Research Article

A Prekindergarten Curriculum Supplement for Enhancing Mainstream American English Knowledge in Nonmainstream American English Speakers

Jan R. Edwards[a] and Peggy Rosin[a]

Purpose: The purpose of this study was to evaluate the efficacy of a curriculum supplement designed to enhance awareness of Mainstream American English (MAE) in African American English- (AAE-) speaking prekindergarten children.
Method: Children in 2 Head Start classrooms participated in the study. The experimental classroom received the Talking and Learning for Kindergarten program (Edwards, Rosin, Gross, & Chen, 2013), which used contrastive analysis to highlight morphological, phonological, and pragmatic differences between MAE and AAE. The control classroom received the Kindness Curriculum (Flook, Goldberg, Pinger, & Davidson, 2014), which was designed to promote mindfulness and emotional self-regulation. The amount of

instruction was the same across the 2 programs. Both classrooms participated in pre- and posttest assessments.
Results: Children in the experimental classroom, but not the control classroom, showed significant improvement in 3 norm-referenced measures of phonological awareness and in an experimental measure that evaluated comprehension of words that are ambiguous in AAE, but unambiguous in MAE, because of morphological and phonological differences between the 2 dialects.
Conclusion: Although more research needs to be done on the efficacy of the Talking and Learning for Kindergarten program, these results suggest that it is possible to enhance AAE-speaking children's awareness of MAE prior to kindergarten entry.

F ew would argue with the claim that the single most important problem in public education in the United States today is the *achievement gap*: the well-documented observation that children from low-socioeconomic status (SES) families perform less well academically than children from middle-SES families. A variety of strategies and programs have been proposed to close the achievement gap, including investing more in early childhood education, working with parents of young children to speak more to their children, reducing class sizes, and lengthening school days, among others. Although there is evidence that many of these strategies are effective, the achievement gap has barely changed, at least in part because these programs must be maintained over a long time period and are very expensive to implement. Therefore, we also need to

find less costly smaller scale short-term programs that may also be effective in decreasing the achievement gap. At least one specific challenge faced by children from low-SES families may be amenable to this approach. This is *dialect mismatch*: the fact that children from low-SES families frequently speak a nonmainstream dialect of English, whereas the language of instruction is Mainstream American English (MAE). For example, African American children from low-SES families generally use a variety of morpho-syntactic, phonological, and pragmatic features that are characteristic of African American English (AAE; Craig, Thompson, Washington, & Potter; 2003; Craig & Washington, 2002; Horton-Ikard & Miller, 2004; Washington & Craig, 1998, 2002a, 2002b). These linguistic differences between MAE and AAE may make learning to read more difficult (Brown et al., 2015) and hinder academic progress more generally.

Recent research on dialect mismatch has focused primarily on children in early elementary school. In a series of studies that followed children from kindergarten to first grade and from first to second grade, Terry and colleagues

[a]University of Wisconsin–Madison

Correspondence to Jan Edwards: jedwards2@wisc.edu

(Terry & Connor, 2012; Terry, Connor, Petscher, & Conlin, 2012) found that nonmainstream dialect use (as indexed by scores on the Diagnostic Evaluation of Language Variation [DELV]; Seymour, Roeper, deVilliers, & deVilliers, 2005), was predictive of poor reading performance; the higher the DELV score in kindergarten or first grade, the lower the reading score in first or second grade. Edwards et al. (2014) measured *dialect density* (number of dialect features relative to the total number of words in a 50-utterance language sample; cf. Oetting & McDonald, 2002) in young AAE-speaking children and found that dialect density was negatively correlated with comprehension of MAE in a lexical task that focused on words that were ambiguous in AAE but not MAE. The stimuli included words such as *cold,* which is ambiguous in AAE because of the AAE phonological feature of final consonant cluster deletion, as well as words such as *cats,* which is ambiguous in AAE because of the morphological feature of optional plural deletion. Furthermore, this relationship between dialect density and MAE comprehension was independent of vocabulary size.

Several theories have been proposed to explain why dialect mismatch might result in poor academic performance (e.g., Washington, Terry, & Seidenberg, 2013). One theory is that teachers may have negative impressions of students who speak nonmainstream dialects (e.g., Labov, 1995), and it is well known that teacher expectations impact academic outcomes (e.g., Cooper, 1979). A second hypothesis is that high dialect density in school-age children is a symptom of a more general problem with linguistic flexibility and metalinguistic awareness. The results of Craig, Kolenic, and Hensel (2014), who directly measured dialect shifting in AAE-speaking children whom they followed from first to third grade, support this claim. They found that children who showed less evidence of dialect shifting had poorer metalinguistic awareness. Last, there is considerable evidence that it is more difficult for adult listeners to process an unfamiliar dialect, particularly in noise (Clopper, 2012; Clopper & Bradlow, 2008). Both Harris and Schroeder (2013) and Edwards et al. (2014) proposed that such findings suggest that dialect mismatch will put non-MAE (NMAE) speakers at a disadvantage: In the noisy classroom environment, they need to expend additional cognitive resources simply to understand their teacher.

The explanations of the relationship between dialect mismatch and academic performance are not mutually exclusive. Furthermore, the fact remains that most children who speak a nonmainstream dialect of English face the challenge that the language of instruction is MAE when they enter school. Several programs have been successful at teaching MAE to NMAE-speaking school-age children. The dialect-shifting programs of Wheeler and Swords (2010) and Fogel and Ehri (2000) are aimed at children from third to sixth grade; these programs use contrastive analysis of morphosyntactic differences between MAE and AAE and focus primarily on written language. Toggle Talk (Craig, 2013) is designed for kindergarten and first grade children. This program also focuses on explicitly contrasting MAE (formal language or *school talk*) and AAE (informal language or *home talk*) and on morphosyntactic differences only.

There are currently no systematic programs that highlight differences between mainstream and nonmainstream dialects of English that are designed for children prior to school entry. It would clearly be desirable to introduce children who speak a nonmainstream dialect to the concept of dialect shifting and to the features of MAE prior to school entry. This type of early intervention would have the potential to enhance children's ability to understand MAE and to more efficiently learn how to dialect shift after kindergarten entry. The purpose of this study was to evaluate whether embedding an indirect approach that focused on phonological and pragmatic differences in addition to morphosyntactic differences between the two dialects (also using contrastive analysis) in a developmentally appropriate emergent literacy curriculum could increase understanding of MAE in NMAE-speaking children prior to kindergarten entry.

Method

Participants

Participating children were enrolled at Head Start centers in Madison, Wisconsin, for a summer kindergarten readiness program. The children were all 5 years of age rather than the mixed age preschool/prekindergarten classes typical at Head Start. Head Start enrolls children on the basis of family income less than 100% of the federal poverty guidelines and other family risk factors (e.g., homelessness, receiving Supplemental Security or Wisconsin Works-2 cash benefits, incarcerated parent, parent mental health issues, etc.).

The experimental and control classrooms were implemented at two separate Head Start centers. There were 13 children in the experimental classroom (seven boys, six girls, *M* = 5;5 [years;months]). There were eight children in the control classroom (two boys, six girls, *M* = 5;4). Ten of the 13 children in the experimental classroom were African American, two were Latino, and one was European American. The two Latino children were bilingual. All children were tested in English, and all instruction was in English. On the basis of authentic assessment by the second author who interacted with all children individually in informal conversation, all 13 children in the experimental classroom spoke a nonmainstream dialect of English, characterized by morphological and phonological differences from the mainstream dialect that are typical of AAE (Craig et al., 2003; Washington & Craig, 2002a).

Procedure

Design

There were two classrooms, an experimental and a control classroom. Both classrooms received a supplemental program in addition to Head Start's full-day 7-week summer kindergarten readiness program. This design was

intended to control for the Hawthorne effect, the well-known observation that individuals may change their behavior simply as a consequence of being part of a study (e.g., Wickström & Bendix, 2000)—that is, if there were a significant increase in performance between pre- and posttest assessments in the classroom that received the dialect mismatch curriculum supplement (the Talking and Learning for Kindergarten program; Edwards, Rosin, Gross, & Chen, 2013), we could not conclude on this basis alone that the TALK program was effective, as the posttest improvement could be due to the Hawthorne effect. However, we could claim that the TALK program was effective if both of the following conditions were met. First, there was also a control classroom that received a different curriculum supplement; and second, children in the experimental classroom, but not in the control classroom, improved their performance on the language-related measures that were the focus of the TALK curriculum.

The experimental classroom participated in TALK, a developmentally appropriate language and emergent literacy curriculum supplement that emphasizes differences between MAE and AAE using contrastive analysis. In brief, the TALK program, designed by the second author and described in more detail below, consists of scripted lessons on the basis of weekly themes with associated books and extension activities, including music, movement, and crafts. The TALK program combines standard language and emergent literacy training with a focus on phonological, morphological, and pragmatic contrasts between MAE and NMAE. The control classroom participates in the Kindness Curriculum (Flook, Goldberg, Pinger, & Davidson, 2014). The Kindness Curriculum is designed to teach mindfulness to preschoolers and is focused on emotional self-regulation and compassion for others. The Kindness Curriculum, developed by instructors at Center for Investigating Healthy Minds (CIHM), consists of structured lessons plus the use of naturally occurring student interactions before and after each lesson to reinforce concepts and practices learned during each lesson. Kindness lessons include focused breathing and movement practices to develop awareness; selected books related to the theme of kindness and caring; and activities that provide children with the opportunity to share and demonstrate acts of kindness toward one another.

The two curricula were delivered the same number of hours per week (1 hr per day), 4 days a week, for 7 weeks. The Kindness Curriculum was implemented by a speech-language pathologist (SLP) who is a trained mindfulness teacher from the CIHM. The TALK curriculum lesson plan activities were developed and delivered by two graduate students from the University of Wisconsin–Madison Department of Communication Sciences and Disorders with 100% supervision of the second author.

Assessments

Children in the two programs received the same pre- and posttest assessments. The pre- and posttest assessments were performed at the Waisman Center of the University of Wisconsin–Madison in the Learning to Talk Laboratory

(TALK assessments) and the CIHM (Kindness Curriculum assessments). Children were brought to the Waisman Center for the pre- and posttest assessment by their parents or by Head Start personnel. The research staff that administered the pre- and posttest assessments was different from the teachers who implemented the two curricula.

The assessments for the TALK program included standardized measures of expressive vocabulary and syntax (Expressive Vocabulary Test–Second Edition [EVT-2], Williams, 2007; the Elaborated Phrases and Sentences subtest [EPS] from the Test of Auditory Comprehension of Language–Third Edition [TACL, or TACL-EPS], Carrow-Woolfolk, 1999). We did not expect these measures to change during the 7-week program in either classroom, as expressive vocabulary and syntax were not direct targets of intervention for either program. Assessment also included three subtests to evaluate phonological awareness (blending subtest of the Comprehensive Test of Phonological Processing [CTOPP], Wagner, Torgesen, & Rashotte, 1999; rhyming and incomplete words subtests of the Test of Phonological Awareness Skills [TOPAS], Newcomer & Barenbaum, 2003). Because phonological awareness was a direct target of intervention for the TALK program, we wanted to evaluate whether there was a change from pre- to posttest for these measures in the experimental—but not the control—classroom.

The final assessment for the TALK program was an experimental measure of lexical comprehension of MAE (Edwards et al., 2014). In brief, the lexical comprehension task examined children's ability to understand words that were ambiguous in AAE, but unambiguous in MAE. For example, [koʊl] can mean *coal* or *cold* in AAE but can only mean *coal* in MAE. In a similar way, [kæts] can mean *cat* or *cats* in AAE but can only mean *cats* in MAE. Half of the items focused on a phonological contrast between MAE and AAE. This was final consonant cluster deletion (e.g., *coal* for *cold*), which is much more common in AAE than MAE (Craig et al., 2003; Guy, 1980). The other items focused on a morphological contrast between MAE and AAE. This was plural marking (e.g., *cat* for *cats*), which is optional in AAE if another number word is present (e.g., *fifty cent*; Washington & Craig, 2002a). All auditory stimuli were prerecorded and presented over a computer speaker. The experimental task included both a training and a test phase. The auditory stimuli for the training trials were recorded by a young adult female speaker of AAE, whereas the auditory stimuli for the test trials were recorded by a young adult female speaker of MAE. In the training phase, pictures and picture names were presented one at a time and the child was asked to repeat each picture name. The test phase used a three-alternative forced choice design. The child was presented with pictures of three words (target, foil, and distractor, as in *coal, cold,* and *bus* or *cat, cats,* and *block*) and was asked to point to the word that was named. As noted above, the condition of interest was the singleton consonant condition for both the phonological and morphological contrasts because these words (e.g., *coal, goal, cat, block*) are ambiguous in AAE but not in

MAE. We believe that this experimental task was an appropriate assessment for the TALK curriculum because both final consonant cluster deletion and plural marking were targets in this curriculum. Moreover, this formal method of testing lexical comprehension was not part of the TALK curriculum, and only six of the 36 words included in the experimental task were targets of instruction in the curriculum.

The children in both classrooms also participated in assessments for the Kindness Curriculum, which were designed to measure aspects of emotional self-regulation. In both classrooms, at the end of the programs, we also asked parents to fill out informal questionnaires on the two programs.

Mean pretest scores for both groups are shown in Table 1. Independent sample *t* tests for each pretest score revealed that there were no significant differences between the two groups except for one measure, the Incomplete Words subtest on the TOPAS. This subtest asks children to fill in missing sounds in familiar words (e.g., children hear "po_ato" and need to add medial "t" to form *potato*). Because the statistical analysis of the efficacy of the TALK program was to compare each child to him/herself, this pretest difference should not influence these results.

TALK Program

TALK is a curriculum supplement aimed at enhancing NMAE-speaking preschool children's awareness of MAE. TALK was held for 7 weeks, 4 days per week for 60 min as part of Head Start's existing kindergarten readiness program. TALK was designed by the second author in collaboration with two graduate students and is based on developmentally appropriate, evidence-based practice for instruction of language and literacy for preschool children (Blachman, Ball, Black, & Tangel, 2000; Bunce, 2008; Haager, Dimino, & Perlman Windmueller, 2014; Lybolt, Armstrong, Techmanski, & Gottfred, 2007; Pufpaff, 2009; Shanahan & Lonigan, 2013). The curriculum is consistent with the Common Core State Standards for kindergarten children in Wisconsin as well as the Head Start Child Development and Early Learning Framework. TALK incorporated standard language and emergent literacy training by promoting a number of literacy-related activities, including

vocabulary learning, compound and complex sentence production, narrative development (highlighting story grammar elements in literature; i.e., characters, setting, internal response, problem, and resolution), literal and inferential question comprehension, rhyming skills (rhyme detection, creation, production, and oddity), and segmenting/blending skills (in syllables, compound words, and consonant–vowel–consonant words.

The unique aspect of TALK was that it blended direct, explicit, and systematic practice, as well as embedded practice, on the contrasts between MAE and NMAE in the context of an emergent literacy curriculum. Because AAE is one of the most researched and systematic NMAE dialects and the majority of the children in the kindergarten readiness program were African American, the phonological and morphosyntactic features of AAE were the basis for dialect contrast (Gidley & Shade, 2010). The phonological and morphosyntactic NMAE–MAE contrasts and pragmatic skill targets were preselected and repeatedly practiced throughout all daily lessons. The TALK targets included morphological, phonological, and pragmatic targets. The morphological targets focused on marking of plurals, possessives, copula, and auxiliary verbs. The phonological targets focused on word-final prevocalic consonant cluster reduction (e.g., [bɛs] for *best*), syllable-initial [d] for /ð/ substitutions (e.g., [dɪs] for *this*), deletion of final /l/ or /r/ after the vowel /oʊ/ (e.g., [doʊ] for *door*), and metathesis (e.g., [æks] for *ask*). Last, the pragmatic/social language targets included the following: talking differently on the basis of context (e.g., greetings in formal vs. informal contexts), indirect requests, and listening to conversational partners.

The TALK lessons were delivered in large and small groups led by two graduate students under the full supervision of the second author. The Head Start lead and assistant teachers were present with their participation limited to behavior management or joining in the group activities. Each day the lead teacher rated the success of instruction and gave written feedback and suggestions about the content and execution of the TALK lessons (see the online supplemental materials, Supplemental Appendix A, for the Team Teaching Feedback Form). Feedback focused

Table 1. Mean pretest scores for participants in the experimental (TALK) and control (Kindness Curriculum) classrooms (standard deviations in parentheses).

Group	EVT-2[a]	TACL-EPS[b]	CTOPP: Blending[b]	TOPAS: Rhyming[b]	TOPAS: Incomplete words[b, c]
TALK classroom	98 (9)	11 (2)	10 (1)	9 (2)	10 (1)
	n = 13	*n* = 13	*n* = 10	*n* = 13	*n* = 13
Kindness classroom	91 (12)	9 (3)	11 (1)	9 (2)	7 (1)
	n = 7	*n* = 8	*n* = 2	*n* = 7	*n* = 7

Note. EVT-2 = Expressive Vocabulary Test–Second Edition; TACL-EPS = Test of Auditory Comprehension of Language–Third Edition; CTOPP = Comprehensive Test of Phonological Processing; TOPAS = Test of Phonological Awareness Skills.
[a]Standardized mean = 100, *SD* = 15; [b]Standardized mean = 10, *SD* = 3; [c]The two classrooms were significantly different at pretest, *t*(18) = 3.32, *p* = .004, *d* = 1.57.

on managing children during lessons or ideas for clarifying or sequencing instructions. Feedback did not alter the preselected TALK targets for the lessons but was used for ongoing continuous improvement of the instruction.

In addition to ensuring focused practice on the TALK targets, lessons were structured to set a predictable routine, address a variety of learning styles, engage children in brief targeted practice, and provide high interest activities and materials. Each day began with a 10-min opening circle, followed by a 20-min Talk Time and a 20-min Rhyme Time, and ended with a 10-min closing circle. The clinicians cotaught the opening and closing circle times with all of the children. The children were split into two groups for either Talk Time or Rhyme Time. The children switched groups for the other lesson before coming back together for the closing circle. Each clinician taught either Talk Time or Rhyme Time for 2 weeks and then alternated for the following 2 weeks. This pattern was repeated throughout the 7-week program.

Each week centered on a theme with selected TALK targets as the focus of the weekly activities (see Table 2 for the themes and associated books, stories, or poems selected). The TALK targets were then embedded into the daily lessons. Concentrated practice on certain TALK targets was planned and implemented during different activities (see Table 3 for an illustration of how a lesson incorporated the preselected TALK targets). Talk Time explicitly emphasized the morphosyntactic and phonologic contrasts between MAE and AAE. Talk Time incorporated shared-book reading, dramatic play, music and movement, crafts and book-extension activities. Children recited and acted out original scripts, poems, and short stories, which included MAE features such as plural /s/, the copula, and word-final consonant clusters.

Explicit emphasis during Rhyme Time was on phonologic contrasts within the framework of phonemic awareness and learning about the alphabetic principle. Children practiced rhyming, segmenting, and blending in addition to letter-sound correspondence. Rhyme Time also incorporated contrasts between MAE and AAE. For example, children practiced rhyming with words that ended in either /oʊl/ (coal, hole, bowl, goal) or /oʊld/ (cold, hold, bold, gold). Rhyme Time incorporated music and dance, movement games, table activities, and letter writing (on paper, whiteboards, air writing, finger on the floor).

Pragmatic and metalinguistic TALK targets were embedded into all activities but were explicitly taught during opening and closing circles. Dialect-shifting activities highlighted how everyone talks differently on the basis of different conversational and social contexts (e.g., friends vs. teachers, home vs. school). Appreciation for these differences was expressed, for example, in greetings in the opening circle time as children and teachers took turns saying *hello* in different languages or as different characters (e.g., goat or troll talk). Pragmatic features of MAE such as interpreting indirect questions (e.g., "Can you read your teacher's mind?") were also taught.

Instructional strategies were taken from evidence-based practice on how best to teach young children. Developmental hierarchies for emergent literacy (e.g., continuum of phonological awareness) were the touchstone for content selection and sequencing activities. There was an emphasis on adult-directed, explicit skill practice but embedded practice opportunities were planned. Errorless learning (i.e., providing a cue or prompt prior to or following instruction to promote a desired response) was used with the goal of building children's participation and confidence by successfully completing tasks. To ensure children's successful responses, TALK targets were modeled; examples were provided; and visual, verbal, gestural, and movement cues acted as scaffolds for children's responses within activities. For example, themed vocabulary words such as *toll* and *troll* were defined within the context of a story (*The Three Billy Goats Gruff*) and an associated picture with the written word and gesture was paired with the vocabulary. Then during Rhyme Time the answer to the question was provided prior to asking children to identify rhyme by saying, "Let's find the words that rhyme." "*Troll, toll,* they both say *oll,* those words rhyme." Strategies for high-quality shared-book reading (Rosin, 2006) were used with each book, story, or poem presented to focus children, elicit their participation, and reinforce their performance. Conversational recasts (Camarata & Nelson, 2006; Cleave, Becker, Curran, Owen Van Horne, & Fey, 2015) of phonological or morphological NMAE productions into MAE were used consistently throughout the lessons. Positive, proactive behavior management

Table 2. TALK themes and associated books, stories, and poems.

Week	Theme	Books, Stories, and Poems
1	About Me & Bees	*Happy Bees* by Arthur Yorinks
		ABC I Like Me by Nancy Carlson
		I Like Myself by Karen Beaumont
2	Three Billy Goats Gruff	*Three Billy Goats Gruff* by Janet Stevens
3	Vehicles: The Little Engine Who Could	*The Little Engine Who Could* by Watty Piper
4	Animals	*The Bold Bull* by Brittany Manning
		Edward the Emu by Sheena Knowles
5	Music/instruments	*The Bell Ringer's Belt* by Brittany Manning
6	Fairy tales /Princesses and elves	*The Elves and the Shoemaker* by Jim LaMarche
		The Shoemaker Rhyme by Brittany Manning
7	Sports	*Preston's Goal* by Colin McNaughton

Table 3. Week Two: *Three Billy Goats Gruff* —Examples of TALK targets in the lessons.

Program component	Activity	Example
Opening circle	Greetings Hello song Introduce theme	Who is here? Say, *I am*. Who's wearing (color, type of clothing)? Say, *I am*. Song Script: *Hello, Hello, Hello and how are you?* *I'm fine, I'm fine, and I hope that you are too!* Three Billy Goats Gruff: troll, toll, told, gold
Talk Time	Introduce vocabulary: Define, picture, written word, gesture Shared Book Reading Practice troll vs. goat talk Act out script on the basis of story with contrasts Review story with script using felt board characters Charades: Act out vocabulary	Vocabulary: *stroll, troll, toll, told, gold* *Three Billy Goats Gruff* Goat: *I am going for a* **stroll** *to get nice and fat* Troll: *Oh no you're not! The* **troll told** *him* Troll: *you must first pay a* **toll**. *ONE piece of* **gold** Children "act" out different characters or objects from story Examples: *goat, troll, gold, bridge* Children guess using the script: *Are you a _____?* Response: *I am a _____. Or I'm not a _____.*

Rhyme Time	"Lettercise" song
	"Rhyming to Read"
	Consonant-vowel-consonant words were used to teach:
	• Letter-sound correspondence
	• Rhyming
	• Blending
	• Segmenting "Break it Down"
		Alphabetic principle
		Letter sound correspondence
		Teach the foundational skills to apply to the
		    MAE/NMAE contrasts (e.g., How many sounds
		    do you hear in *toll* vs. *told*?)
		Do *toll* and *told* rhyme?
		Rhyming words are words that sound the same at
		    the end. Script used *"Troll, toll, they both say oll,*
		    those words rhyme

Closing circle	Leave-taking *"Say goodbye like a goat or a troll* *to your friend"*	Use of different voices to greet your friend

Note. TALK Targets: mark copula, auxiliary, the final stressed consonant cluster, and that we all talk differently depending on context. MAE/NMAE = Mainstream American English/non-MAE.

strategies (e.g., arranging the environment to minimize distractions and encourage attention, providing choices, foreshadowing upcoming events and transitions, making curricular adaptions, appreciating positive behaviors, and teaching replacement skills for unwanted behaviors) were essential for increasing self-regulation and readiness for learning. Additional information on the TALK curriculum is available in the TALK manual (see the online supplemental materials, Supplemental Appendix B).

Results

Pretest Versus Posttest Comparisons

Paired comparison *t* tests were used to compare pre- versus posttest results for all of the TALK assessments. As expected, there were no significant pre- versus posttest differences for the measures of expressive vocabulary and expressive syntax for either classroom. Children who received the TALK curriculum had significantly higher posttest scores on all three measures of phonological awareness: $t(9) = 2.293$, $p = .048$, $d = 0.97$, for the CTOPP blending subtest; $t(12) = 6.009$, $p < .001$, $d = 2.07$, for the TOPAS rhyming subtest; and $t(12) = 3.696$, $p = .003$, $d = 1.35$, for the TOPAS incomplete words subtest, as illustrated in Figure 1.[1] The children in the TALK classroom also had

higher posttest scores for the experimental measure of comprehension of words produced in MAE that are ambiguous in AAE but not in MAE, as shown in Figure 2. These pre- versus posttest differences were significant for all singleton consonant words, combined across the morphological and phonological contrast, $t(12) = 4.629$, $p = .001$, $d = 1.31$, and for the singleton consonant words in the morphological contrast, $t(12) = 4.796$, $p < .001$, $d = 1.23$. The difference between pre- and posttest scores approached significance for the singleton consonant words in the phonological contrast, $t(12) = 41.949$, $p = .075$, $d = 0.58$, for children in the TALK classroom. The pre- and posttest results for the MAE comprehension measure were also compared statistically for the children who received the Kindness Curriculum. Because the sample was smaller for the Kindness Curriculum ($n = 8$) classroom, these comparisons were made both with paired *t* tests and with a nonparametric test (the Wilcoxon signed-ranks test). All comparisons were nonsignificant with both analyses. For the less conservative Wilcoxon signed ranks test, the results were $z(7) = .42$, $p = .67$, for all singleton consonants; $z(7) = .94$, $p = .35$, for the singleton consonant words for the morphological contrast; and $z(7) = .85$, $p = .40$, for the singleton consonant words for the phonological contrast. We did not statistically compare the pre- and posttest results for the phonological awareness measures for the children from the Kindness Curriculum classroom because the sample size was too small to make statistical comparisons meaningful. Only two children were able to pass the baseline on the CTOPP blending subtest

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[1]The degrees of freedom are 9 rather than 12 for the blending subtest of the CTOPP because three children did not pass the baseline at pretest.

Figure 1. Pre- and posttest mean test scores (bars indicate standard errors) for experimental (top plot) and control (bottom plot) classrooms for three subtests that measure phonological awareness (standardized mean = 10, *SD* = 3).
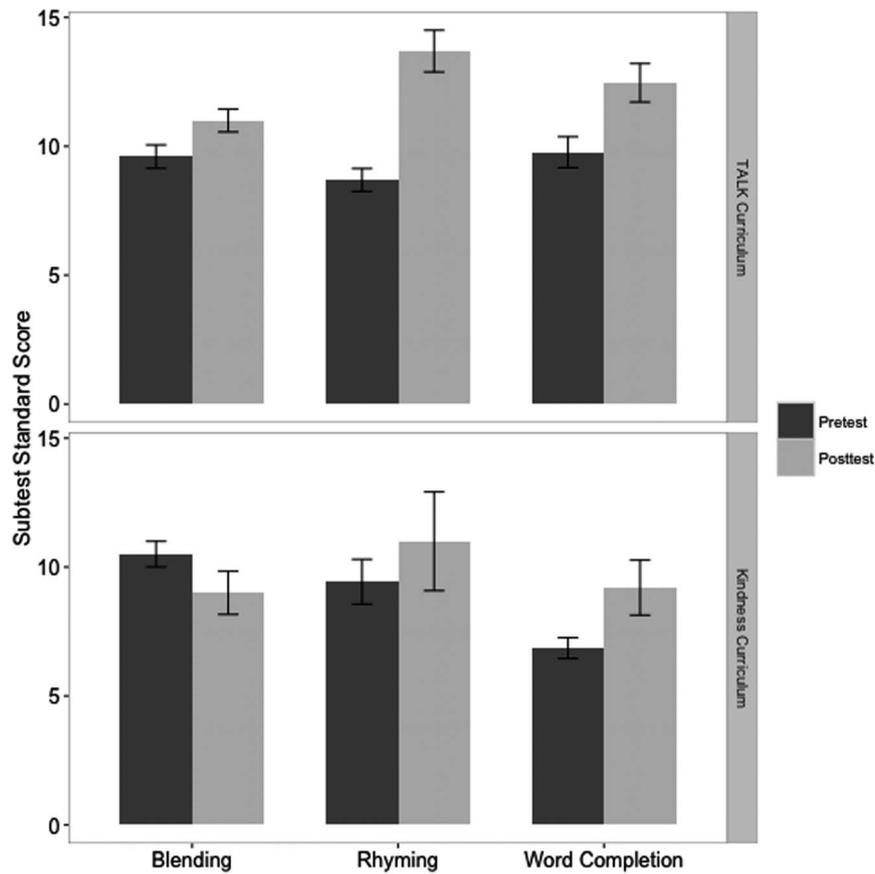
on the pretest assessment. Although seven out of eight children passed the baseline on both the rhyming and the incomplete words subtests of the TOPAS at pretest, only five of eight children passed the baseline on these subtests at posttest. There were no significant differences on either the EVT-2 or the TACL-EPS between pre- and posttest for either group.

Parent Questionnaire

We also asked parents to answer an informal questionnaire about the program (see the online supplemental materials, Supplemental Appendix A, for a copy of this questionnaire). We included this informal evaluation in large part because the Head Start administrators were concerned about whether the parents would be uncomfortable with a program that included a focus on differences between mainstream and nonmainstream dialects of English. The parent questionnaire included specific questions about children's phonological awareness skills as well as a section for more general comments on the program. Parents of all 13 participants in the TALK program returned the questionnaires. Thirteen of 13 parents indicated that their children were able to "rhyme words or point out rhymes," "say

the letters of the alphabet," and "say sounds that letters make," and 10 of 13 parents indicated that their children could "break apart words into sounds." The parent reaction was uniformly positive. Parent responses to the question "What is one thing you liked about the program?" included the following: "The fact that I could see that my child was learning. He always came home and talked about what went on in the classroom that day"; "I liked how you used rhyming words to help prepare the children for kindergarten. My favorite activity was sound out the words using the fly swatters"; and "I think all schools should do programs like this. It really help the kids learn." The parent questionnaire was not validated in any way. Nevertheless, with 100% of parents reporting, the responses suggested that parents viewed the TALK program positively.

Discussion

This article reports on a small-scale study to implement TALK, a curriculum supplement designed to enhance NMAE children's knowledge of MAE prior to kindergarten entry. After a short summer program that included only 28 hours of instruction, children in the experimental classroom, but not the control classroom, showed significant

Figure 2. Pre- and posttest mean test scores (bars indicate standard errors) for experimental (top plot) and control (bottom plot) classrooms for experimental measure of comprehension of words that are ambiguous in African American English but not in Mainstream American English.
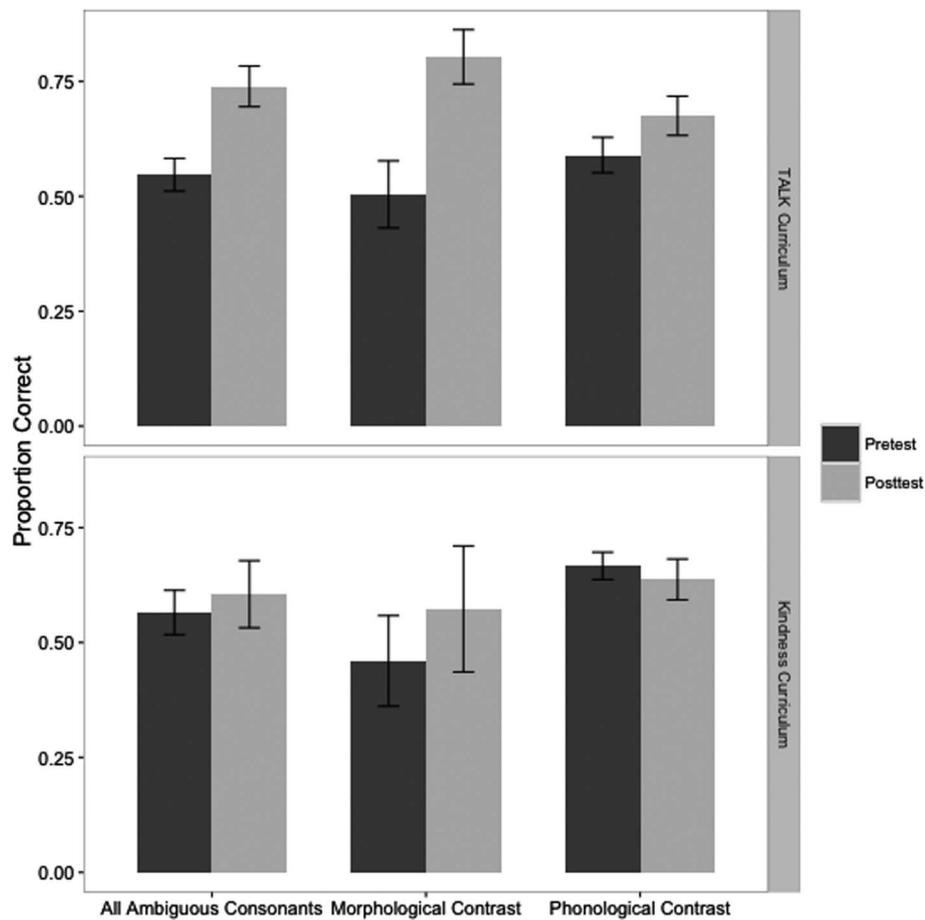
improvement in their understanding of words that are ambiguous in AAE but unambiguous in MAE, either because of a phonological feature of AAE (final consonant cluster deletion) or a morphological feature of AAE (plural deletion). Children in the experimental classroom, but not the control classroom, also showed significant improvement on three measures of phonological awareness—rhyming, blending, and word completion.

The Hawthorne effect can be ruled out as an explanation of these findings because children in the control classroom received the same amount of instruction, although in a different area altogether. As noted above, the Hawthorne effect results in an improvement in behavior simply as the result of being part of a study. If a Hawthorne effect were present, then we would expect that children in both classrooms would have improved performance on the phonological awareness measures and on MAE comprehension. Furthermore, although the improvement in phonological awareness might have occurred in an emergent literacy curriculum that did not focus on differences between MAE and AAE, it seems unlikely that the improvement in MAE

comprehension would also have been observed. Although it is possible that the lack of a significant pre- versus posttest difference in the control classroom was due to the smaller number of participants in this classroom, a visual inspection of most of the pre- and posttest means for the control classroom (see Figures 1 and 2) suggests that this explanation is unlikely, given the small changes in pre- and posttest scores (except for the Incomplete Words subtest of the TOPAS, for which there was a pretest difference between the two groups).

It should be emphasized that this is an extremely small-scale study with a number of limitations. First and foremost is the small number of participants; there were only 13 children in the experimental classroom and only eight children in the control classroom. Furthermore, there was no independent measure of treatment fidelity for either the TALK program or the Kindness Curriculum. Much more research needs to be done to determine the effectiveness of the TALK curriculum supplement, and there are several specific questions that must be addressed. First, is it preferable to explicitly tell children that AAE (home talk)

and MAE (school talk) are being contrasted? TALK did not do this with prekindergarten children, but the Toggle Talk program developed by Craig (2013) uses explicit instruction with children who are only slightly older than the children in the current study (kindergarten and first grade students). Second, is it important to include phonological and pragmatic differences as well as morphosyntactic differences between MAE and AAE? Again, TALK differs from Toggle (Craig, 2013) in that the latter focuses only on morphosyntactic differences. Third, who should implement this curriculum supplement? The TALK program was implemented by graduate students in speech-language pathology under the supervision of an SLP, whereas Toggle Talk is designed to be implemented by classroom teachers. Should the TALK program be implemented in 4K classrooms by a school SLP or by the classroom teacher? Or would it be most effective if the teacher and the school SLP worked together?

Another issue that must be addressed is the dialect spoken by the teacher and other adults in the classroom. In this study, the Head Start teacher spoke only MAE, whereas his teaching assistants spoke both MAE and AAE in the classroom. In most instances, it seems likely that the classroom teacher will speak MAE, but it seems equally likely that not all adults in the classroom will speak MAE consistently, particularly in a school setting with parent volunteers. This will result in challenging situations for the school SLP to negotiate, and additional research will be needed to determine what the best practices are in such contexts.

Last, the most important question is whether the differences observed in this study are sustained over the long term—that is, do children who participate in the TALK program perform differently at the end of kindergarten relative to children who do not? Do they learn to dialect shift from AAE to MAE earlier than children who do not participate in such a program? Are there secondary academic gains for children who participate in such a program relative to children who do not? Although the majority of AAE-speaking children learn to dialect shift by the end of second grade without any direct intervention, approximately 33% do not, and these children are at the highest risk for academic failure (Craig et al., 2014; Terry & Connor, 2012; Terry et al., 2012; Terry, Connor, Thomas-Tate, & Love, 2010). Would TALK or a similar program prior to kindergarten entry help some or all of these at-risk children?

Although much future research is needed to address these questions, these results add to a growing body of research that suggest that it is feasible to teach even young children who speak a nonmainstream dialect of English about MAE prior to kindergarten entry. This program is similar to other developmentally appropriate emergent literacy programs; the crucial difference is that the targets highlight contrasts between MAE and nonmainstream dialects. TALK was designed as a classroom program. As such, it could be implemented in a 4K classroom by a SLP as a Tier 1 Response To Intervention in a school where there many students speak a nonmainstream dialect. The goals of the TALK program are within the school SLP's

scope of practice (e.g., the focus on phonological awareness and on complex language production and comprehension). Furthermore, TALK uses techniques that are already familiar to school SLPs on the basis of other forms of speech and language intervention (e.g., conversational recasting). If a program such as TALK proves to be effective in larger scale future studies and if it can be implemented more widely in 4K classrooms by school SLPs, then children from low-SES families who speak a nonmainstream dialect of English will enter kindergarten with some knowledge of MAE and of dialect shifting.

As noted above, much more research is needed to evaluate the long-term effects of programs such as TALK. However, our working hypothesis is that such programs will allow NMAE speakers to allocate fewer cognitive resources to dialect mismatch at the onset of their academic career. Therefore, they will have more cognitive resources to focus on the general academic learning goals in their kindergarten classrooms.

Acknowledgments

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