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The effects of dialect awareness instruction on nonmainstream American English speakers

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Abstract The achievement gaps between poor and more affluent students are persistent and chronic, as many students living in poverty are also members of more isolated communities where dialects such as African American English and Southern Vernacular English are often spoken. Non-mainstream dialect use is associated with weaker literacy achievement. The principal aims of the two experiments described in this paper were to examine whether second through fourth graders, who use home English in contexts where more formal school English is expected, can be taught to dialect shift between home and school English depending on context; and whether this leads to stronger writing and literacy outcomes. The results of two randomized controlled trials with students within classrooms randomly assigned to DAWS (Dialect Awareness, a program to explicitly teach dialect shifting), editing instruction, or a business as usual group revealed (1) that DAWS was more effective in promoting dialect shifting than instruction that did not explicitly contrast home and school English; and (2) that students in both studies who participated in DAWS were significantly more likely to use school English in contexts where it was expected on proximal and distal outcomes including narrative writing, morphosyntactic awareness, and reading comprehension. Implications for theory and practice are discussed.

Keywords African American English · Southern Vernacular English · Instruction · Literacy · Writing · Reading

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Introduction

In the United States (US), an achievement gap exists between students living in low income and more affluent households that is persistent and chronic (Duncan et al., 2007). For example, recent reading achievement scores from the National Assessment of Educational Progress (NAEP), a national assessment for US fourth, eighth, and twelfth grade students (ages 9–16 years) in various subjects, indicate that 83% of fourth graders from more affluent households scored at or above the basic level compared to only 53% of children from low socioeconomic (SES) households according to the US National Center for Education Statistics (NCES, 2013). This means that nearly half of children living in poverty attained only partial mastery of word reading and reading comprehension skills by fourth grade. Given the confounding influence of race on social, health, and economic well-being in the US, it is not surprising to find that the achievement gap observed between different SES groups is also observed between different race groups. For example, on the 2011 NAEP, 83% of African American fourth graders were reading at or below Basic levels, compared to 55% of White students (NCES, 2011). Similar achievement gaps are seen worldwide according to findings from the Program for International Student Assessment (PISA; Kelly et al., 2013).

Among the many factors that likely contribute to these observed achievement gaps (e.g., poverty, family, school, and community characteristics), spoken dialect variation is of interest (Charity, Scarborough, & Griffin, 2004; Craig, Zhang, Hensel, & Quinn, 2009; Terry, Connor, Thomas-Tate, & Love, 2010). Briefly, dialects are social and regional variations of a language system with distinct phonological, morphosyntactic, semantic, and pragmatic features (Wolfram & Schilling-Estes, 2006). In the US, mainstream American English (MAE) is used in more formal contexts such as school and the workplace, and is most closely represented in standard English orthography. MAE is often referred to in the literature as standard, school, or classroom English. Dialects that are considered less formal, often hold less prestige, and are not well aligned with print are often referred to as home English or nonstandard, vernacular, or nonmainstream American English (NMAE). Despite negative perceptions, ample evidence from sociolinguistic research demonstrates that NMAE dialects are not poor, incorrect, or inferior forms of English; instead, these systematic, rule-governed linguistic varieties are simply an alternative means for conveying the same language form, content, and use (Wolfram & Schilling-Estes, 2006).

Specifically with regard to the achievement gap, African American English (AAE) has gained significant attention because it is used widely among most African American children and adults across the US, irrespective of region, gender, and SES. A resurgence of research on AAE has revealed important characteristics about its use among young children, including variation in use by context and over time (Connor & Craig, 2006; Craig, Kolenic, & Hensel, 2014; Terry, Connor, Petscher, & Conlin, 2012; Washington & Craig, 1994). As with most dialects of a single language, AAE shares many features with other NMAE dialects, most noticeably Southern Vernacular English (SVE). In fact, recent research by Oetting

and colleagues suggests that SVE and AAE are converging. (Oetting & Garrity, 2006; Oetting & McDonald, 2001, 2002; Oetting & Pruitt, 2005). Such findings illuminate that the differences between many NMAE dialects are related more to the frequency and contexts in which specific features are used than the features themselves. As an example, Table 1 provides a brief description of AAE and SVE features commonly produced in child speech.

There are three reasons why dialect variation may be particularly important to consider above and beyond other factors known to contribute to literacy achievement and that are associated with the achievement gap. First, many children living in poverty speak NMAE dialects that differ from MAE and standard English orthography (Labov, 1972; Washington & Craig, 1994). Second, research findings over the last 15 years suggest a strong, predictive relationship between young children's spoken NMAE use and various language and literacy skills, including vocabulary, word reading, spelling, phonological awareness, reading comprehension, and composition (e.g., Charity et al., 2004; Connor & Craig, 2006; Craig & Washington, 2004; Craig et al., 2009; Terry, 2006; Terry et al., 2010; Terry, Connor, Johnson, Stuckey, & Tani, 2016; Terry & Scarborough, 2011). Across these studies, children who are more dense NMAE speakers (i.e., use more unique features of the dialect) tend to demonstrate weaker performance on measures of language and literacy achievement. Third, researchers have observed NMAE production rates decrease significantly during the early elementary years in both speech and print, just as children are learning to read and write in school (Craig et al., 2009; Craig & Washington, 2004; Terry et al., 2012, 2016). Although it is not clear whether the relationship between changes in production rates and achievement are sequential (e.g., shifting precedes achievement) or reciprocal (e.g., achievement

Table 1 Features common across African American English (AAE) and Southern Vernacular English) and targets for the DAWS program

Feature	AAE or SVE	MAE
Zero copula[1,2,3]	You mad at Betty	You are mad at Betty
Zero plural[2,3]	The two girl like to play	The two girls like to play
Omission of past tense marker[2,3]	I see them before	I saw them before
Regularized past tense was/were[1,2,3]	When we was at the store, he left	When we were at the store, he left
Subject verb agreement, also known as omission of third person plural[1,2,3]	She go to the store	She goes to the store
Multiple negatives	He didn't do nothing bad	He didn't do anything bad
Habitual be	It be warm outside	It is [usually] warm outside
Zero possessive[3]	The girl mom taught her to bake cookies	The girl's mom taught her to bake cookies
Preiterite had[3]	It had rained all day	It rained all day

[1] Indicates features targeted on the DELV-S

[2] Indicates features targeted in Study 1

[3] Indicates features targeted in Study 2

gains predict shifting, which in turn predicts greater achievement), studies have shown that children who continue to use NMAE in contexts that presuppose MAE beyond the early elementary years tend to demonstrate weaker language and literacy achievement (Craig et al., 2009; Terry et al., 2012). Taken together, evidence from these studies suggests not only that children's spoken dialect use may be important to consider in the development of proficient language and literacy skills, but also that children's ability to dialect shift between NMAE and MAE may be particularly important to achievement. Therefore, our studies examined the malleability of children's NMAE use, focusing on whether specific manipulated instructional contexts (i.e., students randomly assigned to different instructional conditions) variably influenced children's use of NMAE features in speech and writing tasks, and were associated with reading achievement.

Dialect-shifting and early language and literacy achievement

An individual who is able to shift effortlessly among multiple dialects appropriately is bi- or multi-dialectal (Yiakoumetti, 2007). The skill that speakers must master to be truly bidialectal is referred to as code-switching or dialect shifting (Wolfram & Schilling-Estes, 2006). Dialect shifting is a metalinguistic skill (Efklides & Misailidi, 2010) because it requires one to be responsive to the linguistic environment (both oral and written) and augment language patterns to suit that environment (i.e., pragmatics). Two characteristics of dialect shifting are worth noting. First, dialect shifting occurs both within and between dialects. A speaker might increase or decrease the use of a single dialect or switch from using one dialect to using another. Second, a speaker may not always be aware of changes to his language patterns, even if she or he does so in a manner that is appropriately aligned with the communicative environment. Thus, dialect shifting may not always be a conscious behavior, which may influence its malleability.

It has been argued that achieving bidialectalism can be difficult because dialects of the same language often share many overlapping linguistic features (e.g., pronunciation, grammar, and lexicon). A speaker would not only have to notice that a differing dialect is being used, but also compare that dialect with their own, and then integrate the two dialects to gain proficiency in using both (Siegel, 1999, 2006). Therefore, it is plausible that some emergent bidialectal learners may need explicit instruction to use both linguistic varieties appropriately across multiple settings (Yiakoumetti, Evans, & Esch, 2006).

The challenge of achieving bidialectalism, particularly proficient use of the formal variety in school, is a concern for practitioners around the globe. Considerable debate within bidialectal communities has focused on whether or not the native (e.g., home English) or formal (e.g., school English) language variety should be used as the medium of instruction in the classroom. Examples of home English include Australian Aboriginal English, Caribbean Creole-speaking immigrants in Britain, the Greek Cypriot community, and AAE use among African Americans in the US (Butcher, 2008; Siegel, 1999; Yiakoumetti, 2007; Yiakoumetti et al., 2006). In each instance, the primary concern is that children's native dialect

interferes with gaining mastery of the dialect used in school. In the US, recent research with young children has revealed important characteristics about their dialect shifting behavior.

Young children dialect shift over time

There is evidence of spontaneous dialect shifting among young children. For example, in large cross-sectional studies using spoken narratives and picture description tasks, Craig et al. (2009) observed decreasing spoken production of AAE forms among children from first through fifth grades (ages 6–11 years), with the greatest decreases noted in first grade (Craig et al., 2009; Craig & Washington, 2004). In separate longitudinal studies using the same measure of spoken dialect production at all time points, researchers observed significant decreases in spoken NMAE production rates between kindergarten and first grade (Ortiz et al., 2012; Terry, & Connor, 2010), during the first grade (Terry et al., 2010), between first grade and second grade (Terry et al., 2012), and during second grade (Terry et al., 2016). Importantly, in each of these studies, most children were observed to change their dialect use spontaneously and without explicit instruction.

Young children dialect shift across linguistic contexts

There is also evidence of dialect shifting between oral and written contexts. For example, in a cross-sectional study, Ivy and Masterson (2011) found that third graders produced AAE features at similar rates in spoken and written contexts, whereas eighth graders used significantly more AAE features in spoken than written contexts. In another cross-sectional study, Craig et al. (2009) found that written production of AAE features decreased significantly between first and fifth grades. Both Connor and Craig (2006) and Craig, Kolenic, and Hensel (2014) reported differences in children's use of AAE features between contexts that presupposed more MAE (e.g., story retell with a book; sentence imitation task) than NMAE (e.g., picture description).

Young children's dialect shifting is related to language and literacy achievement

Finally, there is evidence that children who demonstrate shifting from more to less NMAE use during early schooling may have stronger language, reading, and writing skills. For example, in three longitudinal studies with primary grade children, researchers found that dialect shifting was predicted by performance on oral language measures, such as vocabulary, morphosyntax, and phonological awareness (Terry et al., 2012, 2016; Craig et al., 2014). Terry and colleagues also found that children who shifted from more to less NMAE use during first and second grade demonstrated greater gains in word reading and reading comprehension at the end of the school year (Terry et al., 2012, 2016). Additionally, Craig and colleagues found that dialect shifting was correlated significantly with word reading and reading comprehension in kindergarten through second grades (Craig et al., 2014).

In sum, findings from these recent studies bring two important conclusions to the forefront. First, many children appear to change their dialect use in speech and print without explicit instruction to do so. Although it is unclear why some children seem to naturally shift from speaking more to less MAE early in schooling, oral language skills, such as vocabulary and morphosyntax, appear to be associated with their developing dialect shifting ability. Second, children who do not dialect shift from more to less NMAE when MAE is expected during the early elementary years, tend to demonstrate weaker literacy achievement and less growth in reading skills during the school year. This may be especially noticeable among children who continue to use NMAE forms on written tasks where MAE is the expectation. These findings beg the exploration of instructional programs designed to encourage and explicitly teach dialect shifting.

Encouraging and teaching dialect shifting: dialect-informed literacy instruction

Researchers in the US and many other nations have explored the effectiveness of dialect-informed instruction in improving academic outcomes among children who speak various vernaculars or creoles of the mainstream language (James & Garrett, 1992; Wheeler & Swords, 2004; Yiakoumetti, 2006). In reviewing previous research on educational programming that included dialect and creole language varieties in classrooms, Siegel (1999) described three types of programs: instrumental (where children are taught to read and write in the home language variety before learning the standard), dialect accommodation (where children are allowed to speak the home variety in school, but it is not a part of formal instruction), and dialect awareness (where the home and standard varieties are studied as natural characteristics of language). The latter approach has been explored and techniques have been developed for both younger and older students to increase dialect awareness (e.g., Rickford, 1998; Wheeler & Swords, 2004). However, most of these studies have not used experimental designs to test whether (1) dialect shifting is malleable and (2) whether increasing dialect shifting ability contributes to gains in literacy skills.

Two empirical studies have examined the effectiveness of instruction designed to encourage the use of the standard or mainstream language variety in school. In the first, Yiakoumetti (2006) investigated whether it was possible to teach students who used Cypriot dialect (a nonmainstream, informal language variety) to use Standard Modern Greek (a mainstream, formal variety) within the school context using a systematic curriculum. In a 20-min daily intervention that lasted for 3 months, students were exposed to both language variations. The intervention required students to translate spoken and written production from the informal to formal variety. Findings suggested that students demonstrated greater dialect awareness because there was a significant decrease in the use of Cypriot dialect in written and spoken contexts.

In the second, Fogel and Ehri (2000) compared three instructional approaches for US children in third and fourth grades ($n = 89$, approximately 8–10 years of age)

who used AAE forms consistently in their writing. Students received one of three treatments: an Exposure condition where students were exposed to MAE features in stories; an Exposure plus Strategy condition where students were also provided with explanations of MAE rules; or an Exposure plus Strategy plus Practice condition where students were also guided through practice transforming sentences from AAE to MAE. The total amount of instruction in all three conditions was approximately 35–45 min. Results showed that students in the Exposure plus Strategy plus Practice condition significantly outperformed students in the other two conditions in transforming sentences with AAE forms into MAE forms and used fewer AAE forms in response to an extended story-writing prompt.

Results from these studies suggest dialect-informed instruction that goes beyond exposure and traditional grammar lessons to include opportunities to apply that knowledge in writing can have a robust effect on children's writing proficiency. However, important questions remain. For instance, if children who do not dialect shift spontaneously by second grade demonstrate weaker gains in reading skills, then dialect awareness instruction may be more effective for younger children (7–8 years of age). However, the aforementioned studies included older children who were in the upper elementary grades (e.g., 9–10 years of age). It is unclear whether such instruction can be delivered effectively to younger readers and writers and whether dialect shifting is malleable among younger children who are dense NMAE speakers. It is also unclear whether contrasting the home (i.e., NMAE) and standard (i.e., MAE) language varieties is a necessary component of such instructional programs—an instructional component that was utilized in Fogel and Ehri (2000) and has shown some promise in other reports (e.g., Wheeler & Swords, 2004, 2006). It is possible that teaching school English forms without contrasting it with home English would have a substantial effect on dialect shifting. This hypothesis remains to be tested, but it is an important distinction given the potentially political nature of addressing NMAE in US schools. For example, during the late 1990s, the Oakland School District in California decided that children who use Ebonics (i.e., AAE) should receive English as a second language services. Outcry from the press, politicians, teachers, and even families forced the district to change this policy (Rickford, 1998; Wolfram, 1999).

Purpose of the studies

In this paper, we present two studies that were designed to address two important and related research aims. In the first study, there were two specific aims: (1) to examine whether dialect shifting between home English and school English might be malleable for second through fourth graders (i.e., ages 7–9 years) who used home English in contexts where school English was expected; and (2) to examine whether an explicit focus, compared to an implicit focus, on home versus school English might lead to potentially greater use of school English features where school English was expected. In the second study we wanted to investigate the efficacy of an expanded version of the dialect shifting program created in Study 1. We aimed (1) to replicate that dialect shifting was malleable with a larger sample of students;

and (2) to examine whether decreased use of home English affected reading comprehension. We hypothesized that dialect shifting would be malleable based on the evidence provided by Fogel and Ehri (2000) and other studies cited above. We were less sure of our hypothesis that the explicit instruction in dialect shifting between home and school English would facilitate children's ability to dialect shift compared to an implicit focus because there is little experimental evidence to date in the US.

Study 1: explicit versus implicit dialect instruction

Participants

Students in second through fourth grade (ages 7–9) were recruited from two low-SES elementary schools in Northeast Florida. Students who returned parent consent forms were included in the study if they met the following criteria on two screening measures: use of at least one home English (NMAE) feature on either Part I of the *diagnostic evaluation of language variation—screening test* (DELV-S; Seymour, Roeper, & deVilliers, 2003) or in a narrative writing sample. In both instances, school English (MAE) use was the presupposed expectation. Of 140 students screened, 126 (89%) met these criteria and entered the study, with 116 completing the 4-week instructional program and post-instructional program measures (8% attrition). In every case, attrition was due to students leaving the school. Student and teacher participation was strictly voluntary with both having the opportunity to withdraw at any time.

The students attended two schools across 14 classrooms located in a large public school district in a metropolitan area in the southeastern US. Although the school district was diverse socioeconomically and ethnically, the two schools in which the study took place were fairly similar in racial/ethnic composition and in the percentage of students who qualified for federal free and/or reduced price lunch (FARL) programs, an indicator that the student lived in a low SES household. Both schools qualified for Title I funds and both reported that approximately 93% of students schoolwide were eligible for FARL. No students, including those identified as receiving special education services (18%) or being Limited English Proficient (1%) were excluded from the study. Of student participants, just over 95% were identified as African American, 2% were identified as Hispanic, 2% were identified as White, and 1% was identified as multiracial. Additional information on NMAE use in the final participant sample is provided in Table 2.

Study design

All students who met the screening criteria were randomly assigned within classrooms to one of three conditions: (1) Control, a "business as usual" group ($n = 38$ students; 6 s grade; 14 third grade; 18 fourth grade); (2) Editing, an editing instructional program with only implicit attention to dialect shifting ($n = 39$; 7 s grade; 16 third grade; 16 fourth grade); and (3) Dialect Awareness (DAWS), an

Table 2 Means and standard deviations for dialect usage pre-intervention by DELV-S category, dialect variation (DVAR) on the DELV-S and Dialect Density Measure (DDM%) on the writing sample—Study 1

	n	DVAR M (SD)	DDM% M (SD)
Group			
DELV-S strong variation	79	62.38 (17.26)	4.71 (3.84)
DELV-S some variation	15	31.38 (10.01)	3.22 (2.39)
DELV-S no variation[1]	22	14.83 (10.81)	1.56 (1.47)
Grade			
2	20	45.51 (29.10)	4.09 (4.18)
3	46	51.86 (22.92)	4.24 (3.32)
4	50	49.00 (25.30)	3.43 (3.56)
Total	116	49.51 (24.98)	3.92 (3.57)

editing plus explicit dialect awareness instructional program ($n = 38$ students; 7 s grade; 15 third grade; 16 fourth grade). Students in the Control group remained in their classrooms and participated in the instruction provided by the classroom teacher. The implicit Editing and explicit DAWS conditions used the same instructional materials, met for the same length of time, and used the same research assistants as instructors. However, the DAWS instructional program embedded discussions about home and school English, how they were the same and different, and when to use each (more information is provided below). At the end of the instructional programs, students in all conditions were re-administered the DELV-S, the narrative writing prompt, and an Editing Task. By randomly assigning students within classrooms, we controlled for differences in instruction and classroom environment. All participants in each group received the same reading curricula in their regular classrooms.

Instructional programs

The instructional programs were developed specifically for this study. Based on the evidence that many students begin using more MAE features in first grade (Terry et al., 2012), the instruction focused on students in second, third and fourth grades who continued to use NMAE forms in speech and print on academic tasks. Writing was selected as the target outcome based on the findings by Craig et al. (2009) that dialect use in writing, but not oral language, was associated with reading outcomes. Moreover, the expectation for school English is high in the linguistic context of writing. The home English targets were selected based on findings by Johnson and Thomas-Tate (2009) about AAE feature use among African American fourth graders across oral narrative, oral reading, and written narrative contexts. Specifically, students were found to use the following NMAE features most frequently in their writing samples (see Table 1 for examples): (1) copula/auxiliaries [e.g., you (are) making the bed]; (2) zero plural [e.g., the boy(s) are counting money]; and (3) past tense [e.g., yesterday, my sister help(ed) me with homework]. To answer our question regarding implicit versus explicit focus on dialect shifting, the Editing instructional condition was developed to target these

grammatical features. In the Editing condition, students were not introduced to the concept of home and school English. The aforementioned grammatical features were taught simply by describing them as features that should be used in our writing all the time.

In the DAWS condition, a dialect awareness component was added, where students were taught how to contrast home versus school English and the settings in which each were appropriate, during the first week. These discussions were integrated into the daily lessons. The metaphor of informal versus formal clothing was used to teach this concept (Wheeler & Swords, 2004), along with reading literature that included both formal and informal speech patterns. Students and the research assistants had discussions on the different types of clothing and the settings where they are appropriate (e.g., informal clothes at the park versus formal clothes at a wedding). Next, they discussed language, dialects and how sometimes we speak differently to different people or in various settings (e.g., informal speech or home English with friends on the playground versus formal speech or school English with persons of authority). This metaphor was used throughout the remainder of the DAWS instructional program as students learned more about the process of dialect shifting between home and school English. Participants in this group were reminded to use either home or school English as appropriate when instructions for each activity were presented, while those in the Editing group did not receive any information of this nature. The two experimental conditions differed only in that the DAWS group had discussions on dialect use, the appropriateness of formal and informal language in a variety of contexts, and explicit directions on when to use school English to complete activities.

The Editing and DAWS instructional programs took place for 15–20 min per day, four days per week, over a 4-week period in small pull-out groups (two to four students each) in a quiet area of the school. There were four groups for both instructional programs and a cyclical approach was used to teach two target forms each week. The general framework for the instructional programs was an introduction to the dialect forms on Day 1, receptive language activities on Day 2 to build a foundation for the new knowledge, and expressive language activities on Day 3 to practice using the forms. On Day 4, participants were given a task where they were instructed to write a brief story or edit sentences using the target grammatical features of the week. Day 4's activities provided information on students' understanding and usage of the material presented that week. The receptive and expressive tasks for both the Editing and DAWS groups included activities such as sentence sorts, cloze sentences, sentence completion, sentence generation, editing sentences, puzzles, memory games, and bingo. Through these activities, students were able to practice the target grammatical features with numerous trials and immediate corrective feedback was provided as necessary. Scaffolding tips were embedded into the lesson plans to ensure research assistants were able to help all students learn the skills as best as possible. Upon completion, all activities were reviewed as a group to provide feedback. See "Appendix A" for sample lesson plans for both of the instructional programs.

Fidelity

Because students in all three conditions shared classrooms (i.e., randomly assigned within classrooms), we considered the classroom-learning environment and any potential classroom teacher effects throughout the design. All classrooms used the same English language arts curriculum, which included the study of language usage, reading, and literature. To monitor fidelity, research assistants were required to complete a *daily record of instructional program activities* form, which allowed the researchers to keep track of the activities completed, any changes made to the instructional program, and all other pertinent information that could potentially impact the study (e.g., interruptions, school functions students were required to attend, extreme behavior problems). Additionally, research assistants were asked to audio record a full day of the instructional program once a week as a measure of how well they were following the protocol. Recordings were listened to by two of the authors and feedback was provided to the research assistants as needed as a measure of intervention fidelity. The fidelity checklist included information such as whether the research assistants followed the script accurately and completed all necessary language activities. The same authors also observed sessions once per week to ensure that the instructional program was administered as intended. Additionally, we determined that the students were highly engaged in both the treatment conditions and hence, it is unlikely that the differences observed would be attributable to differences in engagement.

Measures

Dialect variation

Part I of the DELV-S (Seymour, Roeper, & deVilliers, 2003) was administered at two time points in the study: first as part of the screening protocol prior to the instructional program and second after the instructional program was completed. Part I of the DELV-S is used to measure language variation status using 15 items. Students were asked to describe actions and respond to questions based on pictures to elicit phonology and morphosyntactic features that occur variably in NMAE such as substitution for postvocalic/θ/and/ð/, third person singular has/have, third person singular -s/-es, third person singular do/does, and the copula was/were. Responses were scored for the frequency of MAE and NMAE features produced, and students were classified according to the test's criterion scores as speaking with strong, some, or no variation from MAE. Reliability (alpha) for this sample was 0.80.

As an indicator of the rate of students' NMAE feature production in speech, scores from each item in Part 1 of the DELV-S were transformed to obtain the ratio of dialect variation of each student (DVAR; Terry et al., 2010). The DVAR score is calculated using the total scores of responses that vary from MAE (Score 1) and responses that are MAE (Score 2) from the DELV-S. Score 1 is divided by the sum of Score 1 and Score 2. This number is then multiplied by 100 to obtain the percentage of DVAR, where 0 indicates that the speaker used only MAE forms

while completing the DELV-S and 100 indicates that the speaker used only NMAE forms while completing the DELV-S. Table 2 provides the DVAR for each of the variation groups described by the DELV-S, as well as by grade. As an indicator of the rate of students' NMAE feature production in writing, a Dialect Density Measure (DDM) was calculated from writing samples. This score is the ratio of NMAE dialect features produced to total words used in the sample (Craig & Washington, 2000). In this study, targeted morphosyntactic NMAE features that were used to calculate DDM were taken from taxonomies established by Thompson, Craig, and Washington (2004) and Oetting and McDonald (2001).

Written language sample

As a measure of spontaneous dialect usage in a writing context, a narrative writing task was administered at two time points in the study: prior to and after completion of the instructional program. In this task, students were shown a picture, provided with a prompt, and instructed to write a story about what they thought happened in the picture. The prompt was: "Write a story about what happened before the boy spit out his milk". 30 min were allotted for students to both plan and write their narratives. Participants did not receive any assistance during the writing task. The written language samples were transcribed and analyzed using the Systematic Analysis of Language Transcripts software (SALT; Miller & Chapman, 2008). The mean number of words used in the writing samples was 99 on the pre-instructional program administration and 114 on the post-instructional program administration. A measure of the percentage of target home English features by total number of words (home English Target %) was calculated in SPSS (version 17) and used in the analyses (see Table 3). Interrater reliability was established by two of the authors who independently checked half of the coded writing samples. Cohen's kappa for total number of home English features used was 0.774; alpha was 0.98.

Editing task

As a measure of students' ability to identify and change home English forms used in sentences to school English, an editing task was administered to third and fourth grade students before and after the instructional program was completed (see "Appendix B"). Due to unexpected scheduling challenges within in the school, second graders were administered the task only after the instructional program was completed. In this task, students' proficiency with using the same grammatical forms targeted in the instructional programs was assessed by asking them to read a sentence and then rewrite it "the way they would see it in a book at school". None of the items on the Editing task were the same as those used in the instructional program. The same items were presented at both administration time points and each targeted form was presented in two items on the task. In addition, two foils that were not targeted dialect features were included on the task. Reliability (alpha) on this task was 0.85.

Table 3 Pre- and posttest means and standard deviations for assessments by condition—Study 1

Condition	n	Pretest editing % correct (no 2nd graders) Mean (SD)	Posttest editing % correct (no 2nd graders)	Posttest editing % correct (all students)	Pretest DVAR	Posttest DVAR	Pretest DDM target writing %	Posttest DDM target writing %
Editing + dialect awareness (DAWS)	39	85.59 (20.23)	95.96 (11.78)	93.24 (16.44)	43.54 (26.11)	39.55 (24.06)	1.21 (1.64)	1.57 (2.10)
Editing only	39	77.50 (26.27)	81.14 (27.25)	83.08 (25.71)	52.82 (23.61)	46.43 (20.12)	1.51 (2.21)	1.77 (2.26)
Control	38	76.46 (32.32)	71.87 (29.85)	73.68 (29.49)	52.08 (24.78)	49.21 (22.52)	1.81 (1.95)	1.84 (2.24)

None of the pretest differences between groups were significant ($p < 0.05$). Data are provided only for students who met study criteria and completed the intervention (n = 116). Means for the Pretest Editing task do not include second graders. Posttest Editing results are provided for the entire sample for 3rd and 4th graders. Higher DVAR and DDM% Writing represents greater use of home English whereas higher Editing % represents greater use of school English. For the writing task, students generally wrote longer essays for the post-testing

Procedures

Administration of assessments

All measures were administered and scored by trained research staff that were, to the extent possible, unaware of the students' assigned condition. The DELV-S was administered to students individually, according to the directions presented in the manual, in a quiet area of the school. The writing and editing tasks were administered to groups of students in their classrooms.

Results

Analyses revealed no pre-instructional program differences by group for grade [X^2 (4) = 0.130, $p = 0.998$], gender [X^2 (2) = 3.023, $p = 0.221$], or race/ethnicity [X^2 (6) = 3.130, $p = 0.792$], confirming equivalence at baseline. Additionally, using MANOVA (GLM, SPSS), we found no pre-instruction group differences on the pretest measures: NMAE use on the DELV-S (%DVAR), on the Editing Task, and in the writing sample [Wilks' Lambda = 0.926, $F(6, 1.282) = 0.479$, $p = 0.267$] (see Table 3).

We used general linear multivariate models (i.e., MANOVA) to investigate the effect of the three conditions on students' use of home versus school English on the three post-instructional program assessments, including the (1) percentage of items correctly edited to school English on the editing task; (2) DVAR percent from the DELV-S; and (3) frequency of target home English features used on the writing task. Means and standard deviations for each group are provided in Table 3. MANOVA allowed us to control the increased risk of Type I error related to multiple analyses.

Results of the analyses revealed significant treatment group differences when considering performance on all three outcomes, editing, writing, and DVAR [Wilks' Lambda = 0.878, $F(6, 222) = 2.248$, $p = 0.024$], with students in the DAWS instructional program utilizing more school English and less home English on the tasks than students in the other groups. The mean effect size (d) for all three outcomes was 0.44, which is educationally meaningful (Hill, Bloome, Black, & Lipsey, 2008).

We then conducted post hoc analyses to further explore the effects of DAWS on the three outcomes. Because students were nested in groups within classrooms, we conducted the post hoc analyses using Hierarchical Linear Modeling (HLM version 7), which accounts for the nested structure of the data. We coded the conditions as follow: DAWS = 1, all others = 0; and Editing = 1, all others = 0. The control group was the fixed reference. Examining the effect of condition on the post-DAWS Editing task (z-score) controlling for the pre-DAWS Editing task (z-score), we found DAWS had a significant standardized effect size of 0.686 ($p < 0.001$) and the Editing program had a significant standardized effect size of 0.343 ($p = 0.045$). Using the hypothesis testing function of HLM revealed that the DAWS effect was significantly greater than the Editing Program effect [X^2 (2) = 16.610, $p < 0.001$].

Model results are available in Table 4 and mean differences are available in Fig. 1 top.

For the written language sample (DDM percent), we found a nonsignificant but meaningful effect (d) of −0.28 for DAWS ($p = 0.169$) given the ages of the children (Hill et al., 2008). The negative effect size suggests that the number of home English forms was lower for DAWS than the control (see Table 5; Fig. 1 bottom). There was no significant effect for students in the Editing condition when compared with the control condition ($p = 0.296$).

With regard to the DELV-S assessment of oral dialect variation (DVAR), we found a significant effect of treatment only for the DAWS condition ($d = -0.437$). Again, the negative treatment effect revealed that students used less home English on the post-test than the control group and the Editing condition (see Table 6; 1 bottom). DVAR in the Editing condition was not significantly different from the control group ($p = 0.535$).

Summarizing the post hoc analyses using HLM, we found that only the DAWS condition had consistent effects of treatment on the Editing task and on DVAR. The effect size (d) on the Editing task between the DAWS and the control was 0.68, controlling for pre-instruction Editing, which represents an educationally meaningful impact (Hill et al., 2008).

Discussion: Study 1

Again, the purpose of this first study was twofold: (1) to examine the extent to which dialect shifting might be malleable for students in second through fourth grade who were still using appreciable amounts of home English in contexts where school English was expected and (2) to examine whether helping students explicitly

Table 4 Effect of the DAWS program on the Editing task—Study 1

Fixed effect	Coefficient	Standard error	t-ratio	Approx. df	p value
Fitted mean on post editing task, β_0					
Fitted mean, γ_{00}	−0.441	0.208	−2.123	9	0.063
Pre editing task, β_1					
Coefficient, γ_{10}	0.551	0.080	6.856	82	<0.001
Editing only program, β_2					
Coefficient, γ_{20}	0.343	0.169	2.033	82	0.045
DAWS program, β_3					
Coefficient, γ_{30}	0.686	0.174	3.945	82	<0.001

Random effect	standard deviation	Variance component	df	χ^2	p value
u_0	0.534	0.285	9	59.547	<0.001
r	0.675	0.455			

Deviance = 216.402

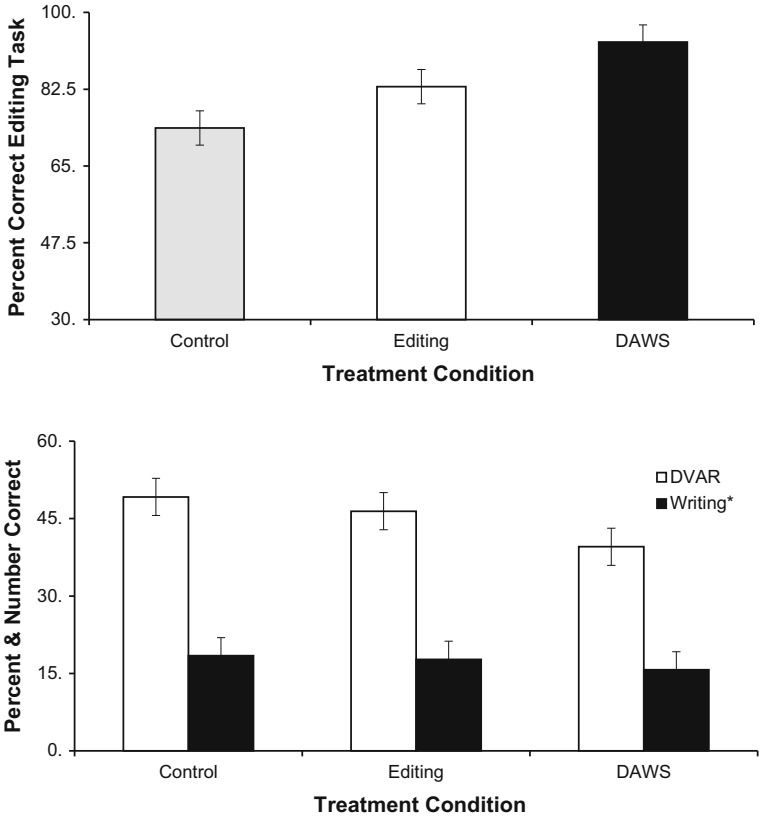

Fig. 1 Study 1 results by condition for the business as usual control (Control), editing only condition (Editing), and dialect awareness condition (DAWS). *Top* Results for the Editing post-test by condition. Higher percentages correct reflect *greater* use of school English. *Bottom* Results for use of home English on the DELV-S, (DVAR, which is the percent of home English forms used) and on the Writing task, which is the number of target home English features used in responding to a writing prompt, by condition. *Asterisk* For the writing task, we multiplied the number of features by 10 to put the two test metrics on a similar scale. Higher scores reflect *less* use of school English. *Error bars* represent standard errors

compare differences between home and school English features and the contexts in which each dialect was appropriate might facilitate dialect shifting. Two important findings emerged. First, within this student population, dialect shifting in writing on structured tasks appears to be malleable. Students who were randomly assigned to the explicit DAWS condition demonstrated greater dialect shifting than students in the Control and implicit Editing conditions. Students in the Editing condition achieved stronger scores on the editing task, which was most similar to the target of the program, than the Control group, but this effect was smaller than the DAWS effect. Overall, the results suggested that explicit focus on encouraging dialect shifting appeared to be more effective at changing students' shifting home English (NMAE forms) in writing. These findings supported further exploration of the effectiveness of the DAWS condition, for performance on both proximal measures

Table 5 Effect of the DAWS program on the written language sample (DDM%)—Study 1

Fixed Effect	Coefficient	Standard error	*t*-ratio	Approx. *df*	*p*value
Fitted mean on written language sample, β_0					
Fitted mean, γ_{00}	4.346	0.652	6.663	13	<0.001
Editing only program, β_1					
Coefficient, γ_{10}	−0.760	0.658	−1.156	98	0.250
DAWS program, β_2					
Coefficient, γ_{20}	−0.947	0.673	−1.406	98	0.169

Random effect	Standard deviation	Variance component	*df*	χ^2	*p* value
u_0	1.645	2.707	13	44.264	<0.001
r	2.877	8.276			

Deviance = 574.661

Table 6 Effect of the DAWS program on oral dialect variation (DVAR)—Study 1

Fixed effect	Coefficient	Standard error	*t*-ratio	Approx. *df*	*p* value
Fitted mean on oral dialect variation, β_0					
Fitted mean, γ_{00}	50.110	4.274	11.726	13	<0.001
Editing only program, β_1					
Coefficient, γ_{10}	−2.801	4.499	−0.623	99	0.535
DAWS program, β_2					
Coefficient, γ_{20}	−9.694	4.568	−2.122	99	0.036

Random effect	Standard deviation	Variance component	*df*	χ^2	*p* value
u_0	10.208	104.194	13	42.608	<0.001
r	19.685	387.493			

Deviance = 1010.642

aligned with the instructional program (e.g., writing and morphosyntactic awareness) and distal measures of literacy achievement (e.g., vocabulary and reading comprehension).

It should be noted that there were no significant pre-test differences in dialect usage on the writing sample or the DELV-S by grade. A limitation of Study 1 was the small sample size, so meaningful effects were not statistically significant. Additionally, there was not a lot of variability in dialect usage (68% of students were categorized as having strong variation from MAE on the DELV-S). Findings may have been different with a larger sample that included students with more variability in NMAE use.

Study 2: the efficacy study

Participants

The screening criterion for the efficacy study was the same as reported in Study 1, with 374 students in second ($n = 149$), third ($n = 116$) and fourth ($n = 109$) grade demonstrating use of at least one NMAE feature on either Part I of the DELV-S or in a narrative writing sample. Students attended 66 classrooms across four schools in a second large public school district in the southeastern US and spoke AAE or SVE dialects. In this study, the percentage of students receiving FARL at the school level ranged from 68 to 84% and all four of the schools received Title I funding. Students who were identified as receiving special education services (8%) or as being Limited English Proficient (5%) were not excluded from this study. The racial composition of the sample was 45% African American, 33% White, 4% Hispanic, 4% Asian, and 7% multiracial. Additional demographic information is provided on the participants from Study 2 in Table 4.

Study design

Participants were randomly assigned within classrooms to either a "business as usual" control group ($n = 195$) or the DAWS program ($n = 179$). The instructional program described in Study 1 was expanded to 4 days a week, for 8 weeks. DAWS targeted the three NMAE features from Study 1 (copula/auxiliaries, plurals, and past tense) as well as subject-verb agreement, possessives, and preterite had (see Table 1 for examples). The efficacy study followed the same framework as Study 1 and the same fidelity measures were completed.

Measures

The dialect variation and written language sample measures described in Study 1 were repeated for Study 2, including the DELV-S and the written language sample. We also included the following measures:

Editing task

The Editing task described in Study 1 was expanded to 14 items to include three additional grammatical features. The six target features were assessed twice and there were two foil items.

Morphological awareness

The Morphosyntactic Knowledge (MSK) task was developed as part of the Reading for Understanding Network initiative to assess understanding of morphology and syntax in connected text (Connor, 2011). Test administrators read aloud grade level passages to students that contained multiple cloze sentences. Students were

provided with three options and were asked, "Which word is right?" [e.g., Sunny and Sky are *pause* (dog, cat, dogs). Which one is right? Dog, cat, dogs?]. Reliability (alpha) on this task was −0.70.

Oral language

The Picture Vocabulary and Oral Comprehension subtests of the Woodcock Johnson Tests of Achievement, 3rd Edition (WJ-III; Woodcock, McGrew, & Mather, 2001) were used to assess oral language. The Picture Vocabulary subtest measured both receptive and expressive vocabulary at the single word level. Students were initially required to point to a named picture and then had to name pictures aloud as the test progressed. The Oral Comprehension subtest assessed students' ability to understand short oral passages by requiring them to provide a missing word based on semantic and syntactic cues of the text. Reliability (alpha) was 0.81 on the Picture Vocabulary subtest and 0.85 on the Oral Comprehension subtest.

Reading

The test of silent reading efficiency and comprehension (TOSREC; Wagner, Torgesen, Rashotte, & Pearson, 2010) was used to assess silent reading of connected text for comprehension. Participants were given 3 min to read and respond yes or no regarding the truthfulness of as many sentences possible in the allotted time. Forms B and O were administered pre- and post-DAWS program. Reliability of this task was 0.85.

Procedures

As in Study 1, all assessments were administered and scored by trained research staff. The DELV-S, MSK task, WJ-III were administered individually in a quiet area of the school. The written language sample, editing task, and TOSREC were administered in small groups.

Results

Descriptive statistics for pre- and post-assessments are available in Table 7. Using 95% confidence intervals and testing for differences using hierarchical linear modeling (HLM; Raudenbush & Bryk, 2002), no significant differences were found between students in the DAWS and Control groups on any of the measures at the beginning of the study, with standard scores on the WJ-III Oral Comprehension task slightly below expectations but solidly in the average range ($M = 95.63$ and 95.72 respectively, $SD = 13.0$). As hypothesized, at the beginning of the study, students used home English in their spoken language and writing, as evidenced by the results of the DELV-S Part 1 DVAR ($M = 31.92\%$, $SD = 26.5$) and the narrative writing

Table 7 Descriptive statistics for pre- (top) and post-DAWS (bottom) assessments—Study 2

	DAWS			Control		
	Mean	SD	N	Mean	SD	N
Pre-DAWS assessment						
Editing task	6.06	3.05	177	5.78	3.19	187
DDM% on essay	3.64	3.39	176	3.29	3.73	190
Morphosyntactic knowledge	18.25	9.30	179	18.59	9.26	190
Post-DAWS assessment						
Editing task	10.33	2.06	166	7.10	3.14	172
DDM% on essay	2.99	3.15	166	3.59	4.58	172
Morphosyntactic knowledge	21.91	7.54	165	20.38	9.01	172
TOSREC B SS	91.92	12.18	166	93.08	11.96	172
TOSREC O SS	92.04	12.07	166	93.34	12.12	172

DDM% ($M = 3.28\%$). Approximately 10% of students left the school during the study (attrition = 9.6%), with no differential attrition found between the groups.

To examine performance differences between students in the DAWS and Control groups, HLM was used because students were nested in classrooms. The DAWS treatment variable (DAWS = 1; Control = 0) was entered at the child level because that was the level of random assignment. All models were built systematically starting with an unconditional model. The intraclass correlation (ICC), which is the proportion of between classroom variance for the Editing task, was 0.104. About 10% of the variance was between classrooms. Results, controlling for pre-test, revealed a significant effect of participating in DAWS on the Editing task and the effect was large ($d = 1.48$). Overall, students who participated in DAWS demonstrated stronger performance on the Editing task than students in the Control (see Table 8). Analyses also revealed no significant effect of grade on the outcome.

Table 8 Effect of the DAWS Program on the Editing Task – Study 2

Fixed effect	Coefficient	Standard error	*t*-ratio	Approx. *df*	*p* value
Fitted mean on post editing task, β_0					
Fitted Mean, γ_{00}	7.109781	0.177308	40.099	64	<0.001
Effect of DAWS, γ_{10}	3.146675	0.224657	14.007	270	<0.001
Pre editing task, β_2					
Coefficient, γ_{20}	0.506307	0.038439	13.172	270	<0.001

Random effect	Standard deviation	Variance component	*df*	χ^2	*p* value
u_0	0.608	0.369	64	96.09	0.006
r	2.038	4.156			

Deviance = 1465.01

$Post\ editing\ RS_{ij} = \gamma_{00} + \gamma_{10} * DAWS_{ij} + \gamma_{20} * Pre\ editing\ RS_{ij} + u_{0j} + r_{ij}$

Results for the MSK task revealed that students who participated in DAWS achieved significantly stronger scores on both the Editing and MSK task than students in the Control (see Table 9). The effect size (*d*) for the Morphosyntactic Knowledge task was 0.326. Given the age of the students, this was educationally meaningful effect sizes (Hill et al., 2008). Again, there was no significant effect of grade on MSK.

Using HLM, results for the writing sample revealed that students who participated in DAWS used significantly fewer features of home English on their written narratives (smaller DDM%) than students in the Control (see Table 10). The effect size (*d)* was 0.214, which is educationally meaningful for an 8-week intervention. There was no significant effect of student's grade level on these findings.

HLM analyses to test for child X treatment interaction effects revealed interactions that followed a similar pattern (see Table 11; Fig. 2). Essentially,

Table 9 Effect of the DAWS program on morphosyntactic knowledge task (MSK)—Study 2

Fixed effect	Coefficient	Standard error	*t*-ratio	Approx. *df*	*p* value
Fitted mean on post MSK, β_0					
Fitted mean, γ_{00}	19.912809	0.553461	35.979	64	<0.001
Effect of DAWS, γ_{10}	2.099790	0.703232	2.986	270	0.003
Pre editing task, β_2					
Coefficient, γ_{20}	0.535558	0.041411	12.933	270	<0.001

Random effect	Standard deviation	Variance component	*df*	χ^2	*p* value
u_0	1.87439	3.51335	64	92.25845	0.012
r	6.37600	40.65332			

Deviance = 2228.31

Model $Post\ MSK_{ij} = \gamma_{00} + \gamma_{10} * DAWS_{ij} + \gamma_{20} * Pre\ MSK_{ij} + u_{0j} + r_{ij}$

Table 10 Effect of DAWS on the written language sample (DDM%), Study 2

Fixed effect	Coefficient	Standard error	*t*-ratio	Approx. *df*	*p* value
Fitted post-test DDM%, β_0					
Fitted mean, γ_{00}	3.66	0.308	11.875	63	<0.001
Effect of DAWS, γ_{10}	−0.80	0.403	−1.986	266	0.048
Pre-test DDM%, β_2					
Coefficient, γ_{20}	0.35	0.058	6.017	266	<0.001

Random effect	Standard deviation	Variance component	*df*	χ^2	*p* value
u_0	0.917	0.841	63	80.574	0.067
r	3.628	13.164			

Deviance = 1815.68

$Post\ DDM\%_{ij} = \gamma_{00} + \gamma_{10} * DAWS_{ij} + \gamma_{20} * Pre\ DDM\%_{ij} + u_{0j} + r_{ij}$

Table 11 HLM fixed effects results examining child pre-test × treatment interactions for the editing task (*top*) and the morphosyntactic knowledge (MSK) task, Study 2

Fixed effect	Coefficient	Standard error	*t*-ratio	Approx. *df*	*p* value
Post test editing task, β_0					
Fitted mean, γ_{00}	7.101	0.179	39.555	64	<0.001
Effect of DAWS, γ_{10}	3.146	0.215	14.625	270	<0.001
Pre test editing task, β_2					
Coefficient, γ_{20}	0.665	0.050	13.260	270	<0.001
Pre test × DAWS interaction, β_3					
Coefficient, γ_{30}	−0.352	0.070	−5.007	270	<0.001
Fixed effect	Coefficient	Standard error	*t*-ratio	Approx. *df*	*p* value
Post test MSK task, β_0					
Fitted mean, γ_{00}	19.850	0.552110	35.953	64	<0.001
Effect of DAWS, γ_{10}	2.145	0.698825	3.070	269	0.002
Pre test MSK task, β_2					
Coefficient, γ_{20}	0.623926	0.056961	10.954	269	<0.001
Pre test × DAWS interaction, β_3					
Coefficient, γ_{30}	−0.175275	0.077776	−2.254	269	0.025

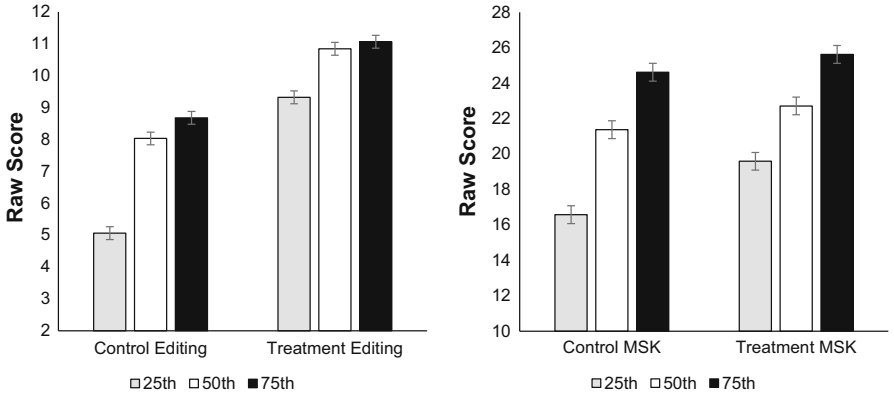

Fig. 2 Study 2. Modeled results showing child X instruction interaction effects on outcomes for the Editing Task (*left*) and the Morphosyntactic Knowledge (MSK) Task (*right*). Pre test scores are modeled at the 25th, 50th and 75th percentile of the sample. *Error bars* are Standard Errors. Note that difference between DAWS and Control Fitted Means are greater for children as pre-test scores are lower suggesting DAWS is more effective when children use greater amounts of home English in contexts where school English is expected prior to participating in the DAWS program

DAWS was most effective for students who had lower scores on the Editing and MSK tasks and used more home English in the writing narrative at the beginning of the study. While DAWS was effective for students regardless of status at the beginning of the program, it tended to have the greatest impact for students who used more home English overall and who had weaker scores on the MSK task.

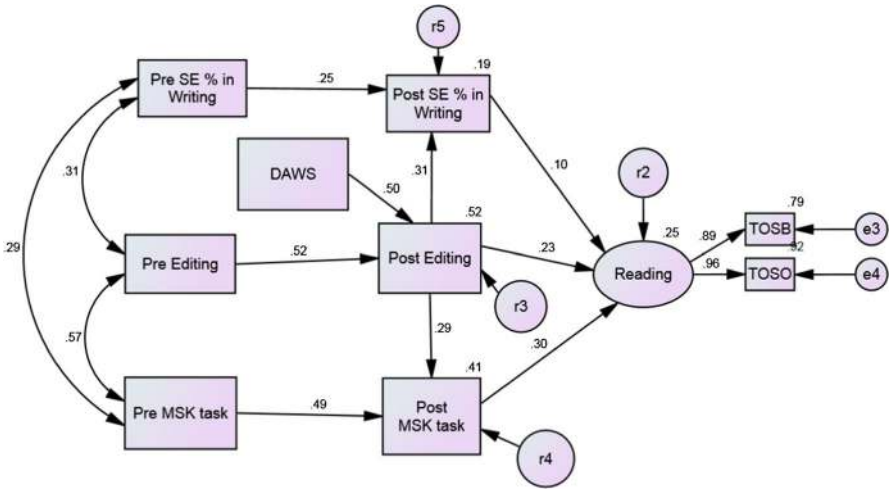

Fig. 3 Study 2. Testing the theory of change for DAWS. All path coefficients are standardized. Among alternative models, this model had the strongest fit (TLI = 0.925; CFI = 0.963; RSMEA = 0.073; AIC = 133.11)

Finally, structural equation modeling (SEM; AMOS version 23) was used to test our theory of change, that DAWS would impact reading comprehension through effects on editing, morphosyntactic knowledge, and writing. Several theoretically plausible models were tested and the model presented in Fig. 3 provided the best fit for the data (TLI = 0.948; CFI = 0.972; RSMEA = 0.066). Note that to accommodate assumptions for SEM, DDM% on the essay was subtracted from 100 so that it reflected the use of school English in the essay. Hence, all path coefficients are positive. Additionally, a latent variable for Reading Comprehension was created using the two TOSREC forms. Controlling for pre-tests, the model that best fit the data showed that the very large effect of DAWS on the Editing task predicted stronger performance on the MSK task and greater use of school English on the written narrative. Performance on these measures then predicted reading comprehension. The total standardized effect of the DAWS program on reading comprehension was 0.18.

General discussion

Based primarily in the desire to alleviate literacy achievement gaps observed between African American children and their peers, both researchers and practitioners have sought out instructional solutions that have some added value above and beyond high quality literacy instruction. Toward that end, spoken dialect variation has emerged as a target for instruction and several models for teaching students to dialect shift have been proposed and even implemented. However, almost no experimental studies evaluating the effects of these instructional models have been published in the literature; thus, it remained unclear whether children as

young as 7 years old could be taught to shift between home and school English use in speech and writing. Additionally, it was also unclear whether such instruction might, in turn, improve literacy achievement. This kind of empirical investigation is particularly important for children who are using substantial amounts of NMAE when speaking in contexts that presuppose MAE, as mounting research suggests that these children may be at risk for reading and writing difficulty in school.

These conditions were the impetus for this series of experiments, whose findings have contributed two significant conclusions to the literature. First, results from Study 1 and 2 suggested that, among children who continue to be dense NMAE speakers as they transitioned from "learning to read" to "reading to learn", dialect shifting is malleable under specific instructional conditions. Specifically, instruction that explicitly focused students' attention to the different linguistic contexts in which home and school English were used was more effective in teaching students to shift to using more MAE forms in speech and writing. This was above and beyond instruction that simply focused their attention towards the appropriate use of MAE forms in English orthography. Those findings set the stage for Study 2 where we investigated whether or not instruction that teaches dialect shifting results in only improved facility with targeted features on isolated tasks (as observed on the editing task in this study), and/or improvement on more global measures of writing and reading achievement.

Second, results from Study 2 suggest that participating in this kind of dialect awareness instruction has a positive effect on students' reading achievement. We conjecture that performance on the Editing task may act as a proxy for how effective DAWS was for individual children. Hence, greater gains on the Editing task suggest stronger response to DAWS, which in turn led to stronger gains in morphosyntactic awareness, reading comprehension, and use of school English (MAE forms) in the written narratives. These findings support and extend our understanding of dialect shifting.

The DAWS instructional program had two innovative features worth noting. First, in all cases, the instructional program was designed to be respectful of both dialects: home (NMAE) and school (MAE) English. Delpit (1995) and others cogently discuss the ramifications of devaluing the language variations used by many race-, cultural-, and language-minority students; thus, including both in the instructional program was an essential design component. Second, children were provided with many opportunities to write. Composing in school is clearly a context in which school English is expected. Therefore, multiple opportunities for practicing in this linguistic context should serve to bolster students' facility with dialect shifting between speech and print. For example, students learned to put quotes around sentences where characters in their narratives were using home English. Importantly, researchers have shown that writing proficiency supports reading proficiency (Graham & Herbert, 2011). Therefore, these increased opportunities to write may also have the added benefit of improving reading achievement. The SEM results tend to support this hypothesis although more research is needed.

Limitations notwithstanding, the positive results of these two studies are promising, not only for theoretical questions about the malleability of dialect shifting, but also practically for classroom instruction. Educationally, it is worth

repeating that significant differences were achieved after only 8 weeks of instruction, 60 min a week. Current US elementary school standards are quite demanding and teachers must capitalize on limited instructional time, while also implementing evidence-based practices effectively. Lessons like those used DAWS can be tailored to English Language Arts lessons (note that the Common Core standards include mastery of MAE features in writing activities). Teachers can review students' writing samples for systematic use of home English features and then use DAWS approaches to teach students about language difference and written grammar in a culturally sensitive manner.

As discussed in the literature review, there is evidence that that dialect shifting is associated with reading achievement and that spontaneous shifting behavior seems to slow down after first grade (e.g., Craig et al., 2009; Terry et al., 2012). Coupled with this, the findings of the two studies described above suggest that explicitly teaching second through fourth graders to dialect shift may improve writing and reading achievement. It will be an important next step to investigate the effectiveness of DAWS when implemented by teachers in the classroom setting. In addition, the positive findings associated with DAWS suggest that metalinguistic awareness may be particularly important to basic and applied research on the relationship between spoken dialect variation and language and literacy achievement. Here, the metalinguistic component of the instruction was focused on the pragmatic context of home and school English use. Terry et al. (2010, 2012) have proposed that this kind of awareness is akin to that already known to contribute to reading and writing development (e.g., phonological awareness, morphological awareness, syntactic awareness). Future research should continue to unpack the role of metalinguistic awareness in the study of dialect variation and literacy achievement.

In sum, the results of these studies, along with the research reviewed in the introduction for other languages (e.g., Yiakoumetti, 2006), reveal that dialect shifting is malleable in students as young as 7 years old who are dense NMAE speakers. Additionally, instruction that increases children's awareness of their dialect use contributes to their increasing mastery of reading and writing. These findings present a positive first step in understanding how dialect variation might be considered in conversations on improving literacy outcomes for diverse learners, in particular those around closing or alleviating the achievement gap in the US. It is important to note that these findings occurred with a sample NMAE speakers from several racial backgrounds in Study 2. This suggests that dialect use and its impact on literacy development may transcend race. Dialect awareness instruction may prove to be a quite robust, practically appropriate, and feasible approach that could be used widely in schools in the US and around the world.

Acknowledgements We would like to thank the entire Reading for Understanding project team, Jennifer Dombek (project coordinator), as well as the children, parents, teachers, and school administrators without whom this research would not have been possible. Funding was provided by the U.S. Department of Education, Institute for Education Sciences, Florid a State University Research and Development Center for Pre-K to 5th Grade Student Comprehension: Examining Effective Intervention Targets, Longitudinal Intensity, and Scaling Factors, Grant #R305F100027. The opinions expressed are ours and do not represent views of the funding agencies.

Appendix A

Example of the DAWS framework

Week 1—Day 3—Examiner Instructions

Objectives: To contrast home and school language and complete activities in both using past tense and plurals.

Examiner: Let's talk about what we did yesterday. What do you remember about home language and school language? What do you remember about past tense and plurals? What endings do we usually see for past tense? What about for plurals?

Scaffolding tip: If students are having difficulty, ask them which language is more formal.

Materials needed: Past/Plural - Sentence Correction; Plural/Past tense – Sentence Generation worksheet

Examiner: Today we are going to complete two worksheets. Take out the first sheet in your folder (Sentence Correction). You will have to read each sentence and then I want you to correct the sentence using what you have learned about plurals and past tense. Let's do the first one together. *You should have check your work.* What word needs to be changed in this sentence?

Sunshine State Standards targeted during Week 1:

- *3.3.3*
- *3.3.4*
- *3.3.5*
- *3.4.1*
- *4.3.3*
- *4.3.4*

Scaffolding tips:

- If students are having difficulty, first ask whether plural or past tense needs to be added.
- If still having difficulty, provide a binary choice of two words that the grammatical marker could be added to.

We have to add –ed to *check* to make the word past tense. Read the sentences to yourself quietly and write down the word that should be changed by making it plural or past tense. *Give students a few minutes to write, and then discuss what was written.*

Ask students to place the worksheet at the back of their folders when the activity is completed.

Examiner: Now we will complete one last activity for the day. Take out the next sheet from your folder (Sentence Generation). I want you to make a complete sentence in school language using the following words. You can add more words than you see on the page to make your sentence. Let's do the first one together. We have the words *three, playground*, and *played*. How can we make that into a complete sentence? We could say *Three kids played on the playground.* Can anyone come up with a different sentence? Remember that we are using school language so we have to include –s/-es for plurals and –d/-ed for past tense. Go ahead and complete the rest of the page. *Give students a few minutes to write, and then discuss what was written.*

Ask students to place the worksheet at the back of their folders when the activity is completed.

Example of the editing only framework

Week 1—Day 3—Examiner Instructions

Objectives: To use plurals and past tense appropriately in writing within the school setting.

Materials needed: Past tense/Plural Sentence Correction worksheet; Past tense/Plural Sentence Generation worksheet

Sunshine State Standards targeted during Week 1:

- 2.3.3
- 2.3.4
- 2.3.5
- 2.4.1
- 2.5.1

Examiner: Today we will do several worksheets together. Please take out the first sheet in your folder. You will have to read each sentence and then I want you to correct the sentence using what you have learned about plurals and past tense. Let's do the first one together. *You should have check your work.* What word needs to be changed in this sentence?

Scaffolding tip: If students are having difficulty, first ask whether plural or past tense needs to be added. If still having difficulty, provide a binary choice of two words that the grammatical marker could be added to.

We have to add –ed to *check* to make the word past tense. Read the sentences to yourself quietly and write down the word that should be changed by making it plural or past tense. *Give students a few minutes to write, and then discuss what was written.*

Ask students to place the worksheet at the back of their folders when the activity is completed.

Examiner: Now we will complete one last activity for the day. Ask students to take out the Sentence Generation worksheet from the top of their folders.

I want you to make a complete sentence using the following words. You can add more words than you see on the page to make your sentence. Let's do the first one together. We have the words *three, playground*, and *going*. How can we make that into a complete sentence? We could say, *Three kids are going to the playground.* Can anyone come up with a different sentence? Remember what we have learned about including –s/-es for plurals and –d/-ed for past tense. Go ahead and complete the rest of the page. *Give students a few minutes to write, and then discuss what was written.*

Ask students to place the worksheet at the back of their folders when the activity is completed.

Examiner: Tomorrow I will show you a picture and I want you to do your best writing using what you have learned.

Appendix B

Editing task used in Study 1

Example: The girl is ride her bike.

1. They watching TV in the back room.
   _____
2. All of the teacher were in a meeting.
   _____
3. *Were you on time for school this morning.
   _____
4. I wash the dishes after dinner last night.
   _____
5. The three girl are best friends.
   _____
6. She happy that it was finally spring break.
   _____
7. *President Obama gave a speech on television today.
   _____
8. Last summer we plant flowers in my grandmother's garden.
   _____

* Notes a foil item

References

Butcher, A. (2008). Linguistic aspects of Australian Aboriginal English. *Clinical Linguistics & Phonetics, 22*(8), 625–642.

Charity, A. H., Scarborough, H. S., & Griffin, D. (2004). Familiarity with "School English" in African-American children and its relation to early reading achievement. *Child Development, 75,* 1340–1356.

Connor, C. M., & Craig, H. K. (2006). African American preschoolers' use of African American English and their emergent literacy development: A complex relation. *Journal of Speech, Language and Hearing Research, 49*(4), 771–792.

Craig, H. K., Kolenic, G. E., & Hensel, S. L. (2014). African American English-speaking students: A longitudinal examination of style shifting from kindergarten through second grade. *Journal of Speech, Language, and Hearing Research, 57,* 143–157.

Craig, H. K., & Washington, J. A. (2000). As assessment battery for identifying language impairments in African American children. *Journal of Speech, Language, and Hearing Research, 43,* 366–379.

Craig, H. K., & Washington, J. A. (2004). Language variation and literacy learning. In E. R. Silliman & B. J. Ehren (Eds.), *Handbook of language and literacy: Development and disorders* (pp. 228–247). New York: Guilford Press.

Craig, H. K., Zhang, L., Hensel, S. L., & Quinn, E. J. (2009). African American English-speaking students: An examination of the relationship between dialect shifting and reading outcomes. *Journal of Speech, Language, and Hearing Research, 52,* 839–855.

Delpit, L. (1995). *Other people's children: Cultural conflict in the classroom*. New York: The New Press.

Duncan, G. J., Dowsett, C. J., Claessens, A., Magnuson, K., Huston, A. C., & Klebanov, P. (2007). School readiness and later achievement. *Developmental Psychology, 43,* 1428–1446.

Efklides, A., & Misailidi, P. (Eds.). (2010). *Trends and prospects in metacognitive research*. New York, NY: Springer.

Fogel, H., & Ehri, L. C. (2000). Teaching elementary students who speak Black English Vernacular to write in standard English: Effects of dialect transformation practice. *Contemporary Educational Psychology, 25,* 212–235.

Graham, S., & Herbert, M. (2011). Writing to read: A meta-analysis of the impact of writing and writing instruction on reading. *Harvard Educational Review, 81*(4), 710–744.

Hill, C., Bloome, H., Black, A. R., & Lipsey, M. W. (2008). Empirical benchmarks for interpreting effect sizes in research. *Child Development Perspectives, 2*(3), 172–177.

Ivy, L. J., & Masterson, J. J. (2011). A comparison of oral and written English styles in African American students at different stages of writing development. *Language, Speech, and Hearing Services in Schools, 42,* 31–40.

James, C., & Garrett, P. (1992). *Language awareness in the classroom*. London: Longman.

Johnson, L. C., & Thomas-Tate, S. (2009). An examination of African American English usage across language contexts and methods used to quantify usage. In *Symposium on research in child language disorders*, Madison, WI.

Kelly, D., Xie, H., Nord, C. W., Jenkins, F., Chan, J. Y., & Kastberg, D. (2013). *Performance of U.S. 15-year-old students in mathematics, science, and reading literacy in an international context: First look at PISA 2012 (NCES 2014-024)*. Washington, DC: National Center for Education Statistics.

Labov, W. (1972). *Language in the inner city*. Philadephia: University of Pennsylvania Press.

Miller, J. F., & Chapman, R. S. (2008). *Systematic analysis of language transcripts (computer software)*. Madison: University of Wisconsin-Madison, Waisman Center, Language Analysis Laboratory.

National Center for Education Statistics. (2011). *The nation's report card: Reading 2011 (NCES 2012-457)*. Washington, DC: Institute of Education Sciences, U.S. Department of Education.

National Center for Education Statistics. (2013). *The nation's report card: A first look: 2013 mathematics and reading (NCES 2014-451)*. Washington, D.C.: Institute of Education Sciences, U.S. Department of Education.

Oetting, J. B., & Garrity, A. W. (2006). Variation within dialects: A case of Cajun/Creole influence within child SAAE and SWE. *Journal of Speech, Language and Hearing Research, 49,* 16–26.

Oetting, J. B., & McDonald, J. L. (2001). Nonmainstream dialect use and specific language impairment. *Journal of Speech and Hearing Research, 44,* 207–223.

Oetting, J. B., & McDonald, J. L. (2002). Methods for characterizing participants' nonmainstream dialect use in child language research. *Journal of Speech and Hearing Research, 45,* 505–518.

Oetting, J. B., & Pruitt, S. (2005). Southern African-American English use across groups. *Journal of Multilingual Communication Disorders, 3*(2), 136–144.

Ortiz, M., Folsom, J. S., Al Otaiba, S., Greulich, L., Thomas-Tate, S., & Connor, C. M. (2012). The componential model of reading: Predicting first grade reading performance of culturally diverse students from ecological, psychological, and cognitive factors assessed at kindergarten entry. *Journal of Learning Disabilities, 45*(5), 406–417. doi:10.1177/0022219411431242.

Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed.). Thousand Oaks, CA: Sage.

Rickford, J. R. (Producer). (1998). *The Ebonics controversy in my backyard: A sociolinguist's experiences and reflections*. Retrieved February 22, 2013 from http://www.stanford.edu/~rickford/papers/EbonicsInMyBackyard.html.

Seymour, H. N., Roeper, T. W., & deVilliers, J. (2003). *Diagnostic evaluation of language variation, screening test examiner's manual*. San Antonio, TX: The Psychological Corporation.

Siegel, J. (1999). Creoles and minority dialects in education: An overview. *Journal of Multilingual and Multicultural Development, 20*(6), 508–531.

Siegel, J. (2006). Language ideologies and the education of speakers of marginalized language varieties: Adopting a critical awareness approach. *Linguistics and Education, 17*(2), 157–174.

Terry, N. P. (2006). Relations between dialect variation, grammar, and early spelling skills. *Reading and Writing: An Interdisciplinary Journal, 19*(9), 907–931.

Terry, N. P., & Connor, C. M. (2010). African American English and spelling: How do second graders spell dialect-sensitive features of words? *Learning Disabilities Quarterly, 33,* 199–210.

Terry, N. P., Connor, C. M., Johnson, L. S., Stuckey, A., & Tani, N. (2016). Dialect variation, dialect-shifting, and reading comprehension in second grade. *Reading and Writing: An Interdisciplinary Journal, 29,* 267–295.

Terry, N. P., Connor, C. M., Petscher, Y., & Conlin, C. (2012). Dialect variation and reading: Is change in nonmainstream American English use related to reading achievement in first and second grade? *Journal of Speech, Language, and Hearing Research, 55*(1), 55–69.

Terry, N. P., Connor, C. M., Thomas-Tate, S., & Love, M. (2010). Examining relations among dialect variation, literacy skills, and school context in first grade. *Journal of Speech, Language, and Hearing Research, 53,* 126–145.

Terry, N. P., & Scarborough, H. S. (2011). The phonological hypothesis as a valuable framework for studying the relation of dialect variation to early reading skills. In S. A. Brady, D. Braze, & C. A. Fowler (Eds.), *Explaining individual differences in reading: Theory and evidence* (pp. 97–120). New York: Pyschology Press.

Thompson, C. A., Craig, H. K., & Washington, J. A. (2004). Variable production of African American English across oracy and literacy contexts. *Language Speech and Hearing Services in Schools, 35,* 269–282.

Wagner, R. K., Torgesen, J. K., Rashotte, C. A., & Pearson, N. A. (2010). *Test of silent reading efficiency and comprehension*. Austin, TX: PRO-ED.

Washington, J. A., & Craig, H. K. (1994). Dialectal forms during discourse of poor, urban, African American preschoolers. *Journal of Speech and Hearing Research, 37,* 816–823.

Wheeler, R. S., & Swords, R. (2004). Codeswitching: Tools of language and culture transform the dialectally diverse classroom. *Language Arts, 81*(6), 470–480.

Wheeler, R. S., & Swords, R. (2006). *Code-switching: Teaching standard English in urban classrooms.* Urbana, IL: National Council of Teachers of English.

Wolfram, W. (1999). Repercussions from the Oakland Ebonics controversy: The critical role of dialect awareness programs. In C. Adger, D. Christian, & O. Taylor (Eds.), *Making the connection: Language and academic achievement among African American students* (pp. 61–80). Arlington, VA: Center for Applied Linguistics.

Wolfram, W., & Schilling-Estes, N. (2006). *American English* (2nd ed.). Malden, MA: Blackwell.

Woodcock, R. W., McGrew, K. S., & Mather, N. (2001). *Woodcock-Johnson tests of achievement* (3rd edn.). Rolling Meadows, IL: Riverside Publishing.

Yiakoumetti, A. (2006). A bidialectal programme for the learning of Standard Modern Greek in Cyprus. *Applied Linguistics, 27,* 295–317.

Yiakoumetti, A. (2007). Choice of classroom language in bidialectal communities: To include or exclude the dialect? *Cambridge journal of education, 37*(1), 51–66.

Yiakoumetti, A., Evans, M., & Esch, E. (2006). Language awareness in a bidialectal setting: The oral performance and language attitudes of urban and rural students in Cyprus. *Language Awareness, 14*(14), 254–260.