



Insights from Listening and Spoken Language Data Repository (LSL-DR): Vocabulary Outcomes of Children who attend OPTION Programs

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Project Aims

OPTION programs administer vocabulary assessments to the students in their programs annually. This data is entered into the Listening and Spoken Language Data Repository (LSL-DR). This poster aims to characterize the change in receptive and expressive vocabulary of children who are deaf or hard of hearing (DHH) and have attended OPTION programs.

Methods

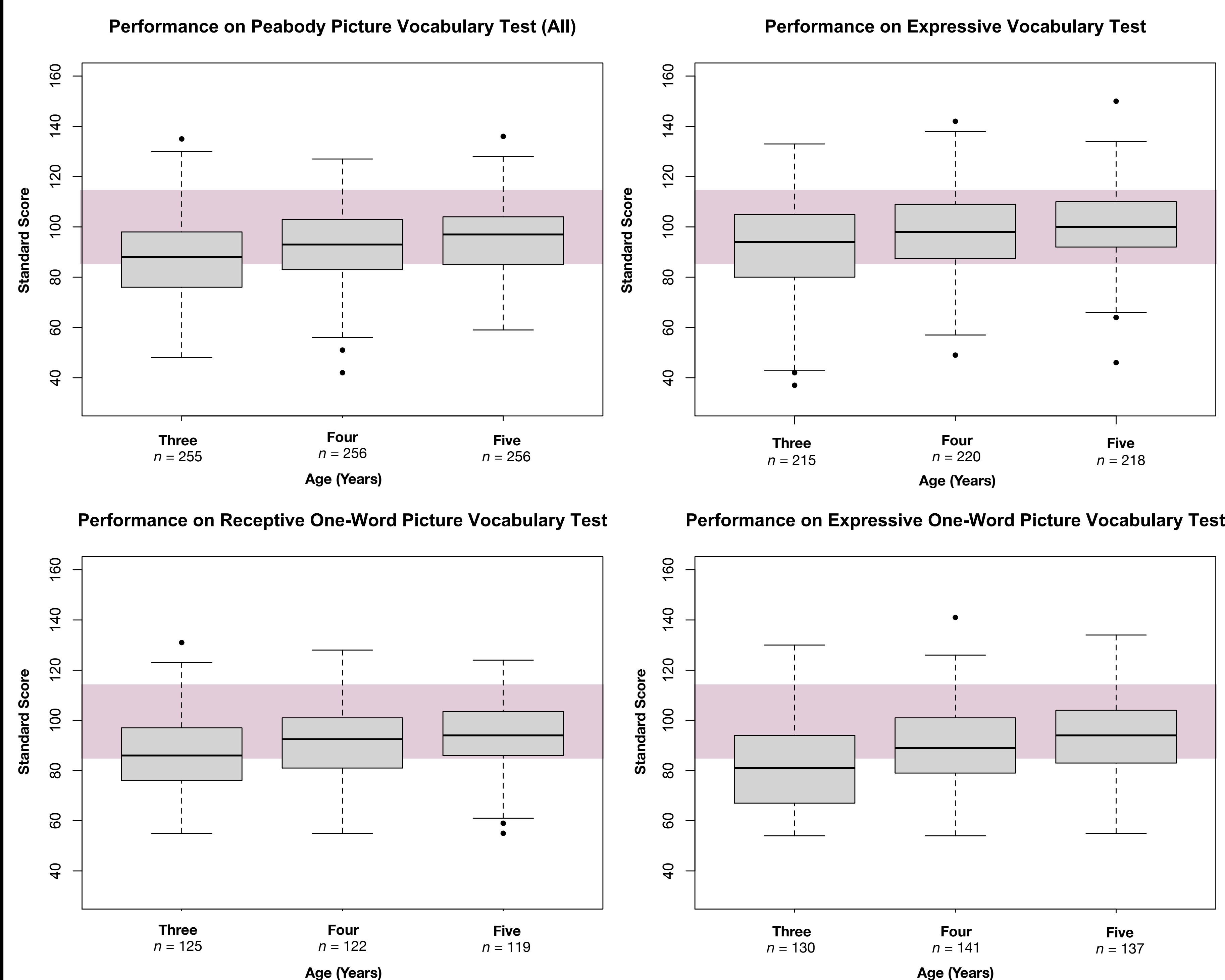
OPTION programs administer one of the following pairs of vocabulary assessments: Receptive One-Word Picture Vocabulary Test (ROWPVT) and Expressive One-Word Picture Vocabulary Test (EOWPVT), or Peabody Picture Vocabulary Test (PPVT) and Expressive Vocabulary Test (EVT). A descriptive analysis of the children's longitudinal performance of **children at three, four, and five years** is presented here.

Participant Demographics

	PPVT EVT	ROWPVT EOWPVT
Total # of Children	260	144
Male	143	64
Female	117	79
Hearing Device		
Cochlear Implants	96	51
Hearing Aids	68	41
Bimodal	79	38
BAHD/ Softband	6	9
Started Intervention in OPTION Program		
18 months or before	109	62
19 - 36 months	125	64
after 36 months	26	18
# of Children with Additional Factors	50	29

Results

A review of performance on receptive and expressive vocabulary assessments indicates a positive trend of growth in this domain from age three to five, with more than 75% of the sample demonstrating scores within the average range by age five years.



The boxplots above characterize vocabulary proficiency of children who are DHH. The upper and lower edges of the boxplots refer to approximately the 75th and 25th percentile of this sample, respectively. The thick line in the box refers to median or 50th percentile. The light pink shaded area indicates the average range, i.e., standard score between 85-115.

Impact of Additional Factors

Development can be impacted by a variety of factors including presence of additional disabilities, prematurity, other medical diagnosis, etc. The combined effect of these additional factors on learning has been indicated in the LSL-DR for each child. The table below compares the scores of the children whose learning is not impacted by additional factors (DHH) and those whose learning is impacted (DHH+) at age five.

Percentile	DHH			DHH +		
	25th	50th	75th	25th	50th	75th
PPVT	87	99	107	77	88	100
EVT	93	102	113	86	96	104
ROWPVT	86	95	105	81	92	99
EOWPVT	84	95	105	73	85	94

Conclusions

- In this sample, a majority of children who are DHH and attended an OPTION program, demonstrated age appropriate receptive and expressive vocabulary proficiency by age five.
- Children whose learning was impacted by additional factors also demonstrated improved vocabulary skills by age five.

These findings suggest that many children who are DHH and receive intervention in OPTION programs, are developing vocabulary skills that prepare them for transition to a mainstream educational setting.

Future studies will examine various aspects of vocabulary development in children who are DHH. For example,

- Identifying the contribution of factors such as adherence to the 1-3-6 protocol, bilingual home environment, etc.
- Evaluation of the efficacy of various vocabulary interventions implemented at OPTION programs

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