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What's in a Name: Children's Knowledge about the Letters in Their Own Names

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Two studies were performed to determine whether children's experiences with their own names boost their knowledge about the components of the name, the letters. The children in Study One showed a significant superiority for the initial letter of their own first name in tests of letter-name, but not letter-sound, knowledge. This pattern was found for Australian first graders (mean age 5 years, 5 months), U.S. kindergartners (mean age 5 years, 8 months), and U.S. preschoolers (mean age 4 years, 10 months). Study Two, with U.S. preschoolers (mean age 4 years, 11 months), again revealed an advantage for the initial letter of a child's first name in knowledge of letter names but not knowledge of letter sounds. Moreover, the children were better at printing the initial letter of their own first name than other letters. The results show that different factors are involved in the learning of letter names and letter sounds. They further suggest that children use letter-based strategies with their own names at a time when they are often considered to be "logographic" readers.

For many children, learning to read and write begins with their own name. Middle-class children in Western cultures have frequent opportunities to learn about the spellings of their own names, especially their first names. For example,

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parents or teachers may write children's names on pictures they have drawn. In daycare centers and preschools, children's coat hooks, cubbyholes, and drinking glasses are often labeled with the children's names. Given children's frequent exposure to the spellings of their own names, it has been suggested that names play a special role in the early development of literacy (Ferreiro & Teberosky, 1982; Villaume & Wilson, 1989).

Although recent normative data are sparse, it appears that middle-class children typically learn to recognize and print their own first names at a young age. Villaume and Wilson (1989), testing children in a daycare center in the U.S., found that the majority of the three year olds and all of the four and five year olds could identify their own first name when it was presented along with two distractors which began with different letters. In an early study carried out with children who were applying to enter a private school in the U.S. (Hildreth, 1936), most children could print their own first name by the age of 5,0 to 5,5. Children between the ages of 4,6 and 4,11 typically produced a mixture of correct and incorrect letters when asked to write their own first name. Ability to write the last name lagged behind ability to write the first name, with the majority of children unable to write their own last name until the age of 6,6 to 6,11. A study performed with Argentinean children found that most middle-class 5 year olds could write their own first names (Ferreiro & Teberosky, 1982). These children were "markedly more advanced at writing and interpreting their own names than . . . other writing" (p. 223). Other evidence shows that children's ability to write their own name at school entry correlates with later reading achievement (Ferguson, 1975; Riley, 1996).

Recent findings begin to shed light on the processes by which children learn to identify their printed names. At first, children appear to distinguish their own first name from other words using just the initial letter (Villaume & Wilson, 1989). Children who use this strategy may not know the conventional labels of the letters in their names but may identify the initial letter as the name itself. For example, a boy named Dan who is shown the printed letter *d* and asked to give its name may respond that the letter *d* "says" Dan. Children gradually begin to learn that the letters in their names have labels that are separate from the name itself. Villaume and Wilson's results suggest that children tend to learn the label for the initial letter of the name before they learn the labels for the other letters. However, Villaume and Wilson's study was primarily descriptive and they did not present quantitative data on this point.

One's name, in addition to being acquired early, continues to be important into later childhood and adulthood. Thus, when children and adults are asked to choose their most preferred letters of the alphabet or to pick the most attractive letter in a group of letters, they show a reliable preference for the letters of their own first and last names over other letters (Hoorens, Nuttin, Herman, & Pavakanun, 1990; Hoorens & Todorova, 1988; Nuttin, 1985, 1987). This preference tends to be stronger for the letters of the first name than for the letters of the last

name. The preference also tends to be stronger for the initial letters of the first and last names than for subsequent letters. In the studies just cited, these patterns were apparent as early as the second grade, the lowest grade level tested. Thus, it appears that the elements of the printed name—the letters—develop a special status at an early age.

The present research was designed to examine children's knowledge about the letters in their names in more detail. We focused on young children, preschool through first grade. Rather than studying how own-name knowledge affects children's preferences for letters, as in the studies described above, we asked how it affects children's knowledge about letter names and letter sounds. For example, is children's knowledge of letter names better for the letters in their own names than for other letters? Is knowledge of the sound values of the letters better for own-name letters than for other letters? These questions are important given that knowledge of letter names and letter sounds is a key foundation for the development of literacy (e.g., Adams, 1990). It is critical to understand the factors that affect the acquisition of letter-name and letter-sound knowledge.

Study One was designed to determine whether a child's own name has an influence on the learning of letter names and letter sounds. To address this question, we analyzed data from three groups of children who had been asked about the names and the sounds of all 26 letters of the alphabet. One group of children attended first grade in Australia, a second group consisted of kindergartners from the U.S., and a third group was U.S. preschoolers. For each letter, we determined whether letter-name and letter-sound knowledge were better for children who had that letter as the first letter of their own first name than for children who did not have that letter as the first letter of their own first name. For example, do children named Dan or David show a better knowledge of the name of the letter *d,* the sound of the letter *d,* or both than children named Bobby or Joe? We carried out similar analyses for the second, third, and fourth letters of the first name to determine whether there were any effects for letters of the first name beyond the initial letter. We also looked for own-name effects for the letters of the last name. Through these analyses, we aimed to map the effects of children's own names on their knowledge of the names and sounds of letters of the alphabet.

STUDY ONE

Method

Brisbane Data

Participants. As part of a longitudinal study being carried out by J. Bowey (e.g., Bowey, 1996), data on letter-name and letter-sound knowledge had been collected from first graders in Brisbane, Australia. The mean age of the 204 children whose data were included here was 5 years, 5 months (range 4,10–6,9); there were 100 boys and 104 girls. All the children were native speakers of English, and none had serious medical or learning difficulties. Children in

Brisbane typically enter first grade at the age of 5 and instruction in letter names, letter sounds, and reading begins at that time. Letter names and sounds are not formally taught before first grade. The Brisbane children had received five to six months of first-grade instruction by the time they were given the present tests.

Materials and procedure. The letter-name and letter-sound tasks were given in a single session, which was individually administered to each child. The letter-name test was given first. The child was shown a series of uppercase letters, each on a separate page of a small photograph album. The letters were presented in the same random order for all children. The child was asked to provide the name of each letter. The experimenter provided explicit feedback for the first two letters, *o* and *n.* No specific feedback was given for the remaining items.

For the sound task, the letters were presented in a similar manner but this time in lowercase print. The order of the letters was the same for all children, and different from that used in the name task. The child was asked to say the sound of each letter. As before, the experimenter provided explicit feedback for the first two letters but not the remaining letters. The scoring of the data from this study assumed that each letter had a single correct pronunciation—the "short" sounds for the vowels, the "hard" sounds for *c* and *g,* and /ks/ for *x.*

Detroit Data

Participants. The participants included 97 kindergartners who attended schools in middle-class suburbs of Detroit, Michigan and 119 preschoolers from childcare centers and nursery schools in similar areas. The mean age for the kindergartners was 5 years, 8 months (range 5,0–6,5), and there were 50 boys and 47 girls. The mean age for the preschoolers was 4 years, 10 months (range 4,0–5,7), and there were 46 boys and 73 girls. All of the children were native speakers of English. In the U.S., formal instruction about the names and the sounds of letters generally begins in kindergarten. The kindergartners in this study had received between one and seven months of instruction by the time that they were tested.

Materials and procedure. All of the children were tested individually. The letter-name and letter-sound tests were conducted in a single session. This session usually followed one or more sessions devoted to other spelling or reading tasks. Of the kindergartners, 63 took the name test before the sound test and the remainder had the reverse order. For preschoolers, 60 had the name test first and 59 had the sound task first.

For the name task, the child was shown a series of cards, each with an uppercase letter printed on it. The order of the cards was randomly chosen for each child. For each card, the child was first asked to give the name of the letter. If the child did not respond correctly in this free-choice situation, a followup question provided the child with two choices. For *h,* for example, the examiner asked, "Is that *h* or *i*?" The distractor for each letter had been chosen randomly from among the other letters of the alphabet and was the same for all children. Half the time the correct name was presented first and the other half the correct name was presented second.

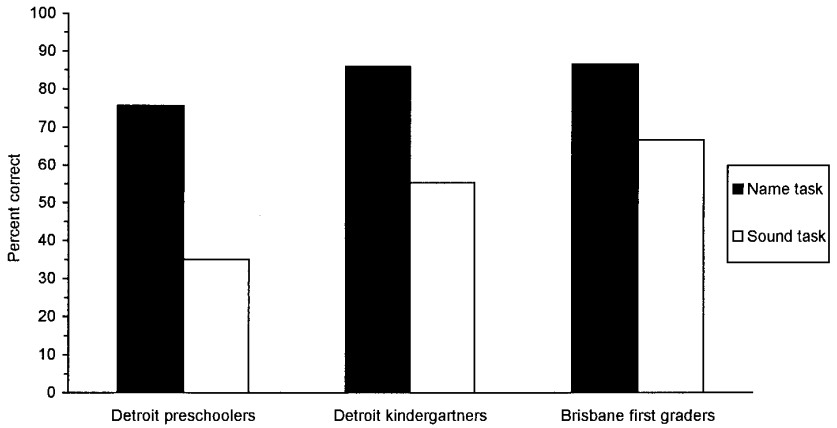

FIG. 1. Percentage of correct responses on letter name and sound tasks by children in each of the three groups of Study One.

For the sound test, the same cards were used. The child was first asked to provide the sound of the letter. If the child said the name of a consonant letter, the experimenter gave the child another chance to respond. If the child again said the name, this was counted as the child's answer. Both the "long" and the "short" sounds of vowels were scored as correct in this free-choice sound task. Both /k/ and /s/ were counted as correct for *c*, both /g/ and /ʤ/ were counted as correct for *g*, and both /ks/ and /z/ were counted as correct for *x*. If the child did not respond correctly in the free-choice sound task, two alternatives were provided. These were the sounds of the letters from the two-choice name task (using the "short" sounds for vowels, the "hard" sounds for *c* and *g*, and /ks/ for *x*). For example, the examiner asked whether *h* made the sound /hə/ or /I/. Here and elsewhere, the phonemes corresponding to consonants were followed by /ə/.

For the analyses presented here, the Detroit children were counted as correct only if they responded appropriately in the free-choice task. This scoring system is similar to that used with the Brisbane data.[1]

Results

Before discussing the main results of the study, which concern children's performance on various letters as a function of the letters in their own first and last names, we must examine the children's overall levels of performance on the name and sound tasks. Figure 1 shows the mean percentage of correct responses in each task for children in each group, averaged across letters. The data were

[1] The Detroit data were also scored by a lenient system, according to which children were counted as correct if they responded correctly in the two-choice task. Overall level of performance was higher than under the strict scoring system, but the effects of own-name knowledge were similar to those reported.

subjected to an ANOVA (analysis of variance) using the factors of group (Detroit preschoolers vs Detroit kindergartners vs Brisbane first graders) and task (name vs sound), with letters as the unit of analysis. There were main effects of group ($F(2,50) = 89.81$, $p < .001$) and task ($F(1,25) = 87.52$, $p < .001$), as well as an interaction between the two factors ($F(2,50) = 18.01$, $p < .001$). Followup tests showed that, on the name task, the Detroit preschoolers performed more poorly than the Detroit kindergartners and the Brisbane first graders, who were statistically indistinguishable from one another. On the sound task, all of the between-group differences were significant. The overall level of performance in the sound task was lower than in the name task. For the Brisbane children, this difference may have occurred, in part, because lowercase letters were used in the sound task and uppercase letters in the name task. However, the Detroit children saw uppercase letters in both the sound task and the name task yet still performed more poorly in the sound task.

We turn now to the central analyses of the study, which were designed to determine whether children's knowledge of letter names and sounds is influenced by the letters of their own first and last names. For each data set—Brisbane first grade, Detroit kindergarten, and Detroit preschool—we calculated the proportion of correct responses to each letter in each task when that letter was the first letter of a child's first name (or commonly used nickname) and when the letter was not the first letter of a child's first name. For the Brisbane first graders, for instance, all 24 of the children whose names began with *a* named this letter correctly (1.0), as compared to 167 of the 180 children whose names did not begin with *a* (.93). Thus, the proportion of correct responses to *a* in the name task was higher for children whose names began with *a* than for children whose names did not begin with *a*. A paired *t*-test was carried out across those 17 letters which were the initial letter of at least two children's first names in order to determine whether the identity of the first letter of a child's first name affects knowledge of letter names.[2] Similar analyses were done to determine whether the first letter of a child's first name affects performance on the letter-sound task. We performed parallel analyses for the second, third, and fourth letters of the first name and for the first through fourth letters of the last name. We did not go beyond the fourth letter because a number of children had first or last names that contained only four letters. A total of 16 *t*-tests were carried out for each data set (4 letter positions [1, 2, 3, 4] $\times$ 2 tasks [name, sound] $\times$ 2 parts of name [first, last]), and so the critical value of $p < .05$ (one tailed) was divided by the number of tests performed. The *t*-tests, as corrected in this manner, provide a stringent test of the reliability of any own-name effects.

Figure 2 shows the difference between own-name and not-own-name letters for the name and sound tasks for the first through fourth letters of the first name and the first through fourth letters of the last name in the Brisbane first graders. Significant

[2] We did not include letters that began only one child's name in the calculations because the proportion of correct responses to such letters can only be 0 or 1 and the results of a single child can markedly skew the results.

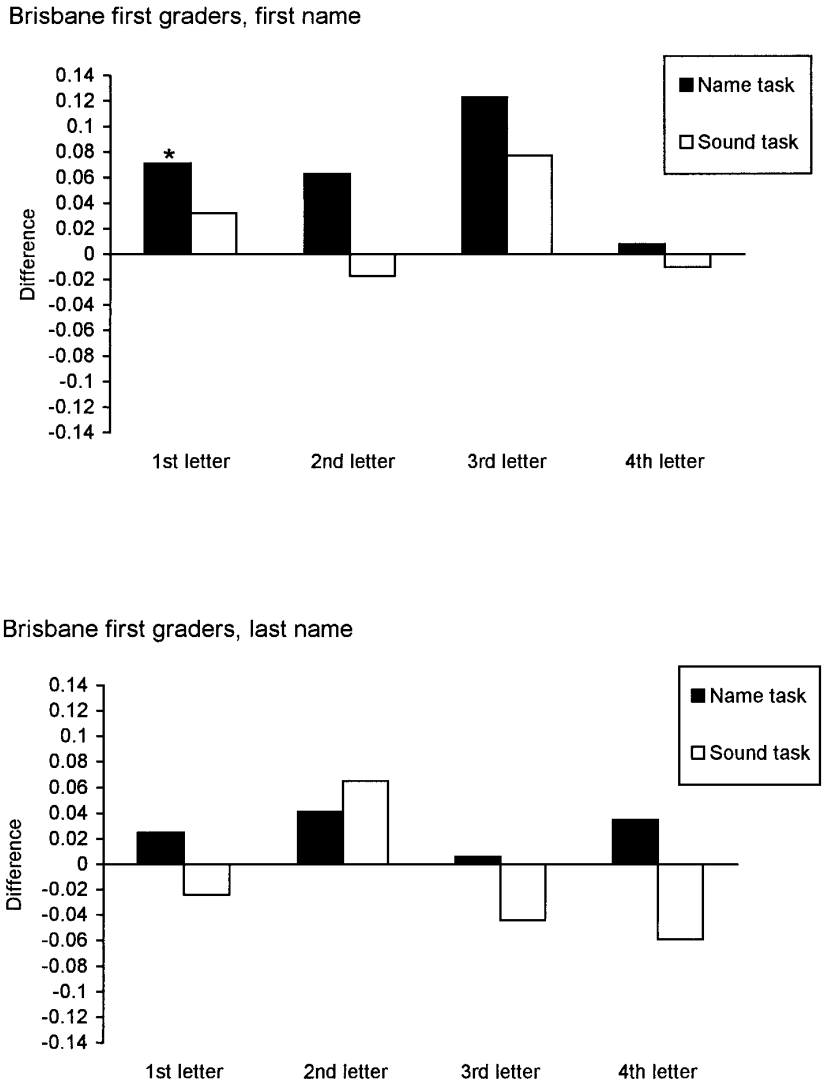

FIG. 2. Difference between proportion of correct responses for own-name letters and proportion of correct responses for not-own-name letters for Brisbane first graders of Study One. *indicates that the difference is significant.

differences are indicated by asterisks. As the figure shows, there was a reliable difference in the name task for the first letter of the first name. The effect for the third letter of the first name missed significance by our stringent criterion (adjusted p = .10). No significant effects appeared in the last name data. Moreover, there were no significant effects for either the first name or the last name in the sound task.

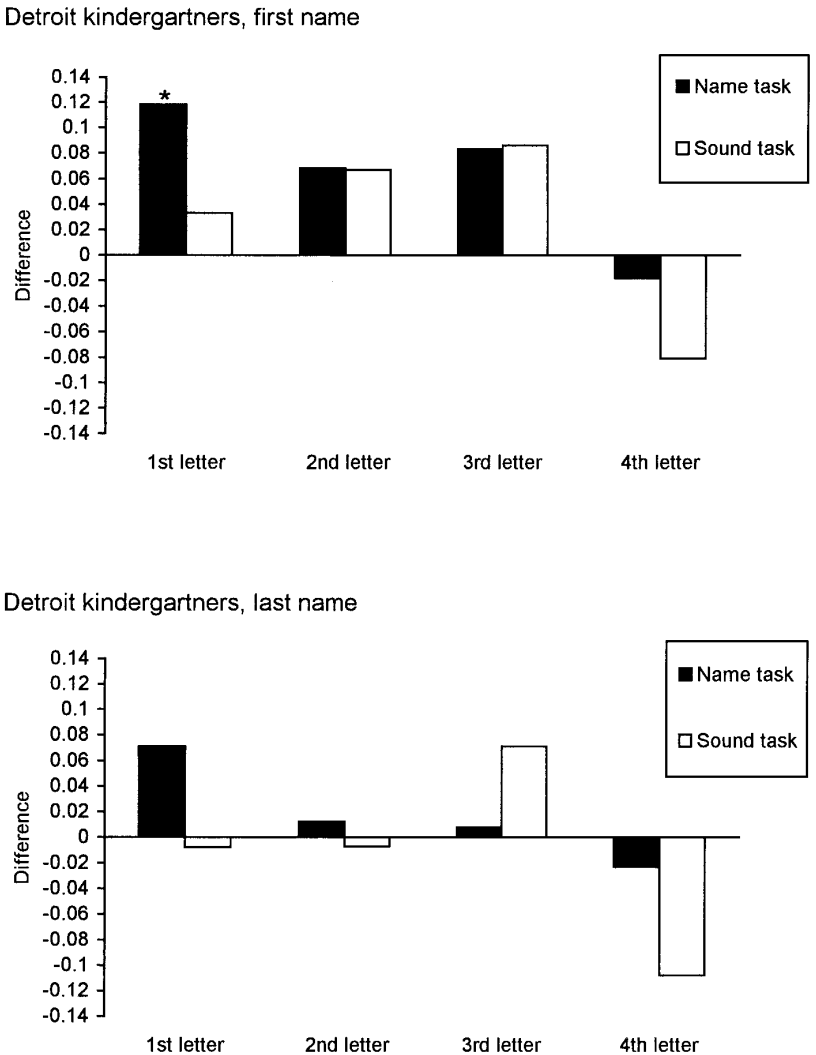

FIG. 3. Difference between proportion of correct responses for own-name letters and proportion of correct responses for not-own-name letters for Detroit kindergartners of Study One. *indicates that the difference is significant.

The results for the Detroit kindergartners are shown in Figure 3. In the name task, a significant difference between own-name and not-own-name letters appeared for the first letter of the first name. No significant differences were found for the sound task, and there were no significant effects in the last-name analyses.

Figure 4 shows the results for the Detroit preschoolers. There was a reliable

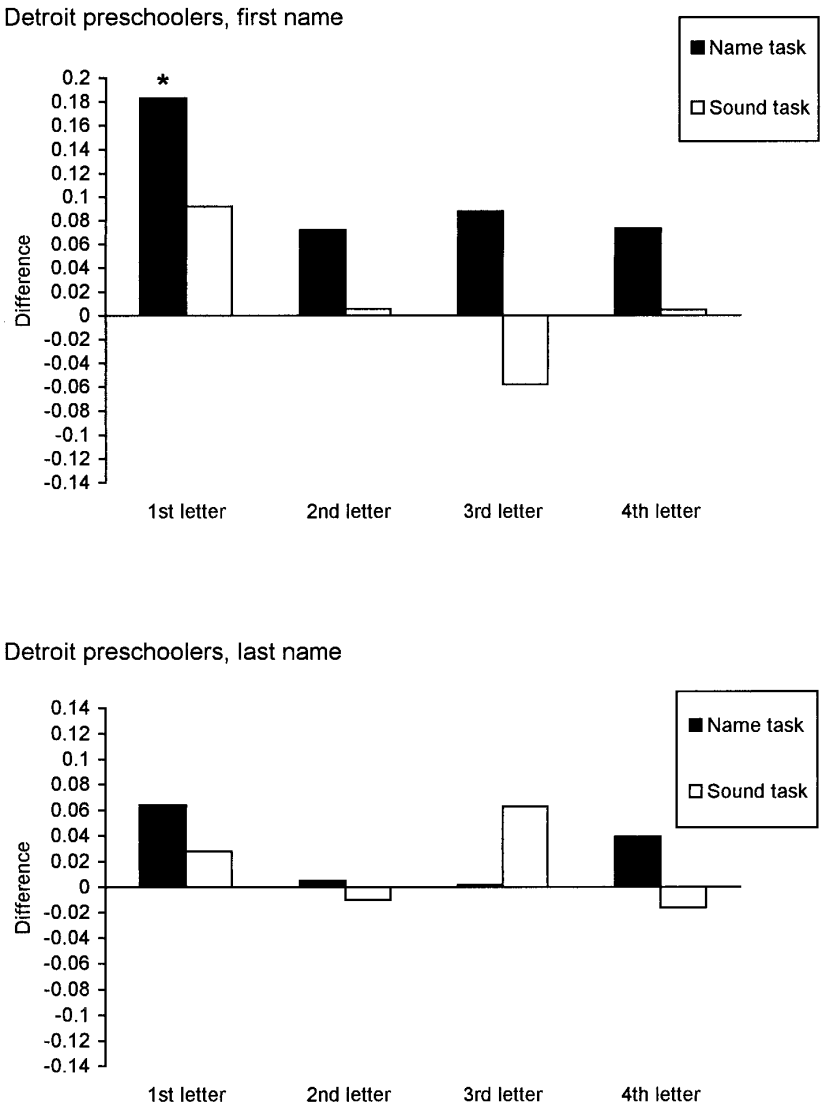

FIG. 4. Difference between proportion of correct responses for own-name letters and proportion of correct responses for not-own-name letters for Detroit preschoolers of Study One. *indicates that the difference is significant.

difference between own-name and not-own-name letters for the first letter of the first name. Again, there were no significant effects in the letter-name task for letters of the first name beyond the first and for letters of the last name. There were no significant effects in the letter-sound data.

Discussion

The results of Study One show that the identity of the initial letter of a child's first name (or commonly used nickname) affects the child's knowledge of letter names. Thus, children named Dan or David are more likely to know the name of the letter *d* than children named Bobby or Joe. This effect was significant by our stringent tests for first graders in Australia and for kindergartners in the U.S., who were similar in age and level of letter-name knowledge to the Australian first graders. The effect was also reliable for U.S. preschoolers. We did not find evidence that the identity of the first letter of a child's last name affects the child's knowledge of letter names. Apparently, the first name has a special status. Letters of the first name beyond the initial one did not have reliable effects on children's knowledge of letter names, although there were nonsignificant trends. Clearly, any effects for letters beyond the initial letter of the first name are weaker than for the initial letter.

Interestingly, we found no reliable effects of children's own first or last name on knowledge of letter sounds. Although children named Dan or David were more likely to know *d*'s name than children named Bobby or Joe, they were not significantly more knowledgeable about *d*'s sound. Possible reasons for this finding will be considered in the General Discussion.

STUDY TWO

The first goal of Study Two was to replicate the interesting and unexpected finding of Study One that children's experiences with their own first name help them learn the conventional label for its initial letter but do not have a reliable effect on letter-sound knowledge. We selected preschoolers whose first names began with one of six popular letters of the alphabet—*d, j, k, m, r,* or *s.* These children were questioned about the names and sounds of the six critical letters, using both a free-choice and a two-choice procedure. We asked whether children showed a reliable advantage for the initial letter of their own first name in tasks tapping knowledge of letter names but not in tasks tapping knowledge of letter sounds.

The second goal of Study Two was to get a broader picture of children's competence with letters, above and beyond their ability to provide the names and the sounds of isolated printed letters. Thus, we also looked at children's ability to print letters and to make decisions about letters and sounds in words. These latter skills were assessed via an initial letter task, in which children selected between two choices for the initial letter of a presented word (e.g., "Does *doll* begin with *d* or *p*?), and an initial phoneme task, in which children made a similar choice for phonemes (e.g., "Does *doll* begin with /də/ or /pə/?). We asked whether performance in each of these tasks was better for the initial letter of a child's first name than for other letters.

Method

Participants

Forty-seven preschoolers contributed data, 26 boys and 21 girls. The children ranged in age from 4 years, 3 months to 5 years, 9 months (mean age 4, 11). Fourteen additional children in this age range were dropped from the study, four for lack of interest and ten (16% of the total) for inability to either say or write at least the first letter of their own first name (see below). The children were all native speakers of English. Most were recruited from childcare centers and preschools in suburban Detroit that served primarily middle-class populations, and were thus similar to the Detroit preschoolers of Study One. Two of the children in Study Two attended a Head Start program in a small Michigan town.

We tested only children whose first names or commonly used nicknames began with *d, j, k, m, r,* or *s* and whose spoken names began with /d/, /ʤ/, /k/, /m/, /r/, and /s/, respectively. Thus, a child named Shelly, whose name begins with the letter *s* but the phoneme /ʃ/, would not have been included. There were 6 children whose names began with *d,* 11 with *j,* 6 with *k,* 12 with *m,* 6 with *r,* and 6 with *s.*

Procedure

All children were tested individually. Each child participated in two sessions, the second session usually taking place within one week of the first.

At the beginning of the first session, the interviewer introduced a clown puppet. The puppet conducted the remainder of the first interview, interjecting occasional banter to keep the session interesting. The puppet asked the child to say aloud, then spell aloud, and then print his or her own first name. The experimenter did not assist the child, except for prompting the child to say (or spell) the first letter and then the next letter, if such prompts were necessary. Any child who could neither say aloud nor write at least the initial letter of his or her first name was dropped from the study on the grounds that this child might not be familiar with his or her printed name and thus not in a position to show influences of own-name knowledge.

The letter printing task was given next. For this task, the clown asked the child to write on separate cards each of the letters *d, j, k, m, r,* and *s.* The letters were verbally presented in an order that was randomly chosen for each child. Then followed the free-choice letter-name task. The 6 letters *d, j, k, m, r,* and *s* were shown to the child in their uppercase forms in an order that was randomly chosen for each child. The clown asked the child, "What letter is this?" for each one. The task was repeated a second time with a different random order, yielding 12 responses in all. For the next task, the free-choice letter-sound task, the clown asked, "What sound does this letter make?" for each of the letters. Again, the letters were presented in two different random sequences, for 12 responses in all.

If the child missed 3 or more of the 12 questions on the free-choice letter-name task, he or she was given at this point the two-choice letter-name task. Here, the

clown asked questions of the form, "Is this a *d* or a *p*?" There were 12 items in all, 2 for each letter. The correct alternative was presented first for one of the questions about a letter and second for the other question. The child was asked about each of the letters once, in a randomly chosen order, and then about each of the letters again. Likewise, if a child made 3 or more errors on the free-choice letter-sound task, he or she was given the two-choice letter-sound task. The questions were of the form, "Is this a /də/ or a /pə/?" The pronunciations were the sounds of the letters on the two-choice letter-name task. Here and elsewhere, the phonemes corresponding to consonants were followed by /ə/.

The second session consisted of two tasks, an initial letter task and an initial phoneme task. Each task started with 3 practice items, all of which began with a vowel that was the name of an English letter. For the initial letter task, the experimenter presented a practice card, for example a picture of an ocean, and said, "This is an ocean. *Ocean* starts with the letter *o.* When you write *ocean,* the first letter is *o.*" The experimenter continued, "So, if I ask you which letter *ocean* starts with, *o* or *e,* what would you say?" For the initial phoneme task, the experimenter said, "This is an ocean. Ocean starts with the sound /o/. Can you hear that? Ooo . . . cean (elongating the /o/) starts with /o/. Ooo . . . cean. So, if I ask you which sound *ocean* starts with, /o/ or /i/, what would you say?" If necessary, the child was given help on the practice items.

For the test items of the initial letter task, the child was shown a card and was told the name of the pictured object, as in "This is a *doll.*" The child was then asked a question of the form, "What letter does *doll* start with, *d* or *p*?" The procedure for the initial phoneme task was similar except that the question was of the form, "What sound does *doll* start with, /də/ or /pə/?" There were 18 cards in all. The correct answer was in the first position for half the trials and the second position for the other half. The order of the initial letter and initial phoneme tasks was counterbalanced across children. Between tasks, the experimenter said, "I'll be using the same pictures again for something else." Each child received a different random order of the cards (via shuffling), but a given child received the same random order for both the initial letter and the initial phoneme tasks.

Materials and Stimuli

For the letter-name and letter-sound tasks, six 1.5 in. uppercase plastic letters were used—*d, j, k, m, r,* and *s.* The questions for the two-choice name and sound tasks are shown in the Appendix. The distractor for the two-choice tasks was a consonant letter (or its sound, in the case of the sound task) which did not appear as a target item.

For the initial letter and initial phoneme tasks, there were 18 4 by 6 in. cards with realistic drawings of common objects. Three cards were prepared for each of *d, j, k, m, r,* and *s.* The test words were monosyllabic and were chosen so that their spoken forms would be familiar to preschool children.

The corresponding printed words are normally introduced in either second or third grade (Harris & Jacobson, 1972), and so it is unlikely that the preschoolers were familiar with the printed forms of the target words. The distractors for the test items were all consonants. The similarity between the initial phoneme of the target and the distractor phoneme (Singh, Woods, & Becker, 1972) was approximately equal for words with each initial phoneme. Three additional cards were prepared to serve as practice items. The items pictured on these cards began with vowel phonemes that were spelled with the corresponding letter, as in *ocean*. The distractors for the practice items were also letter-name vowels. The Appendix shows the targets and distractors that were used in the initial letter and phoneme tasks.

Results

Our major question was whether the children performed better on the initial letter of their own first name than on the other letters in each of the tasks. For each task, we therefore compared the proportion of correct responses for the initial letter of the child's own name with the proportion of correct responses pooled over the five other letters. The data were analyzed by *t* tests, with the critical value ($p < .05$, one tailed) adjusted to compensate for the fact that a total of seven *t* tests were performed.

To score the data for the printing task, we analyzed each letter into an "ideal" form, with specific junctures and strokes. For example, the uppercase form of *d* (the form that children almost always used) has two strokes (the vertical line on the left and the curved line on the right) and two junctures. Each stroke was rated on a 5-point scale, ranging from 4 (perfect) to 0 (unrecognizable or not present). Each juncture was rated on a similar scale. In addition, the overall form of each letter was rated from 4 (correct number of strokes and correct arrangement) to 0 (unrecognizable or blank). For each child, we then calculated a proportion correct score for the first letter of the child's own first name. This was defined as the sum of the stroke and juncture ratings for that letter plus 5 times the overall form rating, divided by the maximum possible score for that letter. Similarly, we calculated the average score for each child across the five letters that were not the initial letter of the child's own name.

Reliability of the ratings of the printed letters was assessed by comparing a subset of the ratings with the judgments of a second rater. For each stimulus letter, the second rater was trained to use the rating system, practicing with feedback on ten of the children's printed responses. The second rater then rated a different 28 children's responses without feedback. The Spearman rank-order correlation coefficient between the first and second raters' judgments on these 28 children was .91.

Table 1 shows, for each task, the number of children who participated in the task, the proportion of correct responses for the initial letter of the child's own first name and the five other letters, and the difference between these two values.

TABLE 1
Proportion Correct for First Letter of Child's Own First Name and Other Letters, Study Two (Standard Deviations in Parentheses)

Task	*n*	Own name letter	Other letters	Difference[a]	Significance of difference[b]
Letter printing	47	.70 (.16)	.51 (.20)	.19	$p < .001$
Letter name, free choice	47	.99 (.07)	.87 (.22)	.12	$p = .004$
Letter name, two choice	9	1.00 (.00)	.86 (.14)	.14	$p = .056$
Letter sound, free choice	47	.46 (.49)	.42 (.40)	.04	n.s.
Letter sound, two choice	33	.82 (.30)	.75 (.16)	.07	n.s.
Initial letter	47	.76 (.32)	.72 (.21)	.04	n.s.
Initial phoneme	47	.75 (.28)	.75 (.20)	−.01	n.s.

[a] Apparent discrepancies in this column are due to rounding.
[b] Adjusted *p* values are shown.

As the table shows, a significant own-name advantage was found for the printing task and the free-choice letter-name task. Only nine children took the two-choice letter-name task, because most did well on the free-choice version of the task. A marginally significant own-name effect was found for these nine children. There were no significant own-name effects for the free-choice or two-choice letter-sound tasks, the initial letter task, or the initial phoneme task.

The results show significant own-name advantages for letter printing and knowledge of letter names but not for tasks that involve knowledge and use of letter sounds. However, performance on these latter tasks was influenced by a variable that has previously been shown to affect children's knowledge of letter sounds—the position of the letter's sound within its name. Three of the letters in the present study—*d*, *j*, and *k*—have CV (consonant–vowel) names. For these letters, the sound that the letter represents is in the salient initial position of the letter's name, the syllable onset. The other three letters—*m*, *r*, and *s*—have VC (vowel–consonant) names. For these letters, the sound symbolized by the letter is at the end of the letter's name, or part of the syllable's rime. Other research has found that children find it easier to learn the sounds of CV letters such as *d*, *j*, and *k* than the sounds of VC letters such as *m*, *r*, and *s* (McBride-Chang, in press; Treiman, Tincoff, Rodriguez, Mouzaki, & Francis, 1998). Compatibly, as Table 2 shows, the children in the present study did better on CV letters than on VC letters in both the free-choice and two-choice letter-sound tasks. A significant superiority for letters with CV names also emerged in the initial letter task, where knowledge of letter sounds (e.g., the sounds of *d* and *p*) was needed to determine whether a spoken word (e.g., *doll*) began with a particular letter. There was no significant superiority for letters with CV names in the initial sound task, where children chose between sounds (e.g., /də/ and /pə/) rather than letters. On the printing task and letter-name tasks there were also no significant differences between letters with CV names and letters with VC names.

TABLE 2
Proportion Correct for Letters with CV Names and Letters with VC Names, Study Two (Standard Deviations in Parentheses)

Task	*n*	Letters with CV names	Letters with VC names	Difference[a]	Significance of difference[b]
Letter printing	47	.52 (.18)	.56 (.21)	−.04	n.s.
Letter name, free choice	47	.89 (.20)	.89 (.20)	.00	n.s.
Letter name, two choice	9	.89 (.12)	.87 (.16)	.02	n.s.
Letter sound, free choice	47	.48 (.44)	.37 (.40)	.11	$p = .046$
Letter sound, two choice	33	.85 (.17)	.69 (.21)	.16	$p < .001$
Initial letter	47	.78 (.21)	.68 (.24)	.11	$p = .004$
Initial phoneme	47	.78 (.21)	.72 (.24)	.06	n.s.

[a] Apparent discrepancies in this column are due to rounding.
[b] Adjusted *p* values are shown.

Discussion

One goal of Study Two was to replicate the finding of Study One that, although children perform better with the initial letter of their own first name in tests of letter-name knowledge, they do not show a significant superiority for their own-name letter in tests of letter-sound knowledge. The same pattern of results emerged in Study Two. There was no reliable superiority for the first letter of the first name over other letters in either the free-choice or the two-choice letter-sound task. In contrast, there was a significant difference in the free-choice letter-name task and a marginally significant difference in the two-choice letter-name task, which was given to only those 9 of the 47 children who did not do well on the free-choice task. To some extent, the significant effects in the letter-name task may reflect the fact that children who could neither say aloud nor write at least the first letter of their first name were not included in the study. However, young children may be able to spell their names aloud without knowing what the letters look like. It was thus not a foregone conclusion that children would be better able to provide the labels for the first letters of their own names than for other letters.

The second goal of Study Two was to examine a range of tasks to determine which ones show an own-name advantage and which ones do not. As just mentioned, we found a superiority for the initial letter of the first name in letter-name knowledge. A similar benefit was found in the production of printed letters. There was no reliable own-name effect in the ability to provide the sounds of isolated letters or to make decisions about the initial sounds of words in the initial phoneme task. Also, there was not a significant own-name advantage in the initial letter task, which required children to use their knowledge of letter sounds in deciding how to spell words.

The absence of reliable own-name effects in the letter-sound and initial letter

tasks does not reflect a lack of sensitivity of these tasks. Performance on these tasks was affected by another variable—whether the letter's sound was at the beginning of its name (as with *d*, *j*, and *k*) or the end of its name (as with *m*, *r*, and *s*). On both the letter-sound and initial letter tasks, performance was significantly better for *d*, *j*, and *k* than for *m*, *r*, and *s*. As suggested by previous research (McBride-Chang, in press; Thompson, Fletcher-Flinn, & Cottrell, in press; Treiman et al., 1998; Treiman, Weatherston, & Berch, 1994), children use the names of letters to learn and remember their sounds. This strategy is facilitated when the sound that is symbolized by a letter appears in the salient initial position of the letter's name. Our finding that children did significantly better on letters with CV names than on letters with VC names in the initial letter task but not the initial phoneme task is consistent with this interpretation. To determine whether the printed form of *doll* begins with *d* or *p*, children must know that *d* corresponds to the phoneme /d/, which is the initial phoneme of *doll*. To determine whether the spoken form of *doll* begins with /də/ or /pə/, children must be able to access the word's initial phoneme but need not know the correspondences between phonemes and letters of the alphabet.

To summarize, preschoolers' experiences with their own first name boost their knowledge of the name of its initial letter and also their ability to print that letter. These experiences have little or no effect on children's knowledge and use of letter sounds.

GENERAL DISCUSSION

The results of the two studies reported here show that children's experiences with their own names help them learn about the components of the printed name—the letters. As early as preschool, children develop a special familiarity with the initial letter of their own first name, learning both about its visual shape (at least in uppercase form) and its conventional label. Thus, preschoolers can produce a visual representation of the initial letter of their own first name more accurately than for other letters (Study Two). In addition, children as young as four and five are more accurate at labeling a printed letter when it is the initial letter of their own first name than when it is some other letter (Studies One and Two). These effects are weak or nonexistent for letters of the first name beyond the initial letter and for letters of the last name. Apparently, the initial letter of a child's first name has a special status.

Although children's experiences with their own first name boost their knowledge of the visual form and label of the name-initial letter, other types of knowledge about the name-initial letter do not benefit. We did not find a significant own-name effect on ability to provide the sound symbolized by a printed letter (Studies One and Two) or performance on a task requiring knowledge of letter-sound correspondences (the initial letter task of Study Two). Children's knowledge of letter sounds was affected, instead, by whether the letter's sound is at the beginning of its name (as with *d* and *j*) or at the end of its

name (as with *m* and *r*). Children were more likely to know the sounds for letters of the former type than for letters of the latter type. This difference replicates other findings (McBride-Chang, in press; Treiman et al., 1998), and is consistent with the idea that children use the names of letters to learn and remember their sounds. Children can more easily find a letter's sound in its name when the sound is in the salient initial position of a CV letter name than when it is at the end of a VC letter name.

Why do children's experiences with their own first names benefit their knowledge about the label of the name-initial letter more than their knowledge about the sound value of this letter? The answer to this question may lie in the nature of children's experiences with their own names. Adults often spell a child's name aloud while printing the letters. For example, a parent or teacher may say the letters *d, a,* and *n* while writing Dan's name on a picture that the child has drawn. As Villaume and Wilson (1989) pointed out, such combined auditory and visual input is not typical of other early literacy events. For example, children often see the McDonald's logo but rarely hear the letters spelled out. They may hear "Time to go to *b, e, d"* or "The answer is *n, o,*" but may not see the words *bed* or *no* in print. At first, the oral script for the name and the written script for the name appear to function as indivisible wholes (Villaume & Wilson, 1989). For example, Dan may be able to recite /di-e-ɛn/ in a sing-song fashion but may not be able to say the letters individually. Gradually, children learn that the oral name consists of separate elements and that the printed name consists of separate symbols. They learn to link the two scripts, beginning with the initial elements. If it is the combined exposure to the printed form of the first name and its oral spelling that is critical, then it makes sense that we did not find a significant advantage in letter-sound knowledge for the initial letter of the child's own name. Children in the U.S. and Australia are more likely to hear their names spelled out by letter name, as in /di/, /e/, /ɛn/, than by letter sound, as in /də/, /æ/, /n/. Dan's early experiences with his name may give him more opportunity to learn the link between *d* and /di/ than the link between d and /də/.

Our results show that different factors affect the learning of letter names and the learning of letter sounds. One factor that appears to be critical for the learning of letter sounds is an understanding that the function of letters is to symbolize sounds, sounds that are often different from the letters' names (Bialystok, 1991). That is, children need to realize that letters have sound values in addition to their conventional labels. A second factor that appears to be critical for the learning of letter sounds is a degree of phonological skill—the ability to analyze the spoken name of a letter into its component phonemes. The present results showed that, regardless of a child's own name, knowledge of letter sounds was better for letters like *d,* where /d/ is relatively accessible in the letter's name, than for letters like *r,* where /r/ is less accessible in the name of that letter. Thus, the learning of letter sounds may require skills above and beyond knowledge about letter names. These addi-

tional skills, which are often acquired at school, are not much affected by children's experiences with their own names.

Our finding that knowledge of letter names and knowledge of letter sounds are influenced by different factors indicates that letter-name knowledge and letter–sound knowledge do not represent the same construct (McBride-Chang, in press). That is, our results do not support the view that there is a single type of knowledge, "alphabet knowledge," that can be assessed by asking children to label letters either by sound or by name. Instead, letter names and letter sounds are two distinct (though partially overlapping) bodies of knowledge, which are influenced by different experiences and different factors. Researchers should separately consider knowledge of letter names and knowledge of letter sounds rather than using a combined measure, as has been done in some studies (e.g., Iversen & Tunmer, 1993; Riley, 1996).

The finding that children's early experiences with their name boost their knowledge about the visual forms and labels of its component letters suggests that children treat their printed name as made up of smaller elements—letters—and their oral name as made up of smaller elements—letter names. As early as preschool, children search for links between the printed name and the oral name, beginning with the initial elements. That is, children's knowledge about their own names is analytic and letter-based from an early age, with a special priority for the initial letter. This view is rather different from the one that many researchers espouse when they call young children *logographic* (Frith, 1985) or *visual cue* (Ehri & Wilce, 1985) readers. Logographic readers, it is thought, focus on some salient visual feature of a printed display—not necessarily a letter—and use this feature to link the visual word to its spoken form. For example, a preschooler may use the shape of a logo or the thumbprint that happens to be near a word in order to identify the word (Gough, Juel, & Griffith, 1992; Masonheimer, Drum, & Ehri, 1984). As long as the key visual feature is present children will identify the word as such, even if the letters themselves are changed. Although we did not assess the reading skills of our participants, it is likely that many of the preschoolers would have been described as logographic readers. Our results suggest that, although young children may use logographic strategies with visually distinctive signs or with words that are presented for the first time, they use more sophisticated procedures with their own names. The intensity and special nature of children's experiences with their own names may help them develop analytic, letter-based identification strategies, strategies which may later be transferred to other words. Just as personal names appear to play a special role in the development of spoken language (Mandel-Emer & Jusczyk, submitted; Mandel, Jusczyk, & Pisoni, 1995), so names may be important in the development of literacy.

APPENDIX. STIMULI FOR STUDY TWO

Stimuli for two-choice letter-name task (choices for two-choice letter-sound task were the sounds corresponding to the choices in the letter-name task):

d: d or *l; j: b* or *j; k: k* or *n; m: t* or *m; r: r* or *f; s: p* or *s*
d: p or *d; j: j* or *f; k: b* or *k; m: m* or *l; r: n* or *r; s: t* or *s.*

Stimuli for initial letter task (choices for initial phoneme task were the sounds corresponding to the choices in the initial letter task, using the "long" sounds for vowels):

Practice:
ocean: o or *e; island: a* or *i; eagle: e* or *o*
Test:
doll: d or *p; desk: d* or *l; door: n* or *d*
jar: t or *j; jet: j* or *n; jail: j* or *f*
kite: b or *k; king: k* or *l; key: f* or *k*
milk: t or *m; mouse: l* or *m; moon: m* or *b*
ring: r or *b; rail: p* or *b; robe: f* or *r*
sign: p or *s; soup: s* or *n; sew: s* or *t.*

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