

Young children's knowledge about printed names

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What do young children know about print?



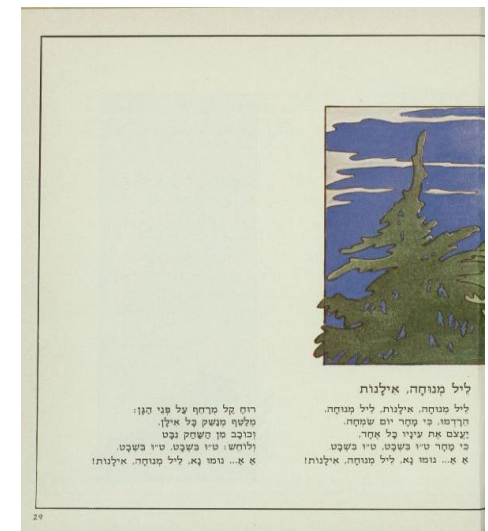
Pepsi

Tolchinsky's (2003) differentiation hypothesis

Children learn about the universal graphic properties of writing (around age 3) before they learn about the specific properties of their own writing system (around age 5)

Universal properties of writing
rectilinearity
lack of iconicity

Language-specific properties
orientation (horizontal,
vertical)
direction (left to right, right
to left)
symbol shapes



Parent survey of early learned printed words

First learned word:

personal names	87%
others	13%

Early learned words:

personal names	69%
preprimer and primer words (e.g. look)	16%
logos, commercial print (e.g., Pepsi)	8%

Experiment 1

Capitalization pattern (language-specific property)

Chuck (here called Ab) vs. chuck (ab),
CHUCK (AB), or chUck (aB)

Symbol shapes (language-specific property)

Sam vs. सहक

Experiment 1 participants

Measure	Younger preschoolers	Older preschoolers	Kindergartners
<i>N</i>	19	17	15
Mean age	3, 7	4, 11	6, 2
range	3, 2 to 4, 0	4, 5 to 5, 4	5, 4 to 6, 9
Number of words read (max. = 22)	0.26	0.41	13.80

Pairs for Experiment 1

Pair type	Examples
Ab vs. ab	Bem vs. bem
Ab vs. AB	Bem vs. BEM
Ab vs. aB	Bem vs. bEm
ab vs. AB	bem vs. BEM
ab vs. aB	bem vs. bEm
AB vs. aB	BEM vs. bEm
Latin vs. non-Latin letters	vok vs. l g d



Proportion selections of first-listed display in each pair type in Experiment 1

Pair type	Younger preschoolers	Older preschoolers	Kindergartners
Ab vs. ab	.54	.69*	.59
Ab vs. AB	.49	.35*	.66
Ab vs. aB	.50	.56	.72*
ab vs. AB	.44	.35*	.61
ab vs. aB	.50	.41	.72*
AB vs. aB	.53	.75*	.40
Latin vs. non-Latin letters	.89*	.97*	1.00*

* significantly different from chance (.50), $p < .05$

Proportion selections of each capitalization pattern overall in Experiment 1

Pattern	Younger preschoolers	Older preschoolers	Kindergartners
Ab	.51	.53	.66*
ab	.47	.36*	.58
AB	.54	.68*	.38
aB	.49	.42*	.39

*significantly different from chance (.50), $p < .05$.

Summary of Experiment 1 results

Symbol shapes (language-specific property)
early emergence: by age 4

Ab capitalization pattern (language-specific property)
late emergence: not until kindergarten
before then: prefer all upper case

Experiment 2 participants

Measure	Younger preschoolers	Older preschoolers	Kindergartners
<i>N</i>	38	34	30
Mean age	3, 8	4, 10	6, 2
range	3, 2 to 4, 3	4, 4 to 5, 6	5, 4 to 6, 10
Number of words read (max. = 22)	0.42	1.62	13.57

Experiment 2: Proportion of times displays accepted as correct renditions of child's name

Display type	Example	Younger pre-schoolers	Older pre-schoolers	Kindergartners
Ab	Becky	.79	.75	.93
ab	becky	.63	.42	.50
AB	BECKY	.79	.92	.50
aB	beCky	.76	.31	.37

Summary of Experiment 2 results

Ab capitalization pattern (language-specific property)

late emergence: not until kindergarten

before then: prefer all upper case

Why do older preschoolers prefer all-upercase names?

Child book survey

0% AB spellings of names

Classroom name survey in preschools

33% AB spellings of names

Parent survey

59% AB spellings of names

96% upercase spellings of single letters

Experiment 3: Orientation

horizontal

SAM

vertical

S

A

M

diagonal

M

A

S

nonlinear

M

A

S

Experiment 3 participants

Measure	Younger preschoolers	Older preschoolers
<i>N</i>	41	37
Mean age range	3, 9	4, 11
	3, 1 to 4, 3	4, 4 to 5, 11
Number of words read (max. = 22)	0.79	1.89

Experiment 3: Proportion of times displays accepted as correct renditions of child's name

Display type	Example	Younger preschoolers	Older preschoolers
Horizontal	SAM	.95	.92
Vertical	S A M	.66	.43
Diagonal	S A M	.65	.43
Nonlinear	A M S	.44	.24

Summary of Experiment 3 results

Horizontal orientation (language-specific property)

Some knowledge by age 4

Earlier than predicted by Tolchinsky's differentiation hypothesis

No priority for orientations that occur in other writing systems

Experiment 4: Symbol shapes in own name

BRENDAN

PRENDAN

similar shape initial letter

VRENDAN

different shape initial letter

BREMDAN

similar shape middle letter

BREGDAN

different shape middle letter

BRENDAW

similar shape final letter

BRENDAC

different shape final letter

Experiment 4 participants

Measure	Younger preschoolers	Older preschoolers
<i>N</i>	56	48
Mean age range	3, 9	5, 0
	3, 2 to 4, 3	4, 4 to 5, 11
Number of words read (max. = 22)	0.21	1.35

Experiment 4: Proportion of times displays accepted as correct renditions of child's name

Display type	Example	Younger pre-schoolers	Older pre-schoolers
Correct	BRENDAN	.93	.92
Similar initial	PRENDAN	.30	.13
Dissimilar initial	VRENDAN	.30	.13
Similar middle	BREMDAN	.55	.17
Dissimilar middle	BREGDAN	.45	.13
Similar final	BRENDAW	.52	.13
Dissimilar final	BRENDAC	.41	.10

Summary of Experiment 4 results

Symbol shapes (language-specific property)

by age 4: detailed knowledge of first letter shape

general knowledge of later letter shapes

by age 5: detailed knowledge of all letter shapes

Priority for leftmost letter (language-specific property)

by age 4

Do young children have any
knowledge of the visual
characteristics of writing?

Yes

Which visual characteristics of writing are learned first?

Universal to language-specific

No

General shape to detailed shape

Left to right

How do children learn about the visual characteristics of writing?

From books, while being read to

No

From passive exposure to print

No

From direct teaching and active engagement with print

Yes