

AN EVALUATION OF THE MATHEMATICAL SKILLS OF PRE-SCHOOL CHILDREN SUPPORTED BY THE NATIONAL EARLY YEARS ACCESS INITIATIVE (NEYAI)

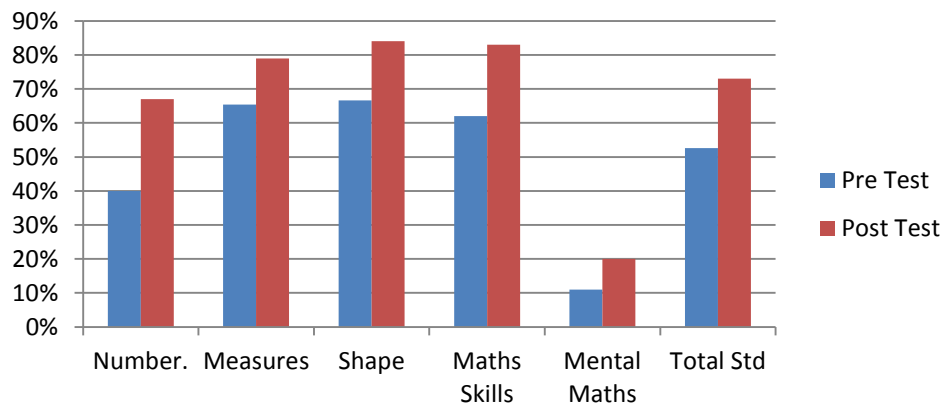
As part of the National College of Ireland (NCI) Early Learning Initiative (ELI) an evaluation of local children's early mathematical skills was carried out. Educational Psychology students from UCD collaborated with the NCI to administer an assessment tool designed specifically to evaluate the level of competency exhibited by pre-school children in the mathematical domain. The Assessment of Early Mathematical Skills and Concepts (AEMSC) is an assessment instrument developed by Terri Lalor, a Masters Degree Student from UCD.

The local pre-school centres deliver a curriculum of early years experiences through the Síolta and Aistear frameworks. The NEYAI provides continuing professional development, support and feedback to these centres. Evaluation using the AEMSC confirms the quality of this provision by providing feedback on individual pupils, individual centres and, through its framework, a rationale for programme content and structure.

The AEMSC focuses on both receptive and expressive language ability, cognitive development, and school readiness. Due to its specificity, the AEMSC can determine if a child has deficits in concept development. This in turn can facilitate a statement of the nature and extent of those difficulties with a view to formalising an appropriate intervention. Contact between the centres and the local primary schools is encouraged and facilitated. This ensures an element of transparency and ease of transition for children into their formal education.

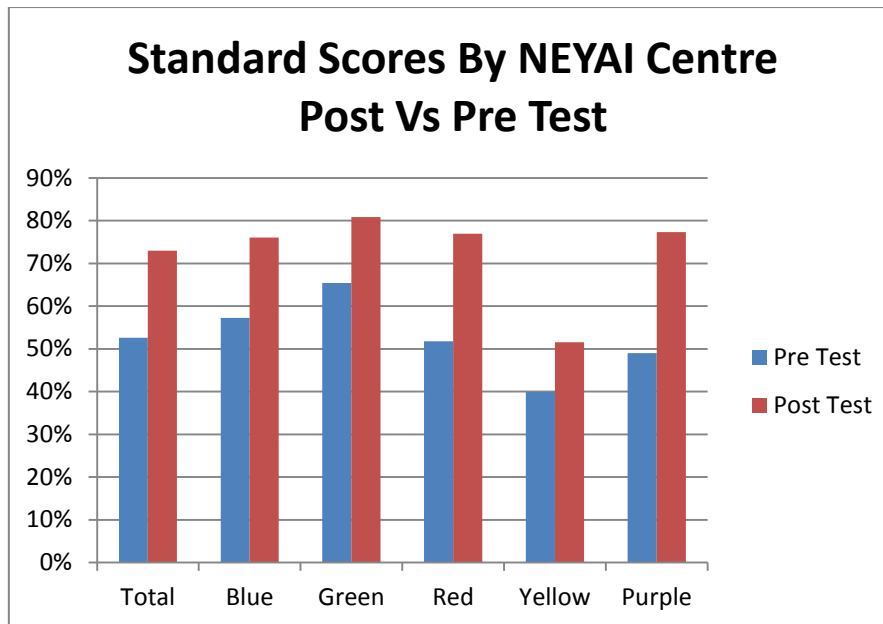
The initial assessment of children from NEYAI centres was carried out in November 2012 (pre-test), this provided a baseline. A further assessment was administered in May 2013 (post-test). For comparative purposes a selection of children from non-NEYAI centres (private pre-schools) were also assessed in May. Findings were as follows:

Standard Scores For NEYAI Centres By Category Post Vs Pre Test



Summary	Number.	Measures	Shape	Maths Skills	Mental Maths	Total Std
Pre Test	40%	65%	67%	62%	11%	53%
Post Test	67%	79%	84%	83%	20%	73%
Increase	27%	14%	17%	21%	9%	20%

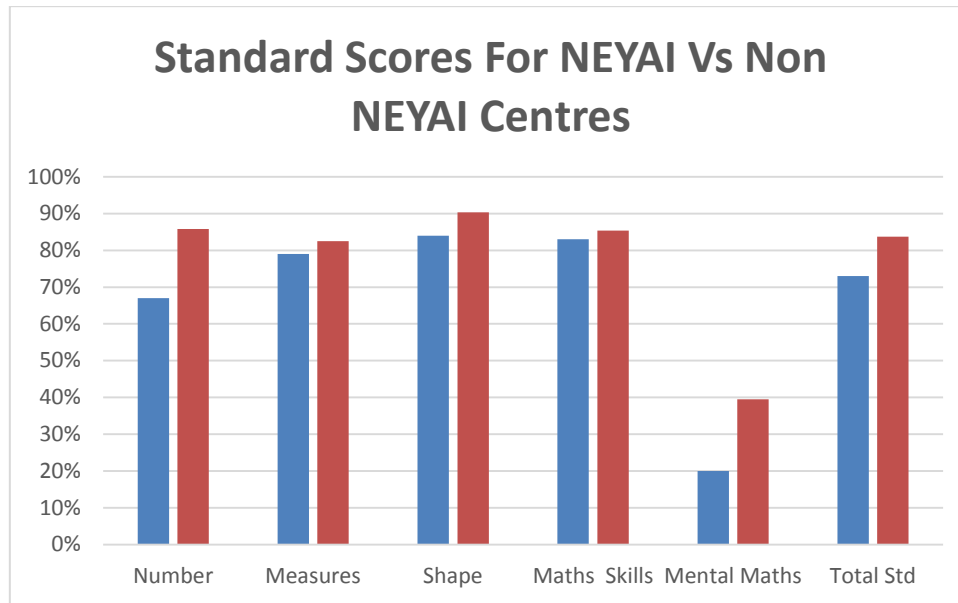
- Performance improved across All subtests
- Overall mean score on post-test **73%**
- Overall mean increase across all centres **20%**
- Most significant increase occurred in Number subtest with increase of **27%**



Summary	Pre Test	Post Test	Increase
Total	53%	73%	20%
Blue	57%	76%	19%
Green	65%	81%	15%
Red	52%	77%	25%
Yellow	40%	52%	12%
Purple	49%	77%	28%

- Purple Centre achieved the highest margin between pre and post test scores with an increase of **28%**
- Yellow Centre the lowest margin with an increase of **12%**
- Feedback to centres provides a framework for areas for improvement and further development.

Comparative Study



Summary	Number	Measures	Shape	Maths Skills	Mental Maths	Total Std
NEYAI Centres	67%	79%	84%	83%	20%	73%
Non NEYAI Centres	86%	82%	90%	85%	40%	84%
Delta	19%	3%	6%	2%	20%	11%

- Non-NEYAI = Private pre-school centres
- Overall mean score was 78% across groups
- NEYAI group scored 5% below the mean, Non-NEYAI group scored 6% above the mean
- Average age of NEYAI group 4 yrs, average age of non-NEYAI group 4 yrs 6 mths