with the youth of their community. Some said no, but most said yes. After contributing the single hour we asked them to commit, several asked to volunteer every week. Artists run one-hour workshops in technical theater arts, watercolor painting, calligraphy, writing, public art, cooking, and other crafts. When you look, you could be amazed at the talents people have to offer: One person knits, and another loves to play board games. When I asked people to share their hobbies, they felt complimented and were excited to share their passion with someone new.

## The Treasure

When it came time to find the money to make this idea a reality, we wrote grant applications—several of them. RFA was already writing grants for our other arts

programs, so it was just a matter of switching our focus to find willing charities, such as the local United Way. We also asked the five municipalities that make up the school district to underwrite some of the costs. These are their kids, and the program is free. The towns donated \$3,000 the first year and \$13,000 the second.

Because the budget was tight, we asked for donated snacks the first year, but we kept track of this in-kind value and put it in the budget the next year. We had to increase RFA’s insurance to cover the new program; though we write such expenses into our grant proposals, we never get anywhere near enough to cover the full cost. We also wrote policies and procedures to deal with student and teacher behavior, but that was just a matter of modifying local school policies.

Finally, we recruited staff—one person who could manage logistics, coordinate volunteers, and be a caring presence for our young people. During the first year, two people shared this job on alternating days: a recent high school graduate and an experienced teacher’s aide. The second year, the staff position was filled by a college graduate who worked as a substitute teacher.

## The Program

The afterschool program creates space for a bright creative community through the long, dark Maine winter. The program is drop-in and free; students can come every day or once a week. Typical attendance is four to 10 students. A typical day begins at 2:30 p.m. when the staff person arrives to turn on lights and prepare the snack. Shortly thereafter, the students arrive on the school bus—noisy, excited, and hungry. They enjoy their snack and relax after a long school day. Then they do whatever homework they have. After that comes the day’s art lesson, which lasts an hour or so. Everyone pitches in to clean up in time for dismissal at 5 p.m.

The paid staff person is on site every day to monitor students, help them with homework, and assist the volunteer artist. The program also pays a music teacher to run an instrumental music group once a week. Everyone else is a volunteer. Dedicated

When you look, you could be amazed at the talents people have to offer: One person knits, and another loves to play board games. When I asked people to share their hobbies, they felt complimented and were excited to share their passion with someone new.



### The public art project “Our Town”

artists volunteer an hour each week or each month to instruction. For example, the local dance academy offers an hour of tap dance every Wednesday. A woman who feels strongly about creating involved citizens spends an hour a week working with students on civic awareness and developing a volunteer attitude. With her help, students raised more than \$550 for an animal shelter and a domestic abuse support organization. Similarly, a jewelry designer volunteers an hour monthly to help students create gifts or items to sell for fundraising. We have intermittent volunteers for everything from holiday card making to baking to Easter egg painting.

When the theater has a musical production scheduled, the afterschool participants help with set design and production, taught by the set designer or producer. So far the students have helped to stage *Willy*

*Wonka*, *Once Upon a Mattress*, and *Annie*. For *Annie*, several students performed on stage. Students learn technical arts by working with the theater’s extensive light and sound systems.

One student who wanted to get involved with the technical aspects of theater was only 12 when she started—but she has the kind of quiet, calm personality that is perfect for the tech booth. After learning about stage lighting, she has been part of the tech team for two productions now, working with adults 30 to 75 years old. They treat her as a peer who is responsible for her cues. Her mother wrote a note of appreciation:

My child ... is so looking forward to the program this year. She stayed connected to the theater over the course of the summer and has at last found her niche. She calls the theater and CASA her “safe space.” [She] has just blossomed and grew such self assurance. Thank you to all who continue to make this program a possibility.

RFA’s ties to the artist community have offered our students other creative opportunities. When another nonprofit organization received a grant to create and install barn quilts for a barn quilt trail, we were asked if our students wanted

to help. Of course we said “yes”! In another example, last year the community radio station worked with the students to read children’s stories aloud. Station staff coached students on reading with attention to tempo, volume, and dramatic emphasis. Together, the station and the students created the radio show “Read to ME” in cooperation with the statewide Read to ME program. Every Sunday night at 6 p.m., young children can tune in for 15 minutes to listen to a bedtime story.

Every CASA project involves direct artistic expressions, but most of the learning comes from concurrent discussions of relevant art history, engineering, and possible public perceptions of the art. For example, the barn quilt artist made a presentation about barn quilt designs that included instruction about color choices, the color wheel, contrasting and complementary colors, and similar concepts. For

another public art project, I took students on a tour of public art already existing in the town to discuss what they liked and didn't like. They practiced collaborative skills in deciding what form their own public art project would take. An added benefit of the public art projects is that they offer the ongoing opportunity for students to shine in their community.

### The Recipe

People have said that Rangeley is unique and that RFA is amazing.

Although it is wonderful to hear these accolades, I believe our success is replicable in other small towns. Those towns may have different resources, but they can provide meaningful afterschool programming if they have equal generosity of heart.

Rangeley's story is like the children's book *Stone Soup* by Marcia Brown (1947). In that story, hungry soldiers come to town asking for food from townspeople who are afraid to share what little they have. The soldiers put some stones in a kettle and begin cooking a delicious stone soup. They assure the townspeople that stone soup is delicious, but it would be so much better with a few carrots! So one household dips into

I believe our success is replicable in other small towns. Those towns may have different resources, but they can provide meaningful afterschool programming if they have equal generosity of heart.

its meager hoard to contribute a few carrots to the pot. Oh, but if only we had some cabbage! Of course another household can add a cabbage. And so, each family contributes something and everyone enjoys a hearty feast—from just a few stones.

Like the soldiers with their stone soup recipe, RFA had a vision and a proactive approach to problem solving. We aggregated many people and organizations, each with bit of time or a few resources to donate.

We provided space, insurance, vision, organization, grant writing, and volunteer coordination—and the people of Rangeley contributed everything else. In this way, nonprofits art organizations are perfectly situated to marshal their towns' resources in order to expose children to the arts, broaden their horizons, and give them opportunities to shine.

### Reference

Brown, Marcia. (1947). *Stone soup: An old tale*. New York, NY: Atheneum.



# Muggle Magic

Learning Through Play in Harry Potter's World

**Leigh Anne Wilson & Brittany R. Jacobs**

In 1997, the world was introduced to one of its great stories: Harry Potter. The masterful writing of J. K. Rowling, about “the boy who lived,” has struck chords with millions of adults and children. Like many before her, Rowling tapped into the power of storytelling as a means of teaching, inspiring, and passing information from one generation to the next. Anthropologists have found evidence of storytelling throughout history, from orators in hunter-gatherer tribes to modern writers and actors (Hsu, 2008).

To actualize a story—that is, to live it out in any way—plays on two of humanity's greatest desires: to learn and to have fun. People are biologically wired for survival, which implies that we are biologically wired to learn: We need to gather and

process information in ways that increase the odds of our survival and success. When we have fun, the neurotransmitters serotonin and dopamine kick into high gear (Ormrod, 2017). If they are present while we are learning, then the learning experience is surrounded by positive emotions that increase the odds of intrinsic motivation and retention. Teaching that uses play and fun therefore is a surefire way to pass along information and skills in ways that invite learners to participate. Actualizing a story through play is a strategy that serves out-of-school time (OST) programs particularly well, as informal educators

---

**LEIGH ANNE WILSON** is a youth services librarian at Carol Stream Public Library in Carol Stream, Illinois. After working for several years as an actor in Chicago, she earned a master's degree in library and information science from Dominican University. **BRITTANY R. JACOBS** is a youth guide (librarian) at Anythink Libraries, an Adams County library system, in Denver, Colorado. She studied curriculum development for informal learning environments before getting her master's in library and information science from the University of Illinois.

are not held to the same standards and structures as schools.

In keeping with these precepts, coauthor Leigh Anne Wilson, a youth services librarian at Carol Stream Public Library in Carol Stream, Illinois, decided to create a new addition to the library's afterschool learning opportunities that would bring children into their own Harry Potter story. Wanting to create a program that combined play and STEM learning, Leigh Anne decided to recreate a Potions class from Hogwarts School of Witchcraft and Wizardry, the magical academy Harry Potter and his friends attend. A Potions class could capitalize on the excitement children bring to the Harry Potter series while teaching them simple chemistry, introducing them to basic lab equipment, and showing them how to measure and follow written directions.

## Context

Carol Stream is a suburban village with approximately 40,000 residents, located 35 miles west of Chicago. Leigh Anne met Brittany Jacobs, the other coauthor of this essay, while working what was a second job for both at a different public library. During their regular shift at that library's reference desk, Leigh Anne told Brittany about her plan to create a realistic Hogwarts class at Carol Stream. Intrigued, Brittany offered to assist with and document the program. Leigh Anne would play the Hogwarts Potions master, while Brittany would be a reporter from *The Daily Prophet*, the newspaper in the wizarding world.

One strength Leigh Anne brought to this program was a background in immersive and improvisational theater. Immersive theater removes the stage to put the audience right in the center of the production. Improvisational theater allows drama or comedy to unfold naturally and spontaneously without scripts. Most children are already skilled improv actors; they have honed their talent through imaginative play. Though learning through play is often relegated to early childhood, play is a necessary learning mechanism for children of all ages.

The plan was to tap into Harry Potter's established fan base to enable ordinary third-

to fifth-grade Muggles (non-magic folk) to fully immerse themselves in Hogwarts, perhaps the most longed-for school in modern literature. To promote learning through play, we needed to model behaviors and to play along with the students, simultaneously giving them an invitation *and* permission to lose themselves in a world of make-believe.

## Preparation

Planning began in late February 2018 for a program execution date of July 30, the day before Harry Potter's birthday. In keeping with the divisions of Hogwarts students into four houses, we decided participants would collaborate in four groups. Putting four students into each house gave us a total class size of 16. Knowing how popular the Harry Potter books are, we offered two classes, one at 2 p.m. and another at 4 p.m.

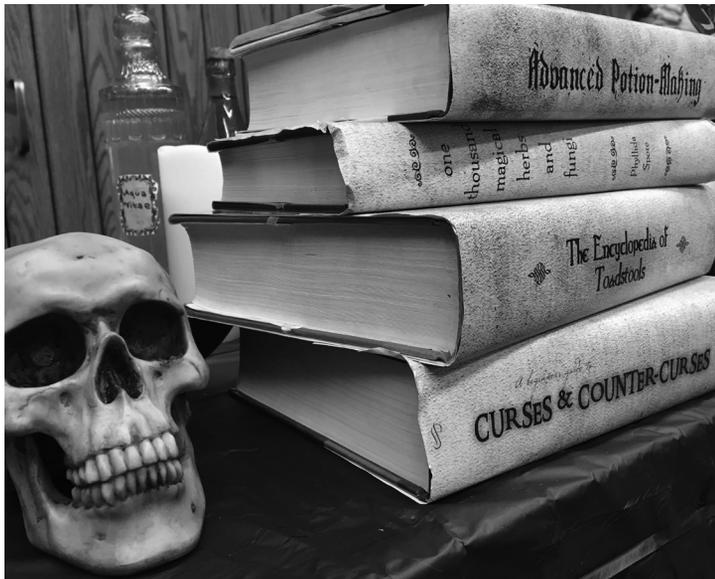
Part of what makes the Hogwarts world so rich and vibrant is how fully fleshed out it is. The classrooms and other spaces are completely visualized, the professors have specific personalities, and the classes themselves are vivid and absolutely believable. In preparation for bringing participants fully into this world, Leigh Anne created three outlines:

1. The physical space
2. The dress and behavior of librarians and teen volunteers
3. The lesson plan detailing the potions students would make, with a list of ingredients and props

The program budget was \$160, or five dollars per child. Most of that money was spent on potion ingredients; Leigh Anne either made or borrowed everything else.

The first consideration was the physical environment. In informal learning, environments create boundaries that structure the experience and set the mood (Thomas & Brown, 2011). To decorate the physical space, Leigh Anne asked herself, "What do children need to see in order to believe?" Decorating started in the library lobby. A sign reading "Portkey Arrival Station" was posted next to a can of beans. In the Harry Potter books, portkeys are a means of magical transportation that enable the traveler to disappear from one place and reappear in another. Portkeys usu-

Most children are already skilled improv actors; they have honed their talent through imaginative play. Though learning through play is often relegated to early childhood, play is a necessary learning mechanism for children of all ages.



**Figure 1. Authentic touches on the Potions master's table**



**Figure 2. Potion ingredients—actually common household substances**

ally are ordinary items that will not catch the attention of Muggles—such as a can of beans.

Continuing the theme, the doors and corridor leading to the program room were covered with gray butcher paper on which bricks and torches had been drawn. A fog machine filled the darkened hall with smoke. Hanging from the ceiling were Hogwarts' famous floating candles, simulated by battery-operated tea lights in painted paper towel cores.

At the door of the program room-turned-dungeon, the Sorting Hat waited to sort children into their houses. Since we couldn't come up with a talking hat, we simply put scraps of paper, each with the name of one of the four houses, into a witch's hat for children to draw at random. Pitchers of iced pumpkin juice, a favorite in the Hogwarts dining hall, sat on nearby tables. In the dimly lit classroom, four long tables, one for each house, were covered with black tablecloths. Battery-operated candles provided atmosphere, and copies of *The Daily Prophet* newspaper were laid down to soak up spills. The Potions master's table (Figures 1 and 2) held a plastic rat skeleton, a plastic human skull, and four sets of potion ingredients. All ingredients had been put into glass bottles collected from friends and family. The containers in this spooky apothecary had handmade labels with such names as "Flesh-Eating Slug Repellent," "Unicorn Horn Powder," and "Jellied Eel Eyeballs."

To help students get into their roles, the adult and teen leaders got into theirs. In addition to Leigh Anne

as the Potions master and Brittany as the *Daily Prophet* reporter, the two teen volunteers took roles as the Head Boy and Head Girl of Hogwarts. All wore black robes and carried wands; the reporter took notes on parchment with a black quill.

The backbone of the program was the lesson plan. The children would conjure up four magical potions using ingredients from the wizarding world. In reality, they would be conducting simple kitchen chemistry experiments.

The first potion was Skele-Gro. This potion appears in the second book, *Harry Potter and the Chamber of Secrets* (Rowling, 2000), where it is used to magically regrow bones that were magicked away by an incompetent professor. This Skele-Gro was basic slime, a simple recipe of glue, water, and liquid starch that is popular with elementary school students. We wanted to begin with a potion that would be familiar to many of the children, so they could focus on skills that might be new to them, such as reading a recipe, measuring amounts, and using basic lab equipment including pipettes and measuring cups.

The second recipe was Veritaserum, a dangerous truth serum used throughout the Harry Potter series. For this potion, we had the children make a modified exploding volcano. This mainstay of school science fairs is created by combining baking soda, dish soap, and vinegar in an inverted cone-shaped container. The combined ingredients create pressure so that the contents erupt through the narrow opening at the top.



**Figure 3. Polyjuice potion**

Experiments with leftover plastic Halloween cauldrons showed that, in the absence of a confined structure with a narrow opening, the potion would merely bubble. But a bubbling cauldron is a nice thing for a witch or wizard! In making this potion, the children would practice reading the sequential steps of a recipe and measuring liquids and solids. Furthermore, they could experiment by varying the amounts of the ingredients to see if the results would also vary. This feature was designed to engage participants in critical scientific thinking and spark their curiosity.

The third potion was Polyjuice, which enables the drinker to assume the appearance of someone else. Polyjuice potion for this class was a recipe for “elephant toothpaste”: a volatile combination of yeast, dish soap, and hydrogen peroxide. When these ingredients are combined in an empty plastic water bottle, the pressure builds up as in the volcano—but the potion takes on the texture and personality of overly enthusiastic toothpaste as it rises and spills out of the bottle (Figure 3).

The final potion was Liquid Luck, which gives the person who drinks it good luck for the day. By far the

simplest, this was the only edible potion—a mixture of white grape juice and lemonade, with a small amount of insoluble edible glitter swirled in to make it sparkle. We wanted to finish on an easy and positive note. Still, making Liquid Luck would reinforce the lessons of the other three potions as children practiced reading, interpreting, questioning, measuring, mixing, learning terminology, and using lab equipment.

## Implementation

In order to sweep the children immediately into the Hogwarts world, Leigh Anne was in costume and character as the Potions master as soon as the program room doors were unlocked and she walked into the lobby. She immediately scolded a man for standing too close to the Portkey Arrival Station, as he could injure himself and others if someone arrived by portkey right where he was standing. (The man jumped aside.)

Addressing the assembled Hogwarts students and their caregivers, Leigh Anne made several announcements. Broomsticks were not allowed in the classroom, so anyone who had flown here on a broom would need to check it at the circulation desk. She thanked caregivers for returning waivers (which were never actually sent), assuring them that she had addressed issues from the last class (which was never held). In particular, she noted, Parvati Patil’s missing fingers had been found and reattached, so there was no reason for concern. Additionally, the whiskers the children would grow by the end of class would eventually fall off, so caregivers had no need to worry about that, either.

Before the program had even begun, every child in the lobby was hooked—listening intently, actively engaged, and ready to go anywhere Leigh Anne led them. The narrative had grabbed their attention while inviting them into the story. We didn’t use dialogue from the books. After all, this story didn’t belong to Harry Potter any more—it belonged to the children. They had become Hogwarts students, and they were ready to learn. Potions Master Leigh Anne introduced the Head Boy and Head Girl and the reporter from *The Daily Prophet*, who would be observing and taking photos in order to write a story on this year’s curriculum at Hogwarts. She asked students to represent their school and their houses by putting on their best behavior. From that moment on, the students earnestly addressed us as “Professor” when they had a question, entering fully into the imagined world Leigh Anne had set up.

As students filed into the program room, each picked a house name from the Sorting Hat and was directed to the appropriate house table. Each table had a librarian or a teen volunteer to assist the children. Throughout the next hour the children, working individually on some potions and collectively on others, began to learn skills they could take into the Muggle world—although they may not have realized they were learning as well as having fun.

Gathered around their house tables, students studied the recipe for Skele-Gro (see box), which was written in a Hogwarts-style font and printed on parchment paper. The challenges hit most of the students immediately: How do we know how much is two ounces? What is a drop? What is a dash? The Head Boy and Head Girl began showing the children the measuring cups and explaining the markings, pointing out the line for two ounces. The Potions master glided around the room, showing students how to use the droppers

for the tiny vials of blue Armadillo Bile. Leaders discussed what the term “a dash” means in a recipe: “It means don’t use a lot, but really it is at your discretion. If you feel more Unicorn Horn Powder is needed, then, by all means, add it!”

As soon as some of the older children figured out that they were making slime (with blue coloring as Armadillo Bile and glitter as Unicorn Horn Powder), they assumed the roles of house prefects, walking around their house tables to help housemates who were slime novices. This collective learning and self-moderation was fueled by the fact that students were competing, not as individuals, but as house teams. Gryffindor could have three excellent Skele-Gro potions, but if one member didn’t complete the task, then Gryffindor would receive no points. In

21<sup>st</sup> century learning and work environments, many problems require collective answers. The ability to work together and see the end goal for the group, as opposed to an individualistic mindset, will serve these students well in many areas of their lives.

Once the first potion was completed and house points awarded, the children read the second recipe. They were already becoming seasoned witches and wizards, thanks to the lessons they learned making Skele-Gro. They knew how to read a recipe, how to measure, how to use the equipment. Best of all, they were asking questions. “Is the Veritaserum bubbling in the cauldron? If not, why not? Let’s read the recipe again and retrace our steps.” The students were thinking like scientists, using processes required for sequential learning, the scientific method, and the engineering design process. An idea often attributed to Isaac Asimov (Quote Investigator, 2015) is that the most exciting

words in science are, “That’s funny...” To our delight, the children began using those words. “That’s funny... Look at how the potion bubbles after we add the Wartcap Powder. What if we added more Wartcap Powder? Will it bubble more? How much Wartcap Powder will it take before the Veritaserum bubbles out of the cauldron? Let’s find out!”

Forty-five minutes into the program, the participants were as engaged and focused as at the beginning, but now they also were confident. Each new recipe, though different from the previous one, gave them the chance to build on the lessons they had learned. The sequential learning allowed them to make creative leaps. They sniffed the ingredients and discussed what they really were. “Armadillo Bile is food coloring! Flesh-Eating Slug Repellent is vinegar!

# Skele-Gro

## Ingredients

- 2 oz. Essence of Comfrey
- 2 oz. Aqua Vitae
- 3 drops of Armadillo Bile
- Dash of Unicorn Horn Powder
- 2 oz. Moondew

## Directions

1. Measure 2 oz. Essence of Comfrey and pour into a bowl.
2. Add 2 oz. Aqua Vitae and mix well to combine.
3. Add 3 drops of Armadillo Bile.
4. Add a dash of Unicorn Horn Powder.
5. Mix well.
6. Measure 2 oz. of Moondew into the bowl and mix your Skele-Gro until it comes together.
7. Remove Skele-Gro from bowl and knead with

Draught of Living Death is hydrogen peroxide! Essence of Dittany is yeast! Wait—when you combine hydrogen peroxide and yeast, it explodes like that?” The skills they learned will serve them when they tackle a Muggle recipe for cookies. An instruction to add a dash of salt or to measure one-half cup will not alarm them. Similarly, their familiarity with lab equipment and scientific inquiry will serve them when they walk into a school science lab. The lab should feel familiar to them—though it will have fewer skulls.

The librarians awarded house points not only for successful potions but also for good behavior. Although we were prepared to take points away for unruliness, we saw none. We set high standards, and every single child rose to meet them. In imaginative play, children try on new roles. From the moment in the lobby when Leigh Anne addressed participants with respect as Hogwarts students who were responsible for their behavior and their school’s reputation, they recognized their agency and met the standards the role-play set.

At the end of the class, Leigh Anne tallied the house points and awarded the House Cup—to Slytherin in the first class and Hufflepuff in the second. The children received parting gifts of a bag of Bertie Bott’s Every Flavor Beans and a small chocolate frog. After toasting with Liquid Luck, the class was dismissed.

## Narrative Play and Science Learning

At the core of our low-tech science learning program was a strong narrative component. The dynamics and aesthetics of the Potions class profoundly influenced the learning that took place, playing on the human desire to learn through storytelling. As Slabon, Richards, and Dennen (2014) put it, “Learners have a predisposition to ‘story’ their experiences, organizing and making sense of their world in terms of narrative memory structures” (p. 505). In re-storying Rowling’s world, the Potions class encouraged learning in a way that framed the learners as their own storytellers.

The students thus were developing “soft” narrative, presentation, and social skills at the same time that they developed “hard” STEM skills. They quickly realized that success in brewing their potions required them not only to measure and observe but also to collaborate as a house team, ask questions, and communicate clearly.

OST programs and other informal learning environments are perfectly situated to take advantage of the potential of play as a pedagogical tool. Our Potions class immersed students in a world they had

only read and dreamed about. They had so much fun that they didn’t even realize that they were learning. Actualized storytelling enabled self-guided learning that, aside from battery-operated tea lights and a fog machine, required no technology—just magic.

## References

- Hsu, J. (2008, August/September). The secrets of storytelling: Our love for telling tales reveals the workings of the mind. *Scientific American Mind*, 46–51.
- Quote Investigator. (2015, March 2). *The most exciting phrase in science is not ‘eureka!’ but ‘that’s funny...’*. Retrieved from <https://quoteinvestigator.com/2015/03/02/eureka-funny/>
- Ormrod, J. E. (2017) *How we think and learn: Theoretical perspectives and practical implications*. Cambridge, MA: Cambridge University Press.
- Rowling, J. K. (2000). *Harry Potter and the chamber of secrets*. New York, NY: Scholastic.
- Slabon, W., Richards, R., & Dennen, V. (2014). Learning by restorying. *Instructional Science*, 42(4), 505–521.
- Thomas, D., & Brown, J. S. (2011). *A new culture of learning: Cultivating the imagination for a world of constant change*. Scotts Valley, CA: CreateSpace.

# Afterschool Matters

## Call for Papers

*Afterschool Matters* is a peer-reviewed journal dedicated to promoting professionalism, scholarship, and consciousness in afterschool education. Published by the National Institute on Out-of-School Time with legacy support from the Robert Bowne Foundation, *Afterschool Matters* serves practitioners who work with youth in out-of-school time (OST) programs, as well as researchers and policymakers in youth development.

We are seeking articles for future issues of the journal, beginning with Fall 2020. Scholarly or practice-based work on all aspects of OST programming for children and youth, from a variety of disciplines and academic perspectives, will be considered. We welcome submissions that explore practical ideas for working with young people in OST programs. Personal or inspirational narratives and essays are appropriate for our section “Voices from the Field.”

All articles, whether scholarly or practice-based, should connect theory to practice and should be broadly applicable across the field. Articles must be relevant and accessible to both practitioners and academic researchers.

We invite you to discuss possible topics in advance with us. A broad variety of topics will be considered, including the following:

- Innovative program approaches in creative youth development, STEM, civic engagement, social and emotional development, or academic improvement
- Research or best-practice syntheses
- Key aspects of program leadership and administration
- OST system-building, such as cross-city and statewide initiatives
- Expanded or extended learning time and the OST hours
- School-community partnerships that support OST programming
- Physical activity and healthy eating
- Special needs youth, immigrant and refugee youth, or other vulnerable populations in OST
- Youth-centered participatory action research projects
- Gender-focused research and policy initiatives related to OST

### Submission Guidelines

- For consideration for the Fall 2020 issue, submit your article no later than January 15, 2020, to [ASMsubmission@wellesley.edu](mailto:ASMsubmission@wellesley.edu).
- Submissions should not exceed 5,000 words.
- Submit your article electronically in Microsoft Word or rich text format. Use 12-point Times New Roman font, double-spaced, with one-inch margins on all sides. Leave the right-hand margin ragged (unjustified), and number pages starting with the first page of text (not the title page, which should be a separate document).
- Include a separate cover sheet with the manuscript title, authors' names and affiliations, and the lead author's phone number and e-mail address.
- The names of the authors should not appear in the text, as submissions are reviewed anonymously by peers.
- Follow the *Publication Manual of the American Psychological Association, 6th Edition* (2009), for reference style guidelines. Present important information in the text and do not use extensive footnotes.

We welcome inquiries about possible article topics. To discuss your ideas, please contact:

Georgia Hall, PhD

Director and Senior Research Scientist, Managing Editor

National Institute on Out-of-School Time

E-mail: [ghall@wellesley.edu](mailto:ghall@wellesley.edu) / Phone: 781-283-2530

Submit manuscripts electronically to [ASMsubmission@wellesley.edu](mailto:ASMsubmission@wellesley.edu)

**NIOST** Wellesley  
National Institute on Centers for  
Out-of-School Time Women

Wellesley College  
106 Central Street  
Wellesley, MA 02481

