

BUILDING BLOCKS: FINE MOTOR DEVELOPMENT IN HEAD START CLASSROOMS AT GREATER LAWRENCE COMMUNITY ACTION COUNCIL



GLCAC Opportunity Empowerment Community.

Alexandra Beck, OT/s, Martha Torres, LMHC, & Margaret Morris, OTD, OT, BCP

INTRODUCTION

Head Start:

- Federally-funded & regulated program providing free services to low-income families¹
- ➤ Local agencies, such as Greater Lawrence Community Action Council (GLCAC), provide educational services to communities²

Greater Lawrence Community Action Council (GLCAC):

- Non-profit, community-based organization serving Greater Lawrence, Merrimack Valley, & North Shore with 5 Head Start locations^{3,4}
- ➤ A 2023 annual report⁴ shares that 524 students were enrolled in Head Start & 64% qualify for services based on public assistance, including:
 - ➤ Homelessness
 - > Foster care
 - ➤ Income below 100% or between 100-130% of federal poverty line
 - Temporary Assistance for Needy Families (TANF)
 - > Supplemental Security Income (SSI)

GAP, ROLE, & AIMS

Gap: Staff requested support in curricular activity development of fine motor skills to help students participate in:

Classroom activities (playing with blocks, playdough)



Functional tasks (dressing, eating)



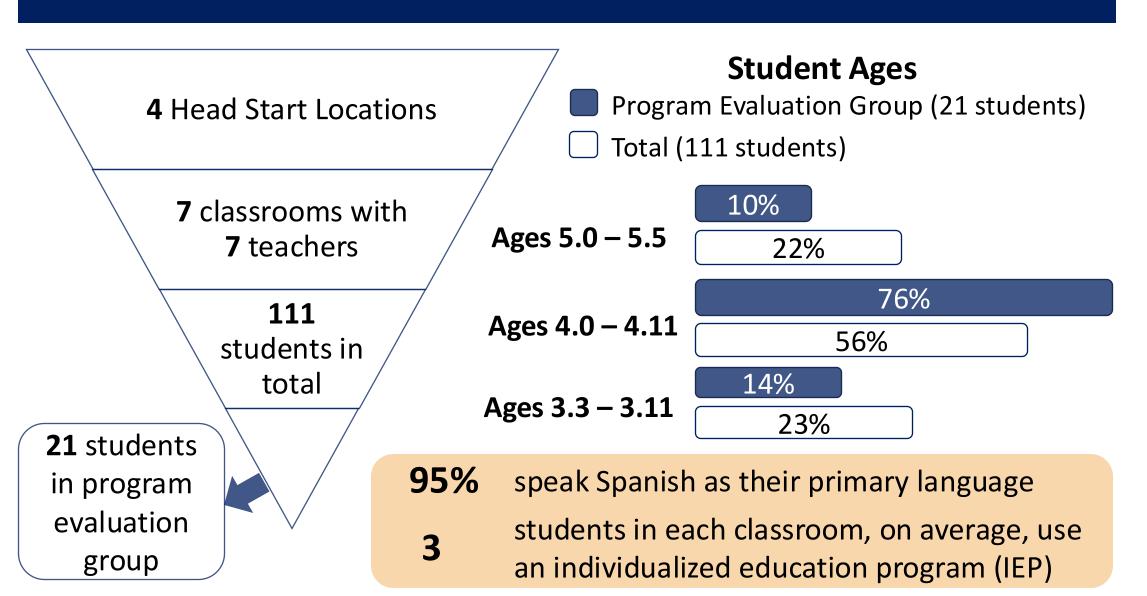
Occupational Therapy (OT) Student Role:

- > Equip classrooms with an activity toolkit, following the National Association for the Education of Young Children⁵ no-worksheets policy
- > Embed & model fine motor activities to support teachers' understanding of rich fine motor preschool activities^{6,7}
- > Curate fine motor activities to inform curricular development^{8,9,10,11}

Aim 1: Provide teacher resources to promote knowledge of fine motor development & provide classrooms with activity toolkit

Aim 2: Support fine motor curricular development in Head Start classrooms through modeling evidence- & play-based activities to improve students' functional independence before the transition to kindergarten

PARTICIPANTS



METHODS

Aim 1 **Pre-Survey**

Gather fine motor knowledge from 7 classroom teachers

Baseline **Evaluation** Conduct

informal teacher interviews to understand fine motor priorities

Resources Model Mat

Man® & fine motor stations; share fine motor & prewriting infographics with teachers

Return **Demonstration**

Teacher sings Mat Man® song & shares understanding of its purpose

The Mat Man® song was presented in English and Spanish for language considerations.

Aim 2

Baseline Work **Samples**

> Randomly select

> Develop informal

samples*

activities

program evaluation

> Gather baseline work

curricular fine motor

> Over 5 weeks, all students rotate through

activity stations in small

Activity

Stations

- ➤ One group works with the OT student while others play with available classroom fine motor toys
- > Gather comparison work samples from program evaluation group

Comparison

Work

Samples

Compare both sets of work samples to evaluate the effectiveness of embedded informal curricular fine motor activities

Program

Evaluation

* Work samples based on Get Set for School – Learning Without Tears® curriculum¹², Miller Function and

BASELINE PROGRAM EVALUATION DATA & ACTIVITIES

Participation Scales - fine motor activities¹³, & Miller Assessment for Preschoolers Draw a Person item¹⁴

- > Baseline program evaluation conducted using functional observation of 7 classrooms, formal teacher surveys, informal teacher interviews, & program evaluation group work samples
- > Evaluation focused on fine motor curriculum across daily occupations including eating, dressing, play & toileting as well as the occupation of classroom tasks^{15, 16,17}

Aim 1 Evaluation Outcome

Teachers report that most students manage daily occupations well, but classroom tasks remains a key concern for transition to kindergarten

Aim 2 Evaluation Outcome

Baseline work samples from the program evaluation group reveal difficulty with hand strength, hand coordination, in-hand manipulation, & prewriting skills

Informal Curricular Fine Motor Activities

- > Curricular activities curated to support teachers & to improve students' fine motor skills in the identified areas
- > Activities modeled & embedded in stations to support fine motor development



Playdough & Tools Mat Man®





Desired Fine Motor Improvements

Improvements in the four identified fine motor areas (hand strength, hand coordination, in-hand

manipulation, & prewriting skills) will guide activity inclusion in the GLCAC Head Start curriculum



Paper Folding



Paper Dolls

Thank you to Martha Torres, Justine Donovan, & the Head Start teachers in the designated classrooms. Your help was much appreciated!

Contacts:

Alexandra.Beck@tufts.edu Margaret.Morris@tufts.edu Scan QR code to view references & additional materials:



Aim 1

Teachers were observed singing Mat Man® song & working with students on fine motor & prewriting activities

Aim 2

Curated fine motor activities were beneficial to student development. Based on functional observation & work samples, students' fine motor & prewriting skills improved in four areas

Hand Strength

Creasing paper, manipulating playdough, & using scissors

Hand Coordination

> Using hands together when folding, writing, cutting, & functional assist with toys

Fine Motor Improvements

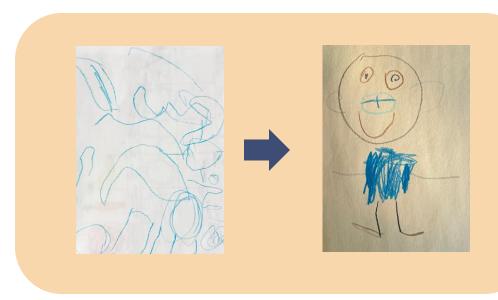
Prewriting Skills

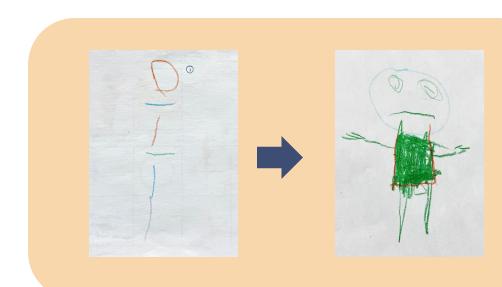
- > Tracing & copying prewriting shapes (vertical/horizontal lines, circle, cross, square, triangle)
- Ability to draw a person with accuracy & detail

In-hand manipulation

- Using pincer grasp to put pennies in a bank & moving pennies from palm to fingertips
- Playing with toys (flipping puzzle pieces, plastic nuts & bolts)

Work Samples Demonstrating Progress in Person Drawing Skills





Limitations Spanish-English language barrier, curricular activities specific to site

CONCLUSIONS & DELIVERABLES

- Fine motor skills are crucial to development & participation in daily occupations such as eating, dressing, toileting, & play as well as academic tasks in early childhood classrooms
- > Embedding intentional & developmentally appropriate fine motor activities to preschool curriculum is beneficial to develop fine motor & prewriting skills
- > Curating fine motor activities & providing teacher resources enriches the curriculum within GLCAC Head Start classrooms

Deliverables:

- All 7 classrooms received a fine motor toolkit with:
- ➤ Mat Man® pieces
- > Fine motor & prewriting infographics
- > Informal curricular fine motor activity suggestions
- (1 additional toolkit with GLCAC administration for replication)

