



SHERMAN CENTER

for Early Learning
in Urban Communities

Director's Message

Spring 2022 was another rewarding semester for the Sherman Center. We wrapped up our back to in-person programming year, continuing to promote our mission of building strong foundations for lifelong learning for young children through developing best early childhood education practices in urban schools. The newsletter begins with an update on our partnership programs written by Dr. Shana E. Rochester, Sherman Center assistant director and research associate. Next, our featured article by Dr. Patricia Young, professor of education and Ms. Deborah Kariuki, clinical faculty of education highlights their faculty awarded research study on computational thinking in early childhood. Louise Corwin, co-chair of the Maryland Early Childhood Leadership Program (MECLP) Advisory Committee, and Liran Laor, MECLP program director, share updates from MECLP and its plans for sustaining and expanding leadership for early learning across the state. In the Research Note, we announce the 2022 Faculty Research Award fellows, Drs. Karen (Lujie) Chen and Chien-Ming Huang, and introduce their project on inserting robots designed with artificial intelligence in the early childhood classroom to support learning and instruction. Following, Dr. Shana E. Rochester shares the progress of her Diverse Books Projects 2.0 study looking to support teachers' use of multicultural books for early care and education. Lastly, in our Research to Practice section, I provide an overview of the milestones of the Literacy Fellows Program in supporting literacy for students in two of our partner schools.

This summer you will find us busy organizing the [Teacher Summer Institute](#) and the inaugural convening of the [Sherman Center Research Conference](#), focused on innovative approaches to advance early childhood education. We will be closing this year with many changes, including a pivot into a stronger focus on research and evaluation of our programs in preparation for the transition into the upcoming Betsy & George Sherman Center to be created with a newly received [gift from the Sherman Family Foundation](#). We hope you enjoy the newsletter on all our spring accomplishments.

Dr. Jennifer Mata-McMahon is Associate Professor of Education and Director of the Sherman Center for Early Learning in Urban Community at UMBC

Sherman Center Update

by Shana E. Rochester, Assistant Director and Research Associate

The Sherman Center entered its fifth year of helping early childhood leaders, teachers, and families to build a strong foundation for lifelong learning for young children in Baltimore City. We continued to provide our core programming in Spring 2022, and we shared highlights from our programs through social media and UMBC-wide events. For example, in April, we hosted a follow-up session with 2021 Teacher Summer Institute facilitator, Dr. Michele Stites. The session took a deeper dive into Individual Education Plans (IEPs), and educators discussed solutions to challenges faced by their students with regard to the "COVID Gap." Sravanti Vitta Sanjay, our communication's intern, also developed a [video highlighting existing and new Sherman Center initiatives](#).

Participants in the [Literacy Fellows Program \(LFP\)](#) provided academic support in English Language Arts for first- and second-grade classrooms at Bay Brook and Curtis Bay Elementary/Middle Schools (EMSs) in the spring. During the semester Dr. Karrie Godwin facilitated a hybrid virtual and in-person session focused on how to use children's zone of proximal development to enhance their vocabulary development. LFP Fellows and volunteers also created virtual read alouds using books from the [Diverse Books Collection](#) and shared them with classroom teachers.

Educators at our partner schools continued to request books for their classroom libraries through the [Diverse Books Project](#). Several educators, including [Ms. Aguda](#) (Bay Brook Marea EMS), [Ms. Corsaut](#) (Arundel ES), [Mx. Xie](#) (Maree G. Farring EMS), and [Ms. Pineda Hernandez](#) (Lakeland EMS) reflected on their use of these books with their students. We are grateful that the project has created an opportunity for students to engage with these books in new and exciting ways.

We held our first [Families, Libraries, and Early Literacy Program \(ELP\)](#) event of the semester in May where we worked with families to support their child's storytelling skills through art. Check out [our Instagram](#) page to see the young learners enjoying the event painting activity. Our final ELP event of the school year will take place in June, and we are delighted to kick off the summer with information about the Enoch Pratt Free Library's [Summer Break Baltimore program](#) and to provide families with resources to support kindergarten readiness.

In preparation for the inaugural [Sherman Center Research Conference](#), we held a support session for educators interested in presenting their work. We received submissions from practitioners, early childhood leaders, and researchers from the Sherman Center community, and we look forward to learning from them in the summer.

Featured Article: Introducing Educators, Parents, and Students to Computational Thinking

by Patricia A. Young, Professor and Chair Elect, UMBC Department of Education and Deborah Kariuki, Clinical Faculty, UMBC Department of Education

Concerned about the state of Maryland's desire to educate children with 21st century computer science skills, we (Patricia Young and Deborah Kariuki), along with Shahin Hossain, doctoral student, UMBC Language, Literacy & Culture, set out to meet this need through a systematic process and the development of instructional materials focused on the principles and pedagogy of computational thinking. The Sherman Center's 2020-21 Faculty Research Award funded our two-phase project, entitled "Infusing a Culture-based Computational Thinking Curriculum in Urban Preschools."

In Phase 1, our participants included 15 early childhood educators; these were preschool teachers, paraprofessionals, and administrators based in Maryland. Participants completed (a) pre-and post-assessments, (b) an e-learning module, and (c) a one-day professional development. The pre-assessment collected demographic information along with information on teachers' views, knowledge, and skills on computational thinking and computer science concepts (e.g., abstraction, decomposition, parallelization, and simulation). We also used

facial expressions to better elicit how participants felt. The post-assessment repeated all questions in the pre-assessment with the exception of the demographic questions.

Figure 1

Kids Computing: A Guide For Parents & Caregivers



Created by
Patricia A. Young and Deborah Kariuki

The e-learning module covered the same computer science concepts in the assessments and was developed to educate adults and students about the basics of computational thinking in P-20. Each concept was defined, explained through practice activities, and



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Research Notes:

Sherman Center 2021-2022 Faculty Research Award Recipients and Pilot of the Diverse Books Project 2.0

by [Shana E. Rochester](#), Assistant Director and Research Associate

In Spring 2022, the Sherman Center announced Dr. Karen (Lujie) Chen, assistant professor of information systems at UMBC, as the [2021-2022 Faculty Research Award recipient](#). Dr. Chen and co-investigator Dr. Chien-Ming Huang (John C. Malone assistant professor of computer science, Johns Hopkins University), will conduct a two-year study entitled, "Robot-Assisted Learning and Teaching for Whole Child: An Exploration in Early Learning in Urban Communities." They will work with Sherman STEM Teacher Scholars, classroom teachers, and students at partner schools to understand how technology-based classroom tutors can support teaching and learning.

In May 2022, Dr. Shana E. Rochester (Sherman Center assistant director and research associate) and Anika Aquino (Sherman Center graduate assistant) concluded an eight-month pilot of the Diverse Books Project 2.0, a professional development series that helped educators to use multicultural picture books with their students. Eleven educators at Sherman Center partner schools implemented interactive read alouds using books from the district's curriculum and the Sherman Center Diverse Books Collection, and they reflected on their use of these books with grade-level peers.¹

We look forward to sharing findings from these studies at the Sherman Center Research Conference and in future newsletters.

¹This work is funded by the Sherman Center and the Foundation for Child Development's Young Scholars Program.

reinforced with knowledge checks. The module concluded with lesson plan ideas for educators interested in teaching the concepts to children in early childhood, elementary, and secondary classrooms.

The preliminary findings from the participant assessments, e-learning module, and one-day professional development revealed that participants had a more positive outlook on their ability to teach and integrate computational thinking into their curriculum after participating in the project, and they felt comfortable with the process of learning through multiple modes (e.g., assessments, e-learning module). Project findings suggest that there needs to be ongoing professional development and support for computational thinking initiatives. In addition, the classroom curriculum must reflect approaches to computational thinking so that teachers are engaged in these practices as part of their daily instruction.

In Phase 2, we developed two instructional materials: a parent's guide and a Culture-based Computational Thinking Curriculum (CCTC). Kids Computing: A Guide for Parents & Caregivers provides four unplugged lessons, or lessons that do not require technology (see Figure 1). Families can also use these computational thinking lessons

at home with household materials. CCTC is an instructional tool that can teach children to break down a problem or system into components. We worked with two undergraduate engineering students at UMBC to develop and 3D print the first prototype (see Figure 2). We have worked with preschoolers and their teachers to further develop the tool.

The Sherman Center's Faculty Research Award supported our efforts to educate teachers about the benefits of computational thinking and address the need for a STEM workforce. We hope to make computational thinking an integral part of our continued work as computer science educators.

Figure 2



The Maryland Early Childhood Leadership Program (MECLP) Update

by [Louise Corwin](#), Co-Chair MECLP Advisory Committee, and [Liran Laor](#), MECLP Program Director

MECLP is gaining momentum and participation as an early childhood leadership hub. The accomplishments and progress of MECLP in the first half of 2022 are visible by a demand for more cohorts of early childhood emerging leaders and through a vibrant Community of Practice, which includes mentoring support, webinars, and an online professional learning community for course completers. Our [website](#) has been refreshed with exciting news of our Fellows' leadership journeys, research and reports pertinent to early childhood, and descriptions and recordings of our webinars. Community Conversations highlight pertinent topics in early childhood recommended by our Fellows, and webinars provide a platform for our Fellows to "lead" discussions with their colleagues. We formed a partnership with the University Systems of Maryland's Southern Maryland Regional Center that will allow MECLP to offer two cohorts of Fellows – one on UMBC's campus and potentially a second one in Southern Maryland to minimize the travel time and expenses of our Fellows.

A grant from the Trust for Learning gives MECLP the opportunity to provide field trips to introduce our Fellows to the Principles of Ideal Learning Environments, which will culminate in the publication of a guide illustrating the benefits of infusing the principles into additional early childhood programs in Maryland. The grant from the Trust supplements MECLP's funding from the Division of Early Childhood at MSDE and the Sherman Center. Our Advisory Committee has been enriched with two new members: Rudi O'Keefe Zelman, the Regional Director of Literacy Lab in Baltimore City, a Cohort I MECLP Fellow, and Alicia Cross, the Assistant Director of the National Institute of Standards and Technology's Child Care Program in Gaithersburg, a Cohort II Fellow; they bring fresh perspectives and voices to the committee. MECLP is producing transformative early childhood leaders as agents of change who are invested in creating a high-quality early childhood workforce in Maryland.

For more information, please visit <https://meclp.umbc.edu>, or email Louise Corwin (lcorwin@umbc.edu), Co-Chair of the MECLP Advisory Committee

Research to Practice

by [Jennifer Mata-McMahon](#), Associate Professor and Director

Literacy Fellows Zachary Tolliver and Olivia Prouty and their four volunteer tutors completed 126 hours of service at Curtis Bay Elementary, while Jada Harris and Shakira Scott-Harris and their volunteer tutors completed 78 hours of service at Bay Brook Elementary/Middle School. Fellows and tutors supported eight first- and second-grade teachers and their students during English Language Arts periods, participating in small-group and whole-group instruction of reading, writing, and vocabulary development. Fellows reported individualized attention and small-group work with young students promoted their enthusiasm for learning, focus, attention, and time on-task. Check out the [video](#) about this program on the Sherman Center website.

