ECHO

ECHO: An international e-journal concerning communication and communication disorders within and among the social, cultural and linguistically diverse populations, with an emphasis on those populations who are underserved.

ECHO is the Official Journal of the

National Black Association for Speech-Language and Hearing

Volume 9, Number 2 **Winter 2014**

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About the Editor

Ronald C. Jones, PhD, ECHO's, Managing Editor, is a professor in the Department of English and Foreign Languages at Norfolk State University. He is also coordinator of the speech communication program and director of the Speech, Language, Hearing and Literacy Center. Dr. Jones received his Bachelor of Science in Education and Master of Arts degrees from Northern Illinois University, DeKalb, Illinois. He received his PhD from the University of Cincinnati, Cincinnati, Ohio. Dr. Jones served as chair of the National Black Association for Speech-Language and Hearing (2006-2008), and has been Managing Editor for ECHO for all but two of the past 10 years. Dr. Jones has written and presented papers in his primary area of scholarly interest: Auditory Rehabilitation service delivery. E-mail address: rjones@nsu.edu.

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Current Issue

ECHO

THE EFFECTS OF ALPHABET STORYBOOKS AND EMERGENT READING STORYBOOKS ON PRINT REFERENCING BEHAVIORS OF HEAD START TEACHERS

Patricia Minnis, PhD
Xavier University of Louisiana
New Orleans, Louisiana

ABSTRACT

A wide range of emergent literacy skills develop during the preschool years, particularly among children who are read to frequently during these formative years. This purpose of this study was to investigate whether a different type of book that had characteristics of both storybooks and alphabet books would naturally induce teachers to engage in more print focused behaviors in the course of shared book reading with limited training. The results suggest that when the materials are designed to focus on print within the context of storybook reading, Head Start teachers engage in more of these behaviors with little or no training.

KEY WORDS: emergent literacy, print referencing, alphabet storybooks

CORRESPONDING AUTHOR:
Patricia Minnis, Ph.D.
Email: pminnis@xula.edu

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Patricia Minnis, PhD
Xavier University of Louisiana
New Orleans, Louisiana

INTRODUCTION

In a longitudinal study examining mother-child interactions during book reading, van Kleeck (1998) found that different book genres elicited different types of talk. When alphabet books were read, the adults talked about letters, letter shapes, sounds, sounds in words, and other print referencing behaviors with high frequency, even when children were as young as 3 years old. Such references to print rarely occurred when reading picture books or rhyming books, where instead adults focused on helping the child interpret the meaning of the stories. Other studies found a similar lack of print referencing during storybook reading (e.g., Ezell & Justice, 2000; Phillips & McNaughton, 1990; van Kleeck, Gillam, Hamilton, & McGrath, 1997). However, several studies (Ezell & Justice, 2000; Justice & Ezell, 2000) have demonstrated that when provided specific training, adults, including Head Start teachers (Justice & Ezell, 2002), can and will spend more time during storybook reading attending to print. The purpose of this study is to explore whether storybooks designed to elicit talk about letters and sounds, termed "alphabet-storybooks" will generate more print referencing behaviors than traditional storybooks. If the prompts throughout the stories do elicit more consistent and higher-level responses to letters, sounds, and rhyme, then alphabet-storybooks could provide a useful means for parents and teachers to remember to attend to print and sound while reading to preschool-age children. They also could provide a context for children to learn and remember letters and sounds in that they are embedded as a meaningful and natural part of the story.

A wide range of emergent literacy skills develop during the preschool years, particularly among children who are read to frequently during these formative years. Emergent literacy refers to learning about reading, writing, and oral and written aspects of print during the time period before children receive formal reading instruction (Stahl & Miller, 1989; Teale & Sulzby, 1987). Emergent literacy skills include developments in oral language (vocabulary, expressive language, listening comprehension), phonological awareness (rhyming, blending, segmenting sounds, sound substitutions, sound deletions), print awareness (print conventions, tracking), and alphabet knowledge (letter recognition, letter-sound). According to Justice and Ezell (2004) emergent literacy describes children's earliest attainments in literacy and is thought to encompass the period from birth to about the end of the preschool years. During this period, children begin to distinguish among an array of written language forms and functions (print concepts), show a developing sensitivity to words as units of both print and sound (concept of word, phonological awareness), and have emerging knowledge of the distinctive features and names of individual alphabet letters (alphabet knowledge).

The ability to successfully transition from emergent to early literacy is related to a child's ability to acquire sufficient levels of knowledge for both written language and phonological awareness (Badian, 2000). According to the National Early Literacy Panel (2008) and the National Association of the Education of Young Children (NAEYC), many problems in school-aged children could actually be prevented if learners began formal schooling with the appropriate emergent literacy skills to support this transition. Lack of these skills can mean long-term struggles with reading and writing. Numerous studies have shown that deficits in processing the phonological features of language account for a significant proportion of beginning reading problems and correlated difficulties in reading comprehension, background knowledge, memory, and vocabulary differences (Liberman & Shankweiler, 1985; Mann & Brady, 1988; Rack, Snowling, & Olson, 1992; Torgesen, Wagner, Simmons, & Laughon, 1990; Wagner & Torgesen, 1987). Morris, Bloodgood, and Perney, 2003 showed that by mid-kindergarten, alphabet recognition, concept of word in text, spelling with beginning and ending consonants, and word recognition effectively predicted success in first grade reading. Stevenson and Newman (1986) found a correlation between the ability to name the letters of the alphabet as a child entered kindergarten and performance on a standardized test of reading comprehension in the tenth grade, suggesting lack of success in the early grades can have a long-term effect on reading ability. Children of poverty are particularly at-risk for development of emergent literacy abilities (Frijters, Barron, & Brunello, 2000; Leseman & de long, 1998; McCormick & Mason, 1986; Neuman, 1999; Ninio, 1980; Purcell-Gates, 1996,

U.S. Department of Education, 2007a, 2007b). It has been clearly established that children of low SES are at risk for poor school readiness and later reading outcomes (cf. Snow, Burns, & Griffin, 1998; U.S. Department of Education, 2007a, 2007b) and that they begin kindergarten with cognitive skills that are below their middle-SES peers and remain behind them throughout school (U.S. Department of Education, 2007a, 2007b).

Children with infrequent parent-child shared storybook reading opportunities have more difficulty acquiring emergent literacy knowledge compared to children who routinely engage in this activity (Raz & Bryant, 1990; Wells, 1985, Aram et al., 2006; Boudreau, 2008; Justice & Kaderavek, 2002; Schuele & Boudreau, 2008; Van Kleeck, 2008). A daily storybook routine is far more typical in middle income or professional homes than low-socioeconomic status (SES) households, and it is implicated in the relatively low levels of emergent literacy skill observed in low-SES children (Feitelson & Goldstein, 1986; McCormick & Mason, 1986; Ninio, 1980; Teale, 1986; Whitehurst et al., 1994 Britto, 2001; Britto & Brooks-Gunn, 2001; Burgess et al., 2002; Scarborough, Dobrich, & Hager, 1991; Speece et al., 2004; Storch & Whitehurst, 2001) Middle SES children have greater skill in print production, book reading concepts, and recognizing environmental print (Dickinson & Snow, 1987). Despite specific instruction on learning the alphabet, Lonigan and colleagues (1999) found that low-SES children in Head Start demonstrated relatively low levels of skill on measures of alphabet knowledge, letter-sound knowledge, book reading concepts, and environmental print decoding compared to middle-class peers. Although letter knowledge may be a strong component in preschool programs, children learn from experiences such as alphabet book reading. In a study of 59 parents of preschool children, Hildebrand and Bader (1992) found that children who performed high on three emergent literacy measures, including writing letters of the alphabet, were more likely to have parents who provided them with alphabet books, alphabet blocks, and shapes.

Head Start has long worked to close the gap between children from low-income families and their higher-income peers. However, the 2010 Head Start Family and Child Experiences Survey (FACES) found that at entry and exit while children are making significant progress in some areas such as letter word knowledge during the Head Start year, they are not improving in areas that predict reading success, including phonemic awareness, and knowledge of print conventions.

State University at New York Stony Brook created a literacy project to enhance the emergent literacy skills of preschoolers from low-income environments. Massetti (2008) examined the effect of the Stony Brook Emergent Literacy Project implemented by Head Start teachers to target children's emergent literacy skills. The components to the literacy project were organized around the three categories of emergent literacy skills considered to be most predictive of later reading success: phonological awareness, print awareness, and emergent writing. The teachers were responsible for giving the activities and transcribing the results of the students on a rubric. The children's emergent literacy skills were assessed at the beginning and end of the preschool year using Get Ready to Read! Screen and Developing Skills Checklist. Results revealed that the Literacy Project was more effective than standard Head Start practice in teaching students key emergent literacy skills. Children whose teachers implemented the Literacy Project activities showed greater gains in emergent literacy skills than children in comparison classrooms. In addition, findings also suggest that the Literacy Project has positive effects on the development of emergent literacy skills in children at risk for poor reading performance.

Emergent Literacy is Developmental

The skills of emergent literacy are developmental, with abilities changing in a predictable sequence across time when a child is exposed to meaningful literacy experiences. Thus, like other language skills, emergent literacy abilities appear to be a result of both nature and nurture. For example, Pick and colleagues (1978) found that preschool children improved their ability to discriminate letter sequences that were "like words." Five-year-olds were significantly less likely to accept very long strings of letters as words than 3-year-old children. Such findings suggest that well before receiving formal reading instruction, young children are already forming hypotheses about the structure of written language (Schickedanz, 1982). Lomax and McGee (1987) examined 3- to 6-year-old children's naming abilities for the 26 letters of the alphabet in both upper-case and lower-case form. All children were from middle-income homes. Children at 3 years of age performed with an overall rate of 42% accuracy, whereas 5-year-old children performed with 93% accuracy.

It appears that, between the ages of 3 to 5 years, children rapidly acquire sophisticated knowledge about the nature of written language. Findings such as these confirm the significance of the preschool period as a time in which critical knowledge about the structure of written language is acquired. Along with phonological awareness, which refers to children's abilities to consciously reflect upon and manipulate the sounds of a language (Adams, 1990; Ball & Blachman, 1991; Vellutino & Scanlon, 1987), children's print awareness serves as a key foundation upon which later reading development will build (Badian, 1982; Stuart, 1995).

Storybook Reading and Emergent Literacy

Longitudinal studies of emergent literacy suggest that reading and writing develop in a concurrent and interrelated manner in young children. Early knowledge of literacy emerges from experiences that permit and promote meaningful interaction with oral and written language (Sulzby & Teale, 1991), such as parent-child storybook reading or telling a story through drawing and developmental spelling (Hiebert & Papierz, 1989). These

experiences provide young children with a context for exploring the form, purpose, and meaning of print. Studies of parent-child storybook reading have shown that parents use a wide range of strategies that enable children to learn how to attend to language and apply this knowledge to literacy situations (Hiebert, 1981; Mason & Allen, 1986; Morrow et al., 1990; Teale & Sulzby, 1987). Parents point to important information, comment, ask questions, respond to child-initiated remarks, talk about pictures, and repeat or expand upon child utterances. Parents of early readers (Thomas, cited in van Kleeck, 1990) and parents of children who are successful in school (Heath; Wells, cited in van Kleeck) do more than read the words in books and elicit labels, objects, and details of events. They ask questions and make comments that enable children to relate information in books to their own experiences or familiar events, and engage them in discussing, interpreting, and drawing inferences (Teale & Sulzby, 1991; van Kleeck, 1990). However, parents rarely make direct reference to letters or conventions of print, or to elements of phonemic awareness such as sounds in words or rhyme unless alphabet books are read (van Kleeck, 1990).

Several studies have examined the use of storybooks to increase awareness of print referencing behaviors when these skills were specifically targeted and taught. A series of studies (Ezell & Justice, 2000; Ezell et al., 2000, Bierman et al., 2008; Girolametto et al., 2007; Gray, 2007; Landry, Swank, Smith, Assel, & Gunnewig, 2006; Lonigan et al., 2011; Powell, Diamond, Burchinal, & Koehler, 2010) demonstrated that adults can be trained to use reference to print when reading picture books and/or rhyming books to preschool children. In these studies, adults (e.g., speech-language pathology students, parents) were taught to use print-referencing strategies, a set of strategies including questions, comments, and requests about print as well as several nonverbal strategies such as pointing to print or tracking print left-to-right while reading books with children. The training successfully increased adult print-referencing behaviors during picture-book-reading interactions with 4-year-old children, and increased children's verbal comments about print.

Other studies further examined the effects of adult attention to print during storybook reading on emergent literacy skills in children. In a pilot study, Ezell, Justice, and Parsons (2000) examined the effects a shared book storybook reading on receptive and expressive alphabet knowledge and knowledge of print. Four parents and their preschool children participated in five training sessions (1 time weekly) for print referencing during storybook reading The first session was comprised of pre-testing and orientation, the following three sessions involved group training and individual practice reading sessions' and the last session was used for posttesting. A series of focused reading behaviors were taught during the three training sessions, conducted through videotaped demonstrations and a manual. The first training session focused on the print referencing behaviors by asking questions, tracking the print, making comments and requests about print, and pointing to the print. The second training session focused on techniques such as praise, a pause for responses, expansions on the child's utterance, repetition, and open-ended questions. The third training focused on book management strategies, which consisted of allowing the child to explore the book independently, turning pages and linking the text to the child's life. Additionally, the parents were given eight children's storybooks to read in the instructed way to their children during the week between training sessions. Gains were made in the area of alphabetic knowledge and in the area of print awareness, though not significant in the short duration of the study.

A study performed by LaCour et al. (2011) explored the relationship between storybook reading in the home and emergent literacy development. The researchers hypothesized if caregivers were provided a workshop regarding effective storybook reading, pre-kindergarten students' emergent literacy development would significantly increase. Twelve Pre-Kindergarten children from Head Start programs comprised the experimental group while ten Pre-Kindergarten children were subjects of the control group. The results revealed students from the experimental group whose parents participated in the workshop did not perform significantly higher on the posttest assessment compared to the control group. However, there was a gain in emergent literacy development for the experimental group. Possibilities for these results included the small sample size used in the study and the short length of time between the pretest and posttest.

Justice, Ritter, Gray, and Pillow (2005) engaged thirty 4-5 year old preschoolers (22 typically developing, 8 language impaired) in storybook reading with an explicit focus on phonemic awareness. They were compared on measures of rhyme, alliteration, and sound segmentation. All subjects participated in reading 6 storybooks twice (2 sessions per weekk), for a total of 12 weeks of intervention. Nine questions about sound (Can you think of another word that starts with /s/? What word rhymes with X?) were embedded into each storybook reading. Results indicated that differential results were obtained for the typically developing children versus those with language impairment. Language impaired children made gains primarily in segmentation, while typically developing children made gains in all phonological awareness skills tested. The results suggest that for both groups, storybook reading is an effective context for teaching phonological awareness skills, although more time and exposures are needed for language impaired children to respond. Current research has found that children look at print more often when adults point to print and/or talk about print when they read. (Justice et al.,2008) A recent study by Zucker,Justice and Piasta (2009) found that more verbal print references were observed when the teachers read books exhibiting higher amounts of print salient features. During storybook reading their was no significant relationship between the teacher's use of print and their quality of language instruction. Justice, McGinty, Piasta,Kaderavek and Fam (2010) explored the effects

of specific print referencing techniques on the print knowledge abilities of students in Pre-K. Fifty nine teachers participated in 120 whole class reading sessions over a 30 weeks. The teachers were randomly assigned to two conditions. The teachers in the experimental group utilized explicit references to print while the teachers in the comparison group read the same set of book titles with no specific focus on print. The results indicated that the children who experienced more exposure to print when being read too exhibited significantly higher print knowledge scores than the children in the comparison classroom.

The extant research on storybook reading reveals that it provides an efficacious context for teaching a wide range of print awareness and phonological awareness skills for typically developing children and for children at-risk because of poverty and/or language delay. In each of these studies, only alphabet books spontaneously elicited talk about print or sound. Parents or teachers needed to be trained in relatively lengthy and frequent training sessions to provide print or sound-focused prompts to children during the reading of storybooks. Alphabet books elicit talk about print because the cues are present in the pictures (i.e., isolated alphabetical letters, pictures of words that begin with the sound) and the text (i.e., explicit mention of words and sounds associated with the letter). However, these books lack meaningful stories and do not follow patterns of narrative structure that help children learn the meaningful aspects of reading and comprehension. This study will examine the effects of books termed "alphabet-storybooks" that maintain elements of both types of books. Each alphabet-storybook focuses on a specific phoneme and its associated letter or digraph. The characters in the stories, called Phonic Faces, each depict the letter drawn in his/her mouth producing the sound associated with that grapheme. Thus, the letter "b" is shown as the vertical line stopping the sound in the mouth and the circle as the lower lip which bounces to release the stopped air in the book "Bejay Bounces." On each page, the /b/ sound appears as a natural part of the story as Bejay bounces a variety of balls which make the /b/ sound as they bounce across the floor. Thus, as the story is read, repeated opportunities to hear the sound and to associate it with both the letter and the speech production cues are encountered. In addition, the stories have numerous words that contain the sound and letter in different word positions as well as rhyming words. The stories also contain numerous vocabulary words and concepts that are present in both the pictures and the text to facilitate learning. The stories differ in story structure from simple sequences to complete narratives with problems, plans, attempts, and outcomes.

This pilot study will explore whether the alphabet-storybooks are more effective than traditional storybooks at eliciting print behaviors in Head Start teachers and children prior to and immediately following a short 5-6 minute training session. The specific questions of this study are:

1. Will storybooks written to incorporate letter-sound awareness (i.e. Phonic Faces alphabet storybooks) elicit more print referencing behaviors from Head Start teachers than traditional emergent literacy storybooks?
2. Following the explanation and modeling of 4 print-referencing behaviors (i.e., finding rhyming words, identifying letter position within words, finding words containing a specific letter, making the sound associated with a letter), will alphabet storybooks elicit more print referencing behaviors from Head Start teachers compared to alphabet-storybooks books without a model and traditional emergent literacy storybooks following the training?
3. Will alphabet-storybooks and traditional emergent literacy storybooks elicit different types of print referencing behaviors from Head Start teachers?

METHOD

Six Head Start teachers read four books during a single 20-30 minute session. The teachers randomly either read a traditional emergent storybook or alphabet storybook first. Both books focused on the same theme (i.e., transportation). Following both readings the examiner demonstrated four print-referencing behaviors. Immediately following the training, the teacher read a second traditional emergent storybook and alphabet storybook. All sessions were videotaped and the readings were scored for print referencing behaviors of the adult and children.

Participants

Six Head Start teachers participated in the study. Participants were recruited from two different centers. Each center had 3 teachers, all of whom agreed to participate. All of the teachers were African American, five females and one male. The teaching experience of the participants ranged from 2 to 15 (x =9) years, and all but one had no additional teaching experience (1 had a year of teaching elementary). Four of the participants held college degrees, 1 in education, 1 in business and certified in education, 1 in sociology, and 1 in rehabilitation counseling. The 5th and 6th teachers had a high school education. Only the least experienced teacher reported that she had not received any literacy or book reading training.

Each Head Start classroom had 20-25 three-four year old children who participated in an all-day program. The classrooms contained an array of books, many displayed on bookshelves. Each room also contained a computer with a variety of age-appropriate software. The program adhered to the Head Start Creative Curriculum with a daily schedule included meals, outdoor activities, and 6 periods (15 to 45 minutes) of structured activities such as circle time, music, small group activity, story, and literacy activities (late in the day immediately before dismissal).

Materials

Each teacher was asked to conduct 4 book readings with his or her class. Two of the book readings were conducted before any training occurred, one using an emergent reading book and one using an alphabet-storybook. A short, 5-6 minute training session then was provided, where different phonological and print awareness strategies that could be done during storybook reading were modeled and explained. Following the training, each teacher read a different emergent reading book and alphabet-storybook.

Emergent Reading Books. Two emergent reading books were used, one read prior to teacher training, and one following. Both books were from the emergent reading level of the Wright Group Sunshine series. To Town (Cowley, 1984) focuses on the theme of transportation vehicles, while Obadiah (Cowley,1984) is a story about a series of cause-effect accidents that start because of a fire. The pictures and text provide similar information (i.e., a picture of a child driving a yellow bulldozer and text stating "I will go to town on my bulldozer"). The text is repetitive, with the same refrain on each page ("I will go to town on my X"). Obadiah was written in rhyme, while To Town incorporated alliteration (i.e., "toot-a-toot"). While some letters are frequently repeated within a book ("t" in "To Town" is repeated on every page), there is no planned specific letter/sound focus inherent in the story. To Town has 15 reading pages (of 16 pages; several of these are two-page illustrations), and 122 total words with an average of 8.8 words per sentence. Obadiah has 15 reading pages with several two-page illustrations, and 89 words, with an average of 8.4 per sentence.

Alphabet Storybooks. Two Phonic Faces alphabet storybooks were read, one prior to and one following training. Both were written at the emergent reading level. Ennos and His Engine (Norris, 2002) focuses on the theme of transportation vehicles, while Effy's Fan (Norris, 2002) is a story about a series of cause-effect accidents that start because of a fire. The pictures and text provide similar information, and is repetitive, with the same refrain on each page ("Do you hear the bus?" or plane, car etc). Both stories are written in rhyme, and both incorporate alliteration in the form of letter-sounds (the engine sounds from the bus and plane are the sound letter "n" makes, nnnnn). Each story is designed to explore a specific letter/sound and the sound is an inherent part of the meaning of the story as it is read (i.e., hearing the "nnnnn" sounds makes people assume there is a vehicle and they guess what they hear). Ennos has 11 reading pages (of 12 pages), and 112 words with an average of 8.6 per sentence. Effy has 11 reading pages, 87 words, with an average of 8.3 per sentence.

Procedures

Teachers were asked to read 2 books in the manner that they typically read to their class. The emergent and alphabet storybooks with the same theme (i.e., To Town and Ennos and His Engine) were read in random order to the class. The teacher was videotaped throughout the reading. Immediately following the reading of the second book, a short training session was conducted. Four phonological and print referencing behaviors were defined and then examples of places in the story where the strategy could be used were shown. The four strategies were:

Strategy	Example
Identifying Rhyming Words	"Tractor and Actor Rhyme" "Find a word that rhymes with see."
Identifying the Word Position of Letters	"The letter 'p' is at the beginning of 'pop' "Where is the letter 'p' in this word?"
Finding Words Containing a Specific Letter	"This word has the letter 's' in it." "Find another word that has an 's'"
Making the Sound of a Letter in a Word	"This letter says the [n] sound." "What sound does this letter make?"

Following the demonstration, the teacher was randomly given either the emergent book Obadiah or the alphabet storybook Effy's Fan, and asked to read to the students using the strategies. Following the first book, the teacher was asked to read the second book using the strategies. Both readings were video recorded.

Storybook Analysis Procedure. Each videotaped book reading was transcribed verbatim. The interaction was transcribed by individuals blind to the nature of the study or the book reading condition. All false starts, partial words, and other maze behaviors were transcribed, as well as each time a sound or letter was elicited. Points and other nonverbal behaviors that were part of the book reading were noted in brackets. Each adult utterance was assigned a number. The behavior then categorized according to the type of behavior identified. The behavior was either classified as a "Phonological or Print Referencing Behavior" or a "Meaning Behavior." A Meaning Behavior was defined as anything that focused on the story, including naming or pointing out something in the illustration, reading the story, or a story embellishment such as commenting on the character's behaviors or asking a prediction question. These behaviors, as well as any off-topic behaviors such as a disciplinary remark, were not analyzed further. Phonological or Print Referencing Behaviors were further classified as attention to letters, attention to sounds, attention to rhyme, or attention to a book or print convention.

Behaviors that were categorized under each subtype are:

1. Letter Reference: pointing to or asking children to point to letters, naming or asking for the name of a letter, identifying or asking children to identify the case (upper or lower case) of letters, pointing to or asking children to find matching letters, finding words that begin with a specified letter, or counting the number of times a specified letter appears on a page.
2. Book/Print Conventions: identifies or asks children to identify the title, illustrator, author, or book parts such as the cover, spine, or pages, identifies or asks children to identify punctuation, white spaces, or end of line, identifies or asks children to identify a sentence, points to or asks children to point to words left-to-right as the text is read.

Reliability

Two of the videotapes were transcribed by a second individual blind to all conditions. A point-by-point comparison was made, with an agreement of .96, generally at points where the tape was difficult to hear. All of the book readings were reanalyzed using the same procedure after an interval of 6 months, and the results compared for the classification of each turn. Intra-scorer reliability was .99. A second scorer trained in the identification procedure analyzed 20% of the book readings. The inter-scorer reliability was .99.

Results

The purpose of this study was to investigate whether a different type of book that had characteristics of both storybooks and alphabet books (i.e., alphabet-storybooks) would naturally induce teachers to engage in more print focused behaviors in the course of shared book reading with limited training.

Table 1 profiles the mean number of letter and book convention behaviors produced by Head Start teachers reading the traditional emergent level stories to their class compared to the alphabet-storybooks prior to and immediately following a short training session.

Table 1

Means and Standard Deviations for Phonological and Print Referencing Behaviors for Traditional Emergent Reader Storybooks and Phonic Faces Alphabet Storybooks Prior to and Following Short Training.

	Initial Reading				Post-Training Reading	
	Traditional	**Alphabet-Storybook**			**Traditional**	**Alphabet-Storybook**
	x sd	x sd			x sd	x sd
Letter	.83 (2.04)	2.00 (1.41)			7.33 (12.43)	11.50 (7.25)
Sound	.17 (.41)	3.50 (3.56)			1.67 (2.87)	5.00 (4.98)
Rhyme	1.00 (2.00)	50 (1.22)	.		3.00 (3.95)	0.00 (.00)
Book Convention	3.17 (.98)	1.67 (1.03)			1.50 (1.04)	1.33 (1.36)
Total	5.17	7.33			13.50	17.83
Difference		+8.33				+10.50

Letter Referencing: Examination of the means showed that at the initial reading (i.e., teachers were instructed to read as they typically did), the alphabet-storybooks elicited more behaviors related to letters and sounds. None of the behaviors occurred with high frequency in either group. On average, the traditional book elicited less than one reference to letters, while 2 references were elicited by the alphabet-storybook. Following the short training, both groups increased their reference to letters. The traditional story elicited an average of 7.33 references to letters although there was wide variation between teachers (sd=12.43). The alphabet storybook elicited 11.5 references, or more than one per reading page of the book.

Sound Referencing: During the initial reading of the traditional book, almost no references to phonemes (sounds) were produced, with a mean of .17 (one teacher made one reference). In contrast, the alphabet-storybooks elicited 3.5. Following training, both groups increased reference to sound, with 1.67 for the traditional book, and 5 for the alphabet storybook, or approximately every-other page.

Statistical Analysis

A dependent t-test indicated significant differences, from pre- to post-test, between the teachers use of print referencing behaviors when using the phonic faces books, $t(5) = 5.71$, $p < .01$, $d = 1.56$. However, the same did not hold when examining the teachers use of print referencing behaviors when using the traditional books, $t(5) = 1.45$, $p = .21$, $d = .75$.

DISCUSSION

These results suggest when the materials are designed to focus on print within the context of storybook reading, Head Start teachers engage in more of these behaviors with little or no training. Rhyme was common to both books and was elicited by both types of books following training. Letter and sound awareness was inherent only to the Phonic Faces alphabet storybooks and a corresponding greater reference to letters and sounds was elicited with and without training by these stories.

Limitations and Implications

This study only examined one session of book reading and very minimal training. Only the behaviors of the adult were analyzed. Thus, while encouraging, the study at best can be considered a preliminary examination of the effectiveness of alphabet storybooks. A longer-term study that examines whether the differences in adult print and phoneme behaviors are consistent and maintained over long periods of time is needed. In addition, the behaviors of the children need to be analyzed. It also needs to be determined how well the alphabet-storybooks elicit behaviors from the adult and children related to meaning and plot development. Finally, since the goal of creating books that elicit print-referencing behaviors is to increase these skills in children, more extended studies are needed to determine if significant differences in emergent literacy skills will be found in children read alphabet-story books compared to a control condition, and if longer periods of training are needed to maintain the adult's focus on print during alphabet-storybook reading or if the books themselves serve to remind teachers to attend to these cues.

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ECHO

EXPLORING AN UNKNOWN LANGUAGE: IMPLICATIONS FOR SPEECH-LANGUAGE PATHOLOGISTS

Rahul Chakraborty
Texas State University
San Marcos, Texas

Jessica Pfister
Baptist Health System
San Antonio, Texas

Maria Diana Gonzales
Texas State University
San Marcos, Texas

Parvinder Sublok
Fairfax County Public Schools
Fairfax,Virginia

ABSTRACT

Inspired by the current multilingual and multicultural mosaic of the United States (U.S.A.), this paper overtly emphasized the need for linguistic analyses for Speech Language Pathologists and/or Special Educators. As an illustration, analyses of segmental phonology of a relatively unexplored language from the Dravidian family of languages, Tulu, was presented. Data were collected from a 25 years old native speaker of Tulu whose second language was English. Along with an overview of the segmental phonology of Tulu, through informal conversation with the informant, different intangible aspects of the Tulu speaking community emerged, including their language-attitude and sociolinguistic-prestige. Relevance of data collection through direct interaction with a native speaker of an unknown language is highlighted. This becomes especially critical while working with non-native speakers of English, as we know that there are many social and personal variables which might operate on nonnative speakers' production mechanisms along with crosslinguistic interference.

KEY WORDS: Multicultural issues; Tulu; Phonology; Speech Language Pathology

Corresponding Author:
Maria Diana Gonzales
Email: mg29@txstate.edu

ECHO

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Rahul Chakraborty
Texas State University
San Marcos, Texas

Jessica Pfister
Baptist Health System
San Antonio, Texas

Maria Diana Gonzales
Texas State University
San Marcos, Texas

Parvinder Sublok
Fairfax County Public Schools
Fairfax,Virginia

INTRODUCTION

Linguistics has consistently influenced the field of speech language pathology. Extensively, speech language pathology, as a discipline, has borrowed and incorporated concepts of theoretical linguistics, psycholinguistics and applied linguistics (e.g., Barlow, 2001b; Barlow & Dinnsen, 1998; Bernhardt & Stemberger, 1998; Demuth, 1995; Dinnsen & Gierut, 2008; Gierut & Morrisette, 2005; McCarthy & Prince, 1993; 1995; Ohala, 1996; Prince & Smolensky, 1993; Pater, 1997). Inspiration from different branches of linguistics has helped us understand processes related to language acquisition and language disorders, as applicable to monolingual, bilingual and multilingual populations. Developments in the field of linguistics have also inspired improvements in the clinical intervention services based on stronger theoretical backbone, and also improved our clarity in the theoretical domain to develop models and theories of speech production and perception mechanisms. For example, optimality theory (e.g., McCarthy & Prince, 1993; 1995; Prince & Smolensky, 1993) has been a major influence to enrich our understanding of language acquisition processes (e.g., Barlow, 2001b; Barlow & Dinnsen, 1998; Bernhardt & Stemberger, 1998; Demuth, 1995; Ohala, 1996; Pater, 1997) and speech and language intervention mechanisms (e.g., Gierut & Morrisette, 2005; Dinnsen & Gierut, 2008).This descriptive note has borrowed techniques from field methods in Linguistics to address some demands in the service delivery industry in Speech Language Pathology.

This descriptive note was inspired by the current linguistic scenario in the U.S.A., where according to 1990 U.S. census, 31.8 million (13 percent), out of the 230.4 millions, spoke a language other than English at home. In the 2000 U.S. Census, the number became 47.0 million (18 percent) among the 262.4 million people in the U.S. As a consequence, numerically, the present American society is clearly exhibiting a multilingual texture, where the linguistic dynamics of our classrooms, hospitals and rehabilitation facilities are rapidly changing. Thus, it is appropriate to hypothesize that, at least, in a cosmopolitan environment, speech language pathologists (SLPs) and/or special educators might encounter clients from different linguistic backgrounds.

Similarly, with the advent of global economic opportunities, future SLPs or special educators might need to serve clients from some L1 backgrounds in different countries, where the SLPs or special educators' descriptive knowledge of the target L1 might range anywhere from, 'very limited experience' to even 'never heard that language before.' Hence, service providers would invariably need to consult studies that have addressed that target language or presented the linguistic aspects of that language. It is needless to say that finding descriptive studies of every world languages is impossible due to several natural limitations, including paucity of linguistic research and inaccessibility of technically accurate reports in different parts of the world. In such a situation, SLPs or Special educators will probably offer services in a language of their choice, making it

a therapist-centric approach or might engage an interpreter and/or a native speaker of the target language. To make it a client-centric approach, clinicians will have to depend on existing literature on the client's target language or use an interpreter. However, instead of waiting for a published descriptive study or being completely dependent on the skills of the interpreter to offer information and services, clinicians, independently, might need to extract the linguistic properties of the target language. For example, analyses of the phonological system of the target language might offer better clarity to the clinicians or special educators and help them devise personalized intervention strategies. This practice might become especially relevant for clients with phonological disorders and/or differences.

METHOD

Borrowing techniques used in the field methods of linguistics and using speech production data collected from a native speaker of a relatively unexplored language from the Dravidian family of languages, this paper offers an illustration to extract an introductory sketch of segmental phonology of a language and basic vocabulary. To illustrate, we have choosen a language which does not have an independent orthographic script and which, to the best of our knowledge, has not received empirical attention from the field of Speech Language Pathology and Special Education. Consequence of such empirical state brings us to our secondary objective. This paper also offers a potential infrastructure, based on which speech language pathologists or special educators could collect data from a normal speaker of any unknown language and derive a rudimentary working sketch of the segmental phonology and lexicon of a language.

The target language is Tulu – a South Indian language thriving only on its auro-oral tradition (Kekunnaya, 1994; Shetty, 2003). Tulu belongs to the South Dravidian sub-group of Dravidian family of languages. Even though Tulu lacks an independent script and uses Kannada (i.e., another language from the Dravidian family of languages) orthographic forms or scripture, Tulu is considered an independent language. It has a rich oral-folk literature and is considered one of the most highly developed Dravidian languages (Kekunnaya, 1994; Shetty, 2003). Typologically, Tulu is considered to be the first language having branched out from the Dravidian stock. Specifically, this paper will focus on the 'Shivarli' dialect of Tulu language. According to the informant of this study, 'Shivarli' Tulu is usually offered a prestigious status among other dialects of Tulu. The other dialects are 'Chittapabansh' and 'Kota' (Kota specifically spoken in Koteshwar, India).

Geographical distribution

Tulu is spoken by 1.95 million native speakers (Brown. 2006; Garry, Jane, & Carl Rubino, 2001), predominantly in the southwest part of India known as Tulu Nadu. Worldwide, there are three to five million native speakers of Tulu (Brown. 2006; Garry, Jane, & Carl Rubino, 2001). In India, Tulu speakers are mainly concentrated in the south Kanara district of Karnataka state in the southern part of India. For 65% of the Tulu speakers, Kannada is the second language (Brown. 2006; Garry, Jane, & Carl Rubino, 2001). So, Tulu speakers are in close contact with Kannada speakers and as a result have borrowed a large number of lexical items from Kannada language. Even direct borrowing from Sanskrit language is found in Tulu. Moreover, probably due to earlier maritime trade between Tulu dominated regions and mid-eastern countries, borrowing from Persian and Arabic languages is also observed. Simultaneously, colonization helped many English and Portuguese lexical items to get a place in Tulu lexical inventory. The native speakers of Tulu are referred to as Tuluva (Tulu people).

Informant

The informant was a 25 years old, post-graduate student, in the University of Bombay, India. He hailed from an 'orthodox' agriculturist 'Brahmin' family of Arasinamakki village near Dharmasthala of south Kanara district, India. He received his primary and secondary education in the Kannada language, in the state of Karnataka, India. At home, he used Shivarli Tulu. He got exposure to English during his graduate studies and to Hindi only after coming to Bombay, India. The informant reported no history of speech, language, hearing and neurological problem.

During informal conversation, the informant's views towards language contact situations, role of code switching, language identity and language attitudes also emerged. According to the informant, in their village, approximately 3000 people speak Shivarli dialect and estimated 4000 people speak Sudra Tulu, the other variety. Villagers code switch and code mix while communicating with people outside the Brahmin or upper caste. However, such linguistic interaction appears to be sensitive to the geographical location. As reported, Tulu speakers living in their village do not frequently mix code with Kannada, even though most villagers speak Kannada fluently. Kannada is the official state language. But Tulu speakers living in cosmopolitan cities do practice code mixing and code switching with other popular languages. Some degree of interference from Kannada and English has also been reported (Shetty, 2003).

Similar observations have been reported by Shetty (2003), where she had compared linguistic attitudes of the Tulu speakers in South Kannada and Mumbai. In South Kannada district, Tulu speakers do not codeswitch from Tulu to Kannada, and the speakers are extremely proud and protected about their language. Probably that is one of the primary reasons why Tulu is still maintained and resisted the political and linguistic oppression (Shetty, 2003). On the other hand, in Bombay, where there is the largest number of Tulu speakers outside South Kannada, Tulu speakers are socially motivated to codeswitch and code mix with languages like English, Hindi and Marathi (Shetty, 2003).

Data Collection

Data was collected in a small classroom with minimum ambient noise. A total of 30 data- collection sessions were used. Each session ranged between 1-1.5 hours in length. Text translation method was used. The informant was given a word list in English with 32 different lexical categories which he translated into Tulu. There were 1577 lexical items in the list. Experimenters were allowed to ask questions multiple times and the informant was patient enough to answer and/or repeat words. Experimenters trained in phonetic transcription transcribed the productions. Transcriptions were verified by a third experimentor, who had an extensive experience (>20 years) with phonetic transcription and field methods. To ensure differences between Kannada (i.e., the official language of the state, where the informant grew up) and Tulu, the informant frequently offered translations for words separately in Tulu and in Kannada.

Data Analyses and Discussion

Illustration of a thorough linguistic analyses is beyond the scope of this note. This note

will offer an introductory list of steps and/or paradigm (refer to Table A) that SLPs and Special educators could use to analyze the phonological constraints of an unfamiliar language. The complete list of lexical items is included in the Appendix A. The following steps could be followed in sequence:

Step 1: Transcribe all the words and identify all the phonemes.

Step 2: Identify all the clusters (2 or 3 consonant clusters or clusters with more than 3 consonants)

Step 3: Identify positions of all the phonems within syllables. That is, what phonemes are observed in initial, medial and final positions of syllables.

Step 4: Identify gemination

Table A: A dataset is included below with all the target lexical categories. Only a limited number of lexical items are included here in the list. Refer to Appendix A for additional lexical categories.

Categories & Tulu Phonetic Transcriptions	Categories & Tulu Phonetic Transcriptions	Categories & Tulu Phonetic Transcriptions	Categories & Tulu Phonetic Transcriptions
Animals cow [pƐtta] bull [bo:ri] ox [bo:ri] calf [kʌndʒi] buffalo [ko:ŋa] sheep [kuri] goat [jeḍə] lamb [kurittamʌri] horse [kudu:re] mare [puɳɳukudu:re] **Fruits** fruit [pʰəla] banana [ba:letapʌrənd ï] orange [tʃittʌpuli] sweet lime [musumbi] lemon [limbepuli] pineapple [pʌrƐŋgipƐlʌkai:] apple [sebu] guava [perʌlƐ] papaya [bʌpʌŋgai] water melon [bʌtʃʌŋgai] **Trees-Plant-Bush** jungle [ka:ḍu] bush [bəllæ] tree [mʌrə] plant [dʌi] creeper [bʌlli] grass [pʌnti] moss [pambʌdʒi] basil [t u:lʌsi] mango tree [ku:kutamʌra] coconut tree [tƐŋgʌitəmʌra] **Time** bright fortnight [ʃuklʌpʌkʃa] dark fortnight [krIʃnʌPʌkʃa] second [sƐkʌnḍə] minute [nimiʃa] hour [gʌntƐ] week [ʊara] fortnight [pʌkʃa] year [ʊʌrʃa] early morning [pʰuljakʰƐlï] morning [bolpu] **Measurements** inch [intʃə] feet [fi:tə] yard [gʌdʒa] furlong [pʌrlʌŋg] mile [mailə] meter [mi:tʌrə] seer [sƐrə] maund [mʌɳə] pound [paundə] kilo [kilo:] **Colors** white [boldu] black [kʌppu] red [kƐmpu] yellow [hʌlʌdi] green [pʌtʃtʃƐ] blue [ni:li] orange [tʃittʌpulibʌnna] pink [ʌrægƐmpu] sky blue [a:ka:ʃʌdʌni:li]	**Insects** insect [puri] ant [pidʒinə] white ant [udalə] fly [kelendʒi] cockroach [akkale] bedbug [tʌgʌnə] spider [dʒƐḍa] honeybee [ti:jatakelendʒi] scorpion [kimbʌtʃolu] flea [umbʌru] **Flowers** flower [pʰu:] rose [gu:labi] lotus [taʊʌrƐ] lily [nʌidIlƐ] daisy [da:saʊala] sunflower [surjakant tube rose [ʊotƐgu:labi] bud [muggæ] petal [Ɛsa:lï] bouquet [hu:taguntʃalu] **Days** day [dina] date [tarikï] Monday [somʌʊara] Tuesday [ʌŋgarƐ] Wednesday [budəʊara] Thursday [gu:ruʊara] Friday [ʃu:krʌʊara] Saturday [ʃʌniʊara] Sunday [ʊItara] full moon day [pʰnʌmƐ] **Season** winter [tʃʌlikala] monsoon [bʌrsakala] summer [ʃƐkƐtʌkala] spring [laIpuna] season [ka:la] **Coins** coin [paʊli] rupee [rupai] paise [pʌisƐ] anna [anɳƐ] pice [tambratananja] money [pʌisƐ] wealth [ʌiʃʊʌrja] pound [pʌunḍu:] shilling [bollinanja] pence [pƐns] **Metal** gold [bʌŋgara] silver [bolli] iron [kʌrba] copper [tambra] steel [sti:lə] brase [pIttʌlƐ] coal [kʰʌlidlï] bronze [kʌntʃu] metal [lo:ha] mica [kʌkkƐbəŋgara]	**Birds** bird [pʌkki] pigeon [puda] crow [kʌkkƐ] sparrow [gubbi] hen [k~oli] cock [pʰundʒæ] cuckoo [ko:kile] peacock [nʌʊilï] peahen [pʰunnunʌʊili] parrot [gili:] **Vegetables** potato [bʌtatƐ] onion [niruli] cabbage [kjabƐdʒ] pumpkin [ku:mbuḍa] gourd [surƐka:I] tomato [tomƐto] cauliflower [kɔliflaʊər] brinjal [bəda:nƐ] sweet-potato [kʰƐrƐŋgï] green peas [bətani] **Months** I month [pʌggu] II month [bƐsa] III month [kartiliï] IV month [a:Ti] V month [soɳa] VI month [nirnəlï] VII month [bontelï] VIII month [dʒardæ] IX month [perardæ] X month [pʰonni] XI month [mai:] XII month [suggi:] **Direction** north [bʌḍʌkkai] south [tƐnkai] east [muḍai] west [pʌḍḍai] north-east [bʌḍʌkkaimuḍai] north-west [bʌḍʌkkaipʌḍḍai] south-east [tƐnkaimuḍai] south-west [tƐnkaipʌḍḍai] direction [dikkï] **Sizes & Shapes** size [a:kara] shape [rupa] square [tʃ ʌ uka] round [u:rutu] rectangular [ajata] triangle [trIkona] oblong [tʃʌtu:rastra:] semi-circle [ʌrdʌsuttu] pentagone [pʌntʃʌkonakrəti] hexagone [ʃʌḍəbudʒakrəti] **Weather** cold [tʌḍʌmena] hot [bƐtʃtʃa] temperature [uŞnʌte] climate [hʌʊamana] humidity [pase] rain [bʌrsa] thunder [guḍugu] lightening [mi:ntʃï] snow-fall [mʌIndï] fog [aIsï]	**Games & Sports** game [gobbu] outdoor game [pidaitagobbu] indoor game [ulaitagobbu] ball [tʃƐnḍï] bat [bæt] skipping [lajepuna] race [bʌlipuna] toy [gobbunasamanə] doll [gombe] whistle [bigil] **Education** education [bərəu] training [tərabeti] montesory [baləʊali] school [ʃalƐ] college [kolƐdʒə] university [ʊiʃʊəʊidjaniləja] residential school [aʃrʌmï] laboratory [prəjogalƐ] library [ʊatʃnaləjə] Language [bʰaʃƐ] **Quality-Quantity Indicators** young [dʒəʊanƐ] old [pəlabƐ] sharp [buddiʊʌntƐ] blunt [dʌḍḍƐ] new [posʌttə] old [pəlʌttə] hot [betʃtʃa] cold [tʌmpu] fine [eḍḍƐ] rotten [halainï] **Numbers** One [ʊondʒi] two [jʌrʌḍɪ] three [mu:dʒi] four [nalï] five [ainə] six [adʒi] seven [jƐlï] eight [jƐlʌma] nine [ʊʌrumba] ten [pʌttï] **Pronouns** I [jenə] We [jenklena] you (sg) [i:] you (pl) [nikkulu] he [ni:nu] she [a:lï] it [au] they [akkulu] this [unḍu] **Function Words** and [bettï] or [ətəʊa] for [boladï] from [əlpʌrtï] up [mitï] down [hiltï] above [mittï] under [alitï] in [ulai] out [pidai]

ECHO

Categories & Tulu Phonetic Transcriptions	Categories & Tulu Phonetic Transcriptions	Categories & Tulu Phonetic Transcriptions	Categories & Tulu Phonetic Transcriptions
World of Nature mountain [pʌrʊʌta] hill [gu:ɖɖæ] volcano [dʒʊalamu:ki] earthquake [bʰuKʌmpï] peak [koɖi] rocks [bʌnɖƐkʌllï] cave [surəŋga] valley [kʌɳiʊƐ] desert [mʌrubu:mi] wave [a:læ] **Stages of Growth** age [praja] baby [ba:lƐ] child [ba:lƐ] youth [dʒʌʊani:] boy [maɳi] girl [ponnu] man [nərəmʌɳi] woman [pʰondʒou] middle-age [mʌdʰjʌpraja] old-man [parʌbƐ] **Ornaments** bun-hair-note [ʃu:li] braid [dʒjædɇ] collyrium [kərdige] kumkum [kumkuma] ear-ring [binɖole] nose-ring [muguti] necklace [nekləs] bangles [kadʒi] ring [riŋg / uŋgurə] waist-band [ʃontapəti] **Professions** profession [udjogə] goldsmith [bəŋgartaatʃarï] blacksmith [kərbʌtakelasədaje] coppersmith [tʃərməKare] shoemaker [atʃari] carpenter [ʃaurike] barber [kumbare] potter [ʌŋgəlitaje] shopkeeper [ʊja:pari] merchant [agase] **Household Items** ladder [je:ɳi] stool [ʃtulï] table [me:dʒï] chair [ku:rtʃi] sofa [ʃƠ:pa] easy-chair [a:ramʌku:rtʃi] swing [nelpala] bench [bentʃi] carpet [dʒʌmkana] cot [mʌntʃi]	**Planetary Words** sun [surje] moon [tʃʌndre] star [nʌkʃʌtrə] planet [grʌhə] nebula [mʌbbu] aerolite [ulʌkkæ] constellation [sti:rənʌkʃʌtrə] comet [du:məketu] eclipse [grʌɳə] milky way [a:kaʃʌgʌŋge] **Physical Differences** bald-headed [ʃaŋƐ] dumb [pottƐ] deaf [pottƐ] blind [kuruɖƐ] one-eyed [ʊʌndʒikʌnnədaƐ] cross-eyed [ʊorekʌnnədaƐ] squint [koʃuk ʌ nnədaƐ] nose-less[muguidjanaƐ] teeth-less [kʰu:liidjanaƐ] stammerer [godjæpaternaƐ] **Professional Equipment** screw [skru] screwdriver[ʃkrudraiʊʌr] hammer [suttigƐ] nail [a:ɳi] axe [maɖu] saw [gʌrgʌsa] bellows [ʊotƐ] furnace [dikkelu] razor [balu] blade [blƐdï] **Food** cooked rice [hunnupu] chapatti [tʃʌpati] bread [brƐɖɖə] puri [puri] curry [kadʒipu] vegetable curry [sʌsjaharikadʒipu] soup [saru] pickles [u:ppʌɖə] sweets [sipæ] sweet-ball [lalu] **Provisons** corn, grain [danja] wheat [go:di] rice [ʌli] barley [barli] millet [ragi] cats [o:ts] maize [dʒo:la] pulses [dʰənija]	**Parts of Body** body [ʃəri:ra] hand [tʌræ] hair [kudʒəlï] face [mo:nƐ] forehead [munɖa] nose [mu:gu] nostril [mu:gudaott Ɛ] ear [kebi] cheek [kƐppæ] chin [gʌɖɖa] **Dress** hat-cap [toppi] banyan [bʌnjan] shirt [ʌŋgi] trousers [tʃʌɖɖi] coat [kotu] tie [tai] pyjama suit [paIdʒamï] jacket [dʒækƐtï] sweater [ʃettʌrï] muffler [ʃa:lu] **Emotions** confidence [dærja] self-confidence [atmʌʊiʃʊasa] violence [hImsƐ] non-violence [ʌhImsƐ] satisfaction [trIpti] dissatisfaction [kutuhʌlə] enthusiasm [kutuhʌlə] disappointment [nirəse] forgiveness [mafi] ridicule [mʌskirimənpu] **House Parts** house [illaɖƐ] cottage [buɖara] hut [gu:ɖisalu] inn [tʰŋguda:ɳa] staircase [maligƐ] step [mu:ttu] railing [nerpu:na] courtyard [tʃaʊaɖi] threshold [hostile] room [koɳƐ]	**Verbs** to eat [tʰinjarï] to drink [pʌrijarï] to gulp [nuŋgjarï] to suck [nekkjarï] to lick [nekkjarï] to swallow [nuŋgjarï] to hear [kenjarï] to see [uijƐrï] to breath [usiraɖijƐrï] to smell [pʌrimʌlauijƐrï] **Culture & Art** art [kʌlƐ] music [sʌŋgita] vocal music [gaenï] instrumental music [ʊadjʌsʌŋgita] singing [pʌdjapanpuna] song [pʌdja] folksong[dʒanəPʌdjapadja] tune [da:ti] folk-story [adʒikate] dancing [nʌlipu] **Religion** religion [dʌrmə]/[dʰʌrmə] cult [pʌntə] temple [deʊʌstana] church [iŋgrƐdʒi] worship [pudʒƐ] prayer [prartʌnƐ]/[prartʰʌnƐ] mediation [djana]/[dʰjana] idol [mu:rti] conch [ʃ ʌnkə]/ [ʃʌnkʰə] shell [ʃʌnkə]/[ʃʌnkʰə] **Admin. & Govt. Set Up** king, emperor [radʒa] queen [raɳi] prince [juʊradʒa] princess [juʊrani] harem [ʌntʌpura] palace [araməne] kingdom,empire [samradʒja] throne [simhasəna] crown [kirita] fort [kotƐ]

Results: Based on the analyses of 1577 lexical items, the phonological analyses revealed the presence of the following phonemes listed in Table B:

Table B: Phonological Inventory

Vowels	[i], [iː], [I], [e], [Ɛ], [æ], [a], [aː], [u], [uː], [ʊ], [oː], [ɔ], [ʌ], [ɘ], [ə]
Consonants	Unaspirated Plosives: [p], [b], [t], [d], [ʈ], [ɖ], [k], [g]
	Aspirated Plosives:[pʰ], [bʰ], [tʰ], [dʰ], [kʰ]
	Unaspirated Affricates:[tʃ], [dʒ]
	Aspirated Affricate:[tʃʰ]
	Fricatives: [f], [s], [ʃ], [ʂ], [h]
	Nasals: [m], [n], [ɳ], [ŋ]
	Approximants: [j],[ʋ], [l], [ɭ]
	Trill: [r]

The following consonant clusters were identified in the dataset:

(I) Clusters with 2 consonants:
pr; p"'l; p.J; tr tJ tw; tm; d.r; di; d"'.J; Kr; K.; KS; Kl; KJ; gr; gi; Tr; sr; sT; .w; sC; sa; rb; rs; rS; rd; rn; rt; rm; rL; ri; rz; ri; rq; rw; rC; rp;rD; NT;NK; Di; Zw; ZJ;Zr ST;SL;ST;Sr;sj sup; mr; mS; mb; nD; as; aT; nC; ndm nZ; nK; nt; ng; ni; id; ip; ii; Wi; wi; Jr; b"J; br; 2n

(II) Clusters with 3 consonants:
mbr; mpi; ndr; nkj; ndj; gj; >gr; Cci; kkj; ttj; DDJ; rpJ;

(III) Only one four consonant cluster could be identified: nrtj-

(IV) Geminates: A double or long consonant, such as the tt in the Italian word sotto or the nn in the English word thinness. tt; nn; pp; cc; ll; kk; dd; bb; gg; rr; dd; mm; dʒdʒ;

Environments & Distribution of Initial, Medial, and Final Phonemes

Suspicious Pairs: As /p/ and /b/ occur in analogous environments throughout the data, based on their range of distribution, it is possible that they may be separate phonemes. Since the data also yields the occurrence of these 2 phons in contrastive environments, the assumption of independent phonemic status to each of the phons is justified. Hence we may conclude that /p/ and /b/ are independent phonemes.

Why is it critical to include linguistic analyses in communication sciences and disorders curricula?

Exploring linguistic operations of an unknown language holds critical relevance for our profession. It is not only a need for the future but also an impending necessity for the current multiligual and multicultural scenario in the USA. Academic programs preparing SLPs should, at least, incorporate basic phonological analyses of unknown languages in the curricula so that the students or professionals become better equipped for the multilingual reality in the United States. The American Speech and Hearing Association (ASHA) does not require students graduating from different accredited programs to include any course content that make students equipped in linguistic analyses of any unknown language. None of the core courses at the graduate or at the undergraduate level offer students any specific training in linguistics or even opportunity so that students can collect linguistic data in an unknown language, analyze, draw inferences and propose linguistic norms of the target language following processes specified in the area of the field-linguistics. Typically, students learn to administer clinical tests and follow the instruction manuals of the respective tests and report the results to formulate intervention strategies. It is critical to understand that the foundational principles behind all the clinical test batteries used is some form of linguistic analyses made-simple by the test constructors.

According to the 2014 Standards for Accreditation of Graduate Education Programs in Audiology and Speech Language Pathology, the Council of Academic Accreditation (CAA), mandates that graduate programs offering degrees in Communication Disorders

> "must provide opportunities for students to acquire and demonstrate knowledge of the nature of speech, language, hearing and Communication Disorders and differences, as well as swallong diorders, including etiologies, characteristics and anatomical/physiological, acoustic, psychological, developmental, linguistic, and cultural correlates" (ASHA, 2014, pg. 13)."

While the CAA mandates that students achieve academic and clinical competencies in delivery of services to culturally and linguistically diverse populations, they do not prescribe 'how' or 'what' a program should do to ensure that students achieve cultural competence. Several programs across the country offering graduate degrees with a bilingual emphasis may require that those students complete bilingual phonetics or phonology courses, but there are no guarantees that all graduate students will be exposed to analyzing linguistic data in an unknown

language, in addition to analyzing, drawing inferences and proposing linguistic norms of various target languages.

Unfortunately and rather non-scientifically, regardless of the linguistic background of the client here in the U.S.A., we offer more clinical tests either in English or in Spanish, even though we know that SLPs are already dealing with clients from several other language backgrounds. If we can equip students to extract rules based on linguistic data collected, students will not probably feel unprepared whenever or wherever they encounter a client coming from an unknown linguistic background.

Language Attitude and Pragmatics

The utility of linguistic analyses for the SLPs and special educators clearly goes beyond the phonological domain. Intangible aspects related to language-attitude, language-prestige and cognitive representation of language-related concepts are equally critical for the speech-language service delivery industry. Historically, before the 1960's, attitudes about language were not seen as critical; the behaviorist approach to language study started viewing language as behavior and not as cognitive or mental activity that could be denounced as something beyond the scope of language studies. For example, in the early 1960's in French Canada, beginning of a change was observed (Lambert, Hodgson, Gardner & Fillenbaum, 1960). Recently, Santello (2013) reported critical idiosyncratic dimensions of language attitude by incorporating interviews and employment of semantic differential techniques. Using language intrinsic multidimensionality and language specific singularity, several latent dimensions such as attractiveness of the language, superiority and efficiency have been reported to be related to attitude formation (Santello, 2013). Thus, direct interaction with a native speaker of an unknown language might offer us snapshots of those intangible qualitative aspects especially when clinical outcomes are not always linearly related to the efficacy of the clinicians aptitude and methodological rigor.

Moreover, direct interaction with a native speaker of an unknown language could definitely be a window to understand paragmatic aspects associated with the target language and its community. For example, how do people from one particular linguistic community use language for greeting, informing, demanding, promising, and requesting? How do they change language according to the needs of the situation or depending on the interlocutor as we observe that speakers vary their language and styles while talking to babies versus adults, males versus females and addressing groups versus indivuduals? How do speakers follow rules for conversations and storytelling, such as taking turns in conversation, introducing topics of conversation, maintaining a topic, closing a topic, and rephrasing when misunderstood? How do they use verbal and nonverbal language such as facial expressions and eye contact? It is needless to say that we all acknowledge that pragmatic rules might vary across cultures and within cultures. However, do we know the nature and degrees of variation? Any SLP course content that specifically addresses how to understand the pragmatic aspects of one language through the language user of an unknown language is thus critical and a necessary aspect to offering quality multilingual and multicultural services to our clients.

Globally and also in the U.S.A., this is going to be especially critical for professionals dealing with adult clients with non-native English accents. Linguistic interference and cognitive interference are an inherent part of a nonnative speakers' linguistic representation. Thus development of logical sensitivity towards world languages and availability of methodologies to explore unknown languages are bound to be the critical indices of our services in the years to come.

CONCLUSION

Considering the global linguistic mosaic and borrowing procedures used in the field methods of Linguistics, the aim of this descriptive note was to present a note on the importance of linguistic analyses in a multilingual world for SLPs. This same paradigm could and should be used when dealing with an unfamiliar language. The analytical infrastructure and a working sketch of Tulu segmental phonology and lexical stock was used as an example of the proposed paradigm based on which speech language pathologists or special educators could then propose intervention strategies. Based on the data collected from a native Tulu speaker, a wide range of phonemes and their possible environments have been identified. Extension of their phonological inventory might help clinicians or educators identify the underlying nature of the phonological behaviors, as applied to intervention of nonnative accent and/or phonological errors of Tulu speakers. Simultaneously, direct contact with the informant revealed that linguistic performance of any Tulu speaker appears to be dynamically sensitive to their existing linguistic experience, geographical location, the sociolinguistic scenario of the speakers' language community (e.g., Chakraborty, 2011; Tarone, 1982) and language attitudes of the speakers (e.g., Brynne & Chakraborty, 2013; Chakraborty, 2011; Kellerman, 1986). Clinicians or educators also need to consider the social-linguistic variables such as, social prestige associated with the L1 and L2 of the speaker. Direct contact with a native speaker is also critically important because speech and language behaviors of nonnative speakers cannot be always explained by the linguistic features of their first and second language and/or cross linguistic interference. Speakers might exhibit features of interlanguage and/or some idiosyncratic features.

Clearly, the scope of this paper did not propose to cover all aspects of the language, even though we acknowledge that other linguistic constructs, such as, suprasegmental phonology, morphology, syntax, semantics and pragmatics are equally critical. Selective attention to the segmental phonology of Tulu has been offered here. An attempt was made to remain as accurate as possible when making assertions. Since the informant was a graduate student in the University of Bombay, some degree of cross linguistic interference from English and Hindi could not be completely ruled out.

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Appendix A: List of Additional Lexical Categories

Animals	**Insects**	**Flowers**	**METAL**	**VERBS**
cow	insect	flower	gold	to eat
bull	ant	rose	silver	to drink
ox	white ant	lotus	iron	to gulp
calf	fly	lily	copper	to suck
buffalo	cockroach	daisy	steel	to lick
sheep	bedbug	sunflower	mercury	to swallow
goat	spider	bud	coal	to hear
lamb	honeybee	petal	bronze	to see
horse	scorpion	bouquet	metal	to smell
mare	flea	garland	marble	to chew
dog	locust			to bite
puppy	butterfly	**CALENDER**	**WEATHER**	to taste
cat	centipede	**TERMS**	cold	to speak
camel	grasshopper	day	hot	to sing
lion	wasp	date	temperature	to vomit
tiger	mosquito	Monday	climate	to cough
panther	grainmoth	Tuesday	humidity	to cry
wolf	caterpillar	Wednesday	rain	to touch
fox		Thursday	thunder	to walk
bear	**TREES-**	Friday	lightening	to run
monkey	**PLANT-BUSH**	Saturday	snowfall	to jump
kangaroo	jungle	Sunday	fog	to slip
zebra	bush		frost	to fall
elephant	tree	**MEASUREMENTS**	vapour	to sleep
deer	plant	inch	air	to turn
pig	creeper	feet		to swell
crab	grass	yard	**WORLD OF**	to dance
rat	moss	mile	**NATURE**	to move
mongoose	basil	meter	mountain	to wander
rabbit	mango tree	pound	hill	to enter
tortoise	coconut tree	kilo	volcano	to sink
frog	banyan tree	gram	earthquake	to come
squirrel	root	weight	peak	to go
lizard	trunk	measurement	rocks	to climb
snake	branch		cave	to swim
earthworm	twig	**MONTH**	valley	to lift
cobra	leaf	January	desert	to give
python	bark	February	wave	to take
crocodile	thorn	March	bank	to hit
whale	tendril	April	shore	to hold
fish		May	well	to live
snail	**Birds**	June	sea	to stay
tail	bird	July	ocean	to play
	pigeon	August	lake	to pull
	crow	September	river	to scratch

ECHO

VEGETABLES
potato
onion
cabbage
pumpkin
gourd
tomato
cauliflower
sweet-potato
green peas
French-beans
cucumber
carrot
raddish
beetroot
garlic
ginger
drumstick
bitter gourd
green grass like vegetable

SEASON
winter
summer
spring
fall

COLORS
white
black
red
yellow
green
blue
orange
pink
gold
silver
purple
violet
brown

FOOD
rice
bread

sparrow
hen
peacock
parrot
hawk
vulture
eagle
owl
swan
duck
bat
crane
pigeon
crow
sparrow

DIRECTION
north
south
east
west
north-east
north-west
south-east
south-west

EMOTIONS
confidence
self-confidence
satisfaction
dissatisfaction
enthusiasm
disappointment
forgiveness
ridicule
depression
confusion
anger
laughter
love
hatred
insult
respect
pride
desire
jealousy

October
November
December

TIME
fortnight
second
minute
hour
week
year
morning
afternoon
evening
night
midnight
century
era

COINS
coin
money
wealth
pound
shilling
pence
cent
dollar

SIZE & SHAPE
size
shape
square
round
rectangular
triangle
semi-circle
pentagon
hexagon

PROFESSIONS
profession
goldsmith
blacksmith
coppersmith
shoemaker

steam
stream
pond
fountain
waterfall
canal
drain
island
oasis
cape
tide
ebb
earth
ground
world
soil
land
clay
sand
stone
mud
slab
bridge
dam
flood
gulf
bay
latitudes
longitudes
continent
subcontinent

PLANETARY WORDS
sun
moon
star
planet
nebula
constellation
comet
eclipse
milkyway
solar system

to push
to sit
to stand
to swing
to die
to think
to decide
to say
to tell
to look
to know
to understand
to laugh
to smile
to become
to want
to wait
to wake
to rise
to ask
to feel
to remember
to forget
to remind
to console
to worship
to pray
to like
to deceive
to cheat
to occur
to satisfy
to win
to accept
to flee
to meet
to confuse
to enjoy
to choose
to find
to reach
to scold
to punish
to beat
to fight
to catch

puri
curry
vegetable curry
soup
pickles
sweets
chutney
curds
butter-milk
milk
food
breakfast
lunch
dinner

RELIGION
religion
cult
temple
church
worship
prayer
mediation
idol
bell
sin
merit
omen
bad omen
God
Goddess
saint
priest
ghost
witch

NUMBERS
one
two
three
four
five
six
seven
eight
nine

hope
surprise
happy
unhappy
selfish
faith
fear
feelings
obstinancy
excitement
control
understanding
doubt
shyness
cunningness
helplessness
pain
shame

HOUSE & PARTS OF HOUSE
house
cottage
hut
inn
staircase
step
railing
courtyard
threshold
room
sitting room
bedroom
kitchen
toilet
bathroom
floor
ceiling
wall
door
window
doorpanel
doorframe
corner
nitche

carpenter
barber
potter
shopkeeper
merchant
fisherman
tailor
weaver
butcher
labourer
gardener
magician
priest
milkman
shepherd
sweeper
painter
printer
farmer
postman
grocer
cook
tanner
hunter
doctor
mason
sailor
judge
lawyer
broker
policeman
warrior
clerk
treasurer
accountant
teacher
professor
poet
writer
dancer
actor
actress
musician
singer
photographer
artist
student

PROFESSIONAL EQUIPMENT
screw
screwdriver
hammer
nail
axe
saw
furnace
razor
blade
potter's wheel
fisherman's net
scissors
button
thread
needle
loom
spade
sickle
waterwheel
shovel
postcard
envelope
letter
stamp
telegram
balance
weight
leather
weapon
arrow
bow
quiver
sling
brick
cement
car
stick
sword
shield
gun
gunpowder
bullet
dagger
spear

to dress
to wear
to comb
to fly
to graze
to bark
to release
to leave
to squeeze
to gather
to steal
to cover
to spread
to get
to obtain
to charge
to open
to close
to remove
to use
to prepare
to save
to keep
to press
to throw
to tie
to wash
to send
to bring
to finish
to begin
to call
to bend
to steer
to stab
to shine
to show
to hang
to shake
to stretch
to put
to fill
to hide
to mix
to knock
to strike

ten	loft	**ADMIN. & GOVT. SET UP**	blackboard	to fix
eleven	storey		chalk	to stop
twelve	terrace	king	duster	to break
thirteen	balcony	queen	pen	to flow
fourteen	shelf	prince	pencil	to finish
fifteen	tile	princess	ink	to develop
sixteen	roof	palace	paper	to increase
seventeen	gate	kingdom	book	to decrease
eighteen	pillar	empire	notebook	to collapse
nineteen		throne	slate	to contract
twenty	**GAMES & SPORTS**	crown	brush	to teach
twenty one		fort	colour	to learn
twenty two	game	court		to write
twenty nine	outdoor game	prime minister	**PROVISIONS**	to read
thirty	indoor game	minister	corn	to draw
thirty one	ball	deputy minister	grain	to count
thirty two	bat	chief minister	wheat	to measure
thirty nine	skipping	president	rice	to question
forty	race	vice- president	barley	to answer
forty one		parliament	maize	to examine
forty two	**EDUCATION**	cabinet	dry peas	to pass
forty nine	education	governor	kidney beans	to fail
fifty	training	mayor	lentil	to dig
fiftyone	school	nation	parched rice	to plant
fiftytwo	college	country	flour	to pour
fiftynine	university	state	spices	to grow
sixty	residential	capital	salt	to reap
sixtyone	school	province	red chillies	to blossom
sixtytwo	laboratory	district	clove	to do
sixtynine	library	city	cardamom	to make
seventy	Language	town	cinnamon	to weave
seventyone	Literature	village	pepper	to cut
seventytwo	mathematics	constitution	mustard	to build
seventynine	Science	administration	fennel seed	to float
eighty	Physics	government	dill seed	to string
eightyone	chemistry	democracy	parsley	to sell
eightytwo	Botany	dictatorship	sesame seed	to purchase
eightynine	Physiology	dictator	cumin seed	to earn
ninety	Biology	secretary	coriander seed	to spend
ninetyone	Zoology	revenue	ginger	to rain
ninetytwo	Geology	land-owner	dry ginger	to cook
ninetynine	Geography	leader	piper root	to bake
hundred	Civics	subject-people	honey	to fry
hundred and one	Politics	patriot	sugar	to grind
hundred and two	Economics	symbol	tea	to fire
two hundred	Sociology	duty	coffee	to burn

three hundred
four hundred
five hundred
thousand
two thousand
million
first
second
third
fourth
fifth
sixth
seventh
eighth
nineth
tenth
odd
even
number
figure
quarter
half
three quarter
one-&-a-quarter
one-&-a-half
one-&-a-three quarter
two-&-a-quarter
two-&-a-half
two-&-a-three quarter

ORNAMENTS
braid
ear-ring
nose-ring
necklace
bangles
ring
waist-band
wrist-watch
flower garland for hair
ornament
diamond
beads
pearls

philosophy
Logic
Psychology
textbook
map

PRONOUNS
I
We
you
he
she
it
they
this
that
these
those

HOUSEHOLD ARTICLES
ladder
stool
table
chair
sofa
easy-chair
swing
bench
carpet
cot
cradle
mattress
quilt
pillow
pillow-cover
bed-sheet
blanket
shawl
fan
cupboard
trunk
iron
mirror
comb
bucket

right
majority
minority
opposition
party
vote
election
boundary
war
peace
army
attack
siege
invasión
expedition
march
victory
defeat
surrender
retreat
conspiracy
mutiny
riot
revolution
National anthem
flag

FUNCTION WORDS
and
or
for
from
up
down
above
under
in
out
on
by
with
along with
far
near
behind

cocoa

CULTURE & ART
art
music
vocal music
instrumental music
singing
song
folksong
tune
folk-story
dancing
dance
drawing
painting
printing
photography
picture
frame
design
sculpture
sewing
embroidery
knitting
exhibition
show
piano
violin
treble
flute
trumpet
cymbal
drum

AGE-STAGES OF GROWTH
age
baby
child
youth
boy
girl
man

QUALITY-QUANTITY INDICATORS
young
old
sharp
blunt
new
old
hot
cold
fine
rotten
full
empty
shut
open
cheap
costly
ripe
raw
dry
wet
solid
liquid
heavy
light
weak
strong
small
big
rough
smooth
hard
soft
long
short
narrow
broad
high
low
wide
hollow
round
flat
straight

DRESS	mug	after	woman	curved
hat	soap	before	middle-age	good
cap	tape	around	old-man	bad
shirt	pipe	like	old-woman	kind
trousers	cup	upon	pregnant	cruel
coat	saucer	amongst	person	smart
tie	kettle	how	widow	fool
pyjamas	strainer	there	widower	wise
jacket	spoon		married	mad
sweater	teaspoon		unmarried	
muffler	fork		male	
socks			female	
shoes			childhood	

ECHO

REPORTING EFFICACY OF CULTURAL COMPETENCE

Karen Harris Brown, PhD
University of West Georgia
Carrollton, Georgia

ABSTRACT

This article shares research about the professional (personal and general) efficacy beliefs of 221 school-based speech-language pathologists (SLPs) that assess the language skills of students who are bilingual, bicultural, and bidialectal. Personal efficacy involves beliefs about one's own ability to change individual's learning and behavior (Dembo & Gibson, 1985). General efficacy is defined as one's beliefs about the field's ability to change individuals' learning and behavior (Allinder, 1994). Bicultural is defined as individuals who are socialized to attain specific values, beliefs, behavior styles, communication styles, and traditions in more than one culture (Kritikos, 2003). Bidialectal is defined as someone who possesses the ability to speak two different dialects (Seymour & Nober, 1998; Taylor, 1976). Bilingual is defined as individuals who regularly use two (or more) languages (Grosjean, 1992, as cited in Isaac, 2002).

Results of a self-reporting survey indicate that most SLPs believed they were "somewhat competent" to assess the language skills of students who spoke languages and dialects they did not understand and/or speak. Results also indicate that most speech language pathologists believed that, speech language pathologists as a whole were "somewhat competent" as well. Implications for future research, graduate programs, and school districts are discussed.

KEY WORDS: assessment, culture, efficacy, linguistic diversity

Corresponding Author:
Karen Harris Brown, PhD
Email: khbrown@westga.edu

ECHO

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Karen Harris Brown, PhD
University of West Georgia
Carrollton, Georgia

INTRODUCTION

Like teachers, speech-language pathologists (SLPs) are challenged with providing appropriate education services to PreK-12 students from culturally and linguistically diverse backgrounds. These related-services professionals are responsible for identifying students in need of special education services and they are expected to utilize assessment practices that reliably differentiate between a communication disorder and communication differences among students from culturally and linguistically diverse backgrounds (Battle, 2012; Brice, 2002; Caesar & Williams, 2002; Kritikos, 2003; Langdon, 2002; Langdon & Cheng, 2002; Wilson & Coleman, 2000). Speech-language pathologists are also expected to determine the communication skills of students whose native language and dialect are other than Standard American English (SAE), which SLPs oftentimes do not understand or speak (Harris, 2010).

Increasingly, the diversity in our public school system reflects our national population, and the students in our classrooms are representative of the diverse cultures now present in American society (Blair, 2003; Buckley, 2013; Center for Public Education, 2012). The student population is comprised of children of color and those of Hispanic/Latino origin. The 2008 U.S. Census Bureau reported that the elementary, middle, and high school student population demonstrate more diversity by race and Hispanic origin than the Baby Boom student population. Projections indicate the student population aged 6 to 17 will continue to grow in diversity in future years.

Like educators, SLPs can anticipate working with increasing numbers of culturally and linguistically diverse students and their families. Unlike the growing cultural diversity represented among our nation's students, the SLP workforce does not necessarily reflect such diversity. For instance, only 7.6% of all ASHA members (audiologists; SLPs; speech, language, and hearing scientists; and audiology and SLP support personnel), nonmember certificate holders, international affiliates, and associates self-identified as members of a racial minority (ASHA, 2013). Of the 2,420 SLPs responding to the American Speech-Language-Hearing Association's 2012 Schools Survey, more than half (53%) reported providing clinical services to ELLs in English (ASHA, 2012).

Among other areas, speech-language pathologists are relied on for assessment results and recommendations related to language skills. If SLPs are not culturally competent, there are serious implications for students who are culturally and linguistically diverse, and the decisions that follow. As such, it is paramount that these professionals understand the limitations of standardized tests and the significance of utilizing a culturally competent identification and assessment process. Culturally competent speech-language pathologists practice in a manner that consider the cultural and linguistic characteristics and unique values each client and family/caregiver brings to ensure provision of the most effective assessment and intervention services (ASHA, 2004, 2006).

Assessing Students from Culturally and Linguistically Diverse Backgrounds

Differentiating between a disability or difficulty, due to acculturation and language learning, can be complex for school-based SLPs (Baca, Fletcher, & Hoover, 2008; Brice, 2001; Sanchez, Parker, Akbayin & McTigue, 2010). Similar to other language minority students, an assumption of language disorder, rather than language difference, results in the propelling of these students in disproportionate numbers toward special education and related services (Adger, Wolfram, Detwyler, & Harry, 1993; Burnette, 2000; Delpit, 1995). There exist a larger number of students who are culturally and linguistically diverse and receiving special education services than the percentage of students who are culturally and linguistically diverse in the general school population. The disproportionate representation of students who are culturally and linguistically diverse in special education has been considered one of the chief issues the U.S. public school system has encountered in the past 38 years (Coutinho & Oswald, 2006).

In contrast to placing children without a disability into special education programs, many children with disabilities are not identified because of difficulties in differentiating a disability from a cultural and linguistic difference (Burnette, 2000). Under-identification can occur when an evaluator makes the assumption that a child who belongs to a specific racial/ethnic group speaks the dialect connected with that group (Ortiz, 1997; Wilson, Wilson, & Coleman, 2000). Thus, differences revealed in the assessment may be attributed to dialect rather than errors (Laing & Kamhi, 2003).

Professional Efficacy. Ashton and Webb (1986) used Bandura's (1977) cognitive theory of social learning to define teacher efficacy as the belief in one's ability to make his/her students academically successful. These theorists separate teacher efficacy into two dimensions: (a) "personal teaching efficacy—the belief that one's abilities can positively affect students' academic achievement and (b) "general teaching efficacy"— the belief that teaching can positively affect students' achievement regardless of students' environment or ability. In essence, personal efficacy and general efficacy comprise professional efficacy (Hoy and Woolfolk, 1993).

Educational researchers have focused greatly on the efficacy of teachers. There has been a lot of discussion surrounding the issue of culturally competent practices among educators in K-12 classrooms. However, school-based speech-language pathologists have been left out of this very important dialogue (Harris, 2010).

Kritikos (2003) investigated SLPs' professional efficacy beliefs. In this study, the majority of SLPs reported low levels of professional efficacy. Specifically, the SLPs reported that they and the field in general, were "not competent" or "somewhat competent" to assess the language skills of individuals who are multicultural and multilingual. The author extended Kritikos' 2003 study and examined the professional efficacy beliefs of school-based SLPs who assessed language skills of K-12 students who are bilingual, bicultural, and bidialectal (BBB).

METHOD

In an effort to extend the work of Kritikos and forward our professional understanding of the role of professional efficacy beliefs, this study used a survey research design. Through the use of random sampling, the author investigated perceived professional efficacy beliefs among a group of school-based SLPs. This research method was used to determine the individual and combined relationship between SLPs' professional efficacy beliefs about assessing the language skills of students who are bilingual, bicultural, and bidialectal and SLPs': (a) race/ethnicity, (b) years of experience as an SLP, (c) years of experience with children and youth, (d) percentage of students from homes where a language other than English is spoken, (e) percentage of students from homes where a dialect is spoken, (f) frequency of time spent with students and their families who are BBB, (g) years worked with students who are BBB, (h) proficiency in a language other than English, and (i) proficiency in a dialect. In the analyses these variables were treated as continuous variables. Tables that include these variables will include a breakdown of variable (a) race/ethnicity, to include the following: (1) African American/Black, (2) Hispanic/Latino, and (3) Other race.

Participants and Setting

The state of Florida serves over 250,000 English Language Learners (www.fldoe.org/aala/, n.d.) and employs approximately 7930 full-time SLPs with their Certificate of Clinical Competence (CCC), (ASHA, 2013). The author gained access to a sample of 390 school-based speech language pathologists who provided services to children and adolescents, ages 3-22 years, in two central Florida school districts. The school districts were selected based on the similarity in student demographics and enrollment. Additionally, the districts shared like percentages of exceptional student (students with disabilities) populations. Two hundred twenty-one (221) participants completed surveys, thus representing a 56% response rate.

Procedures and Materials

Selection criteria. The caseload of PreK-12 SLPs in the two central Florida school districts was the key requirement for participant selection. *Licensure/certification and educational background (masters and PhD) served as the secondary selection criteria.*

Materials. The Speech-Language Services to Bilingual/Bicultural/Bidialectal Students (SLSBBBS) survey, was used to explore and describe school-based SLPs: (a) beliefs about assessing students who are bilingual, bicultural, and bidialectal; (b) professional efficacy (personal and general efficacy); and (c) solutions to achieving professional efficacy. The survey used in this study was an author-modified version of Kritikos' survey, Speech-Language Services to Bilingual/Bicultural Individuals (SLSBBI, 2003) survey. The original version consisted of 25 yes/no, multiple-choice, and Likert-type response items. It was piloted and revised more than 30 times based on feedback from faculty at the University of Illinois-Chicago (UI-Chicago). The Survey Research Laboratory at UI-Chicago provided assistance in revising several drafts of the survey. Of the 596 participants in the pilot study, 100 provided written feedback. Additionally, the American Speech-Language-Hearing Association's (ASHA) Multicultural Issues Board evaluated the instrument and provided written feedback regarding the survey strengths and weaknesses.

The modified version of the SLSBBI included the term bidialectal. Question 25 of the original survey solicited respondents' qualitative opinions. This question was removed and not included in the modified version. Although 16 questions were added to the original questionnaire, these questions were all of a demographic nature and modifications were minor. Additionally, the modified version underwent its own revision process following a review by faculty at the University of South Florida.

Data Analyses. Quantitative analyses was used to assess respondents' beliefs about professional efficacy (personal and general efficacy), as measured by each subscale as related to the following variables: (a) race/ethnicity, (b) years of experience as an SLP, (c) years of experience with children and youth, (d) percentage of students from homes where a language other than English is spoken, (e) percentage of students from homes where a dialect is spoken, (f) frequency of time spent with students and their families who are BBB, (g) years worked with students who are BBB, (h) proficiency in a language other than English, and

(i) proficiency in a dialect. Analyses included calculating the frequency and percentage of responses and statistical analyses of group differences in responses using a multiple regression analysis (Hatcher & Stepanski, 1997). An analysis of these data provided information about the professional efficacy beliefs of SLPs regarding the assessment of language skills of students who are bilingual, bicultural, and bidialectal.

RESULTS

The purpose of this investigation was to determine whether SLPs' efficacy beliefs would vary as a function of (a) race/ethnicity, (b) years of experience as an SLP, (c) years of experience with children and youth, (d) percentage of students from homes where a language other than English is spoken, (e) percentage of students from homes where a dialect is spoken, (f) frequency of time spent with students and their families who are BBB, (g) years worked with students who are BBB, (h) proficiency in a language other than English, and (i) proficiency in a dialect. Multiple data analyses were conducted using the above variables to test the main hypothesis of this study. The following results are described in reference to each of the variables.

Race/ethnicity. The sample consisted of 184 (83%) SLPs that indicated they were White (not Hispanic/Latino), representing the largest group of respondents. Thirty-seven respondents (17%) indicated that they represented a racial "minority group. The distribution of participants of color was as follows: Hispanic/ Latino (n = 17), African American/Black (not Hispanic/Latino) (n = 15), and Asian American /Pacific Islander (n = 5). None of the respondents indicated that they were American Indian or Alaskan.

Years of experience as an SLP. Fifty-three respondents (24%) had worked as speech-language pathologists (SLPs) for 20 years or more. Novice speech-language pathologists (0-3 years of experience) and those with 4-7 years of experience both represented the next largest group with 23%, respectively.

Years of experience with children and youth. Speech-language pathologists provide services to children and youth, as well as adults. As a result, the researcher was particularly interested in knowing how many years of experience they had with children and youth. In terms of years of experience providing services to children and youth, 59 respondents (26%) represented the category of 4-7 years, followed by 53 (23.4%) with more than 20 years, and 50 (22%) with 3 years or fewer.

Percentage of students from homes where a language other than English is spoken. Of the 221 respondents, 100 (45%) reported having less than 25% of students from homes where a language other than English is spoken. The next largest group (n = 92, 42%) reported having 25%-50% of students from homes where a language other than English is spoken.

Percentage of students from homes where a dialect is spoken. Concerning dialect speakers, most respondents (n = 119, 54%) indicated having less than 25% of students from homes where a dialect is spoken followed by 69 (31%) respondents who indicated having 25%-50% of students from homes where a dialect is spoken.

Frequency of time spent with students and their families who are BBB. The largest group of respondents (n = 166, 75%) reported working with students who are bilingual, bicultural, and bidialectal and their families 3-5 times per week, followed by 51 (23%) who reported working with these students and families 1-2 times per week.

Years worked with students who are BBB. Regarding years of experience working with students who are bilingual, bicultural, and bidialectal, 89 (40%) respondents indicated having 1-5 years. This represented the largest group. This was followed by 72 (33%) of respondents who indicated having greater than 10 years of experience.

Proficiency in a language other than English. Only 25% of the respondents indicated that they understood and/or spoke a language other than English. The most common language spoken among these participants was Spanish (n = 40, 18%). The second largest group of respondents (n = 10, 5%) indicated that they spoke French. Italian and Creole represented the third largest group of respondents, (n = 5, 2%), respectively. Ninety-three percent of the respondents reported that English was the first language they learned while only 5% reported that they first learned a language other than English. The remaining group (2%) indicated that they simultaneously acquired English and another language.

Proficiency in a dialect. Finally, 26 % of the respondents indicated understanding and/or speaking a dialect. The largest group of respondents (n = 41, 19%) in this category reported that they understood/spoke African American Vernacular English. This was followed by 17 (8%) of respondents who reported that they understood and/or spoke Southern Dialect, 12 (5%) who reported understanding and/or speaking Hispanic English Vernacular, and 8 (4%) who reported understanding and/or speaking a Caribbean dialect.

Professional (Personal and General) Efficacy Beliefs

Respondents were asked to indicate their beliefs that they can competently assess the language skills of students who are BBB. Similarly, respondents were asked to indicate their beliefs regarding the field's general competence to assess the language skills of students who are BBB. Level of competence was represented by the following scale: not competent, somewhat competent, competent, and very competent. The largest group of respondents (n = 109, 49%) reported they felt somewhat competent in assessing a student's language skills in a language and/or dialect they did not understand or speak. Not competent and somewhat competent were considered to be not competent,

while competent and very competent were considered to be competent. Regarding general efficacy, the largest group of respondents (n = 140, 63%) reported that most SLPs were somewhat competent in assessing a student's language skills in a language and/or dialect they did not understand or speak. Table 1 displays a summary of the results.

TABLE 1: Summary of SLPs Personal and General Efficacy Responses

			Frequency	%
Professional Efficacy	Personal Efficacy	Not Competent	40	22
		Somewhat Competent	109	49
		Competent	53	24
		Very Competent	11	5
	General Efficacy	Not Competent	46	21
		Somewhat Competent	140	63
		Competent	34	15
		Very Competent	1	<1

Correlations

Data were analyzed using both bivariate correlation and multiple regressions to determine if SLPs' professional efficacy beliefs about assessing the language skills of students who are BBB varied as a function of the previously listed demographic variables. Regarding personal efficacy, the bivariate correlations revealed that there were no significant relationships found between any of the predictor variables and personal efficacy.

The bivariate correlations revealed one predictor variable that was statistically significantly related to general efficacy: Hispanic/Latino (r = -.18). In relation to the hypothesis that there would be a relationship between SLP race/ethnicity and general efficacy, a statistically significant, negative correlation was found between (Hispanic/Latino) and general efficacy. There were no other statistically significant relationships found between the rest of the predictor variables and general efficacy. The bivariate correlations also revealed that the two criterion variables were significantly related to each other: personal efficacy and general efficacy (r = .56). These results indicate a strong positive relationship (+.40 to +.69)

(http://faculty.quinnipiac.edu/libarts/polsci/Statistics.html, n.d.). A strong correlation between the two criterion variables suggests a linear relationship.

Multiple Regression

The purpose of performing a multiple regression analysis was to determine whether the inclusion of the predictor variables (race/ethnicity, etc.) would lead to increased prediction of the outcome variables (personal and general efficacy). The researcher used PROC REG to perform a multiple regression analysis in which professional efficacy was "simultaneously regressed on the predictor variables" (Hatcher & Stepanski, 1997, p. 417). Regarding personal efficacy, $R^2 = .08$. This indicates that the linear combination of the 11 predictor variables accounted for 8% of the variance in personal efficacy, $F (11, 195) = 1.48$, $p = .14$, adjusted $R^2 = .03$. In this case, the p value is greater than .05. Means, standard deviations, and intercorrelations involving demographic and personal efficacy variables are presented in Table 2.

Concerning general efficacy, $R^2 = .09$. This indicates that the linear combination of the predictor variables accounted for 9% of the variance in general efficacy, $F (11, 202) = 1.83$, $p = .051$, adjusted $R^2 = .04$. In this case, the p value is at the traditional significance level of .05. Means, standard deviations, and intercorrelations relating to the demographic and general efficacy variables are presented in Table 3.

Table 2: Means, Standard Deviations, and Intercorrelations Relating to Demographic and Personal Efficacy Variables

Variable	M	SD	Intercorrelations										
			1	2	3	4	5	6	7	8	9	10	11
1. Personal Efficacy	2.15	.80											
2. African American/Black	.06	.24	.03										
3. Hispanic/Latino	.08	.27	-.01	-.08									
4. Other Race	.03	.17	-.11	-.05	-.05								
5. Years Worked in Field	2.96	.51	-.03	-.06	-.06	-.15							
6. Years provided services to children and youth	2.91	.51	-.01	-.04	-.07	-.16	.97						
7. Language other than English spoken at home	2.73	.80	.08	.01	.12	.17	-.14	-.14					
8. Dialect spoken at home	2.65	.88	.08	.08	.16	.00	.10	-.08	.40				
9. Frequency of time spent with students who are bilingual/bicultural/ bidialectal	2.78	.48	.06	-.01	.02	.02	.01	.01	.22	.07			
10. Years worked with students who are bilingual/ bicultural/bidialectal	2.76	.99	.08	.00	-.04	-.13	.74	.75	-.14	-.10	13		
11. Proficiency in a language other than English	.22	.41	.13	.01	.33	.12	-06	-.06	.19	.12	-.05	-.05	
12. Proficiency in a dialect	.03	.18	.06	.06	.05	.29	.04	.05	.03	.01	-.03	.05	.36

Note: n = 221
No p values less than .05

Table 3: Means, Standard Deviations, and Intercorrelations Relating to Demographic and General Efficacy Variables

Variable	M	SD	Intercorrelations										
			1	2	3	4	5	6	7	8	9	10	11
1. Personal Efficacy	1.96	.62											
2. African American/Black	.07	.25	.02										
3. Hispanic/Latino	.08	.27	-.18*	-.80									
4. Other Race	.03	.17	-.08	-.05	-.05								
5. Years Worked in Field	2.97	1.50	-.02	-.05	-.07	-.15							
6. Years provided services to children and youth	2.93	1.50	-.03	-.04	-.08	-.16	.96						
7. Languages other than English spoken at home	2.73	.80	-.01	-.04	.12	.16	-.14	.14					
8. Dialects other than SAE spoken at home	2.64	.88	.03	-.07	.16	.01	-.12	-.10	.40				
9. Frequency of time spent with students who are bilingual/bicultural/bidialectal	2.78	.48	-.03	.00	.03	.02	-.04	-.00	.21	.08			
10. Years worked with students who are bilingual/bicultural/bidialectal	.77	.99	.09	.02	-.05	-.13	.73	.74	.16	-.11	.11		
11. Proficiency in a language other than English	.21	.41	-.06	.00	.32	.12	-.07	-.06	.19	.12	-.05	-.05	
12. Proficiency in a dialect	.03	.18	-.11	.06	.04	.29	.04	.04	.03	.02	-.03	.04	.36

Note: n = 221
***p < .05**

Beta Weights

Table 4 displays beta weights for personal efficacy. The data shown reveals that two of the predictor variables displayed statistically significant beta weights — other race and years worked with students who are bilingual, bicultural, and bidialectal. Both predictor variables demonstrated small beta weights. Other race demonstrated a beta weight at -.16 ($p < .05$), while the beta weight for years worked with students who are bilingual, bicultural, and bidialectal was .22 ($p < .05$).

TABLE 4: Beta Weights Obtained in Multiple Regression Analyses and Personal Efficacy

Predictor Variables	Beta Weights
African American/Black	-.10
Hispanic/Latino	- .09
Other Race	-.16*
Years Worked in the field of speech-language pathology	-27
Years provided speech-language services to children and youth	.07
Percentage of students from homes where language other English is spoken	.06
Percentage of students from homes where a dialect is spoken	.05
Frequency of time spent with students who are bilingual/bicultural/bidialectal	.03
Years worked with students who are bilingual/bicultural/bidialectal	.22*
Proficiency in a language other than English	.14
Proficiency in a dialect	.06

Note: n = 221
***p < .05**

Beta weights for general efficacy are shown in Table 5. These data demonstrate that two of the predictor variables displayed statistically significant beta weights — Hispanic and years worked with students who are bilingual, bicultural, and bidialectal. Both predictors displayed small beta weights. Hispanic demonstrated a beta weight at -.20 ($p <.05$), while the beta weight for years worked with students who are bilingual, bicultural, and bidialectal was .27 ($p < .05$).

TABLE 5: Beta Weights Obtained in Multiple Regression Analyses Predicting General Efficacy

Predictor Variables	Beta Weights
African American/Black	-.00
Hispanic/Latino	-.20*
Other Race	-.07
Years Worked in the field of speech-language pathology	.18
Years provided speech-language services to children and youth	-.42
Percentage of students from homes where language other English is spoken	.01
Percentage of students from homes where a dialect is spoken	.07
Frequency of time spent with students who are bilingual/bicultural/bidialectal	-.07
Years worked with students who are bilingual/bicultural/bidialectal	.27*
Proficiency in a language other than English	.04
Proficiency in a dialect	-.10

Note: n = 221
***p < .05**

DISCUSSION

Quantitative analyses of SLPs' personal efficacy beliefs revealed that most SLPs believed they personally were "somewhat competent" to assess the language skills of students who spoke languages and dialects they did not understand and/or speak. Further, SLPs' general efficacy beliefs revealed that they primarily believed the field of speech-language pathology to be "somewhat competent" in assessing the language skills of students who are bilingual, bicultural, and bidialectal. These findings are similar to the results of Kritikos (2003). As cited in the Kritikos study, the majority of SLPs in that study reported *low levels* of professional efficacy. Specifically, these SLPs reported that they and the field in general were "not competent" or "somewhat competent" to assess the language skills of multicultural/multilingual individuals.

It is interesting to note that in the current study while a large percentage of respondents indicated that they provided services to children from homes where Spanish and Creole was spoken, a mismatch existed between these students and the number of speech-language pathologists who reported understanding and/or speaking these languages. Similarly, a stark contrast existed between the linguistic variations of students who spoke English and the clinicians responsible for providing speech and language services to them. What makes these professionals "somewhat competent" in distinguishing language/cultural difference from language/culture disorder in these students? Of those who do qualify with a language/culture disorder, what tools are in place for these speech-language pathologists to provide culturally competent services to students whose language and/or dialect they do not understand or speak?

In this current study, this author hypothesized that SLPs' professional efficacy beliefs about assessing the language skills of students who are bilingual, bicultural, and bidialectal would vary as a function of SLPs': (a) race/ethnicity, (b) years of experience as a speech-language pathologist, (c) years of experience with children and youth, (d) percentage of students from homes where a language other than English is spoken, (e) percentage of students from homes where a dialect is spoken, (f) frequency of time spent with students and their families who are bilingual, bicultural, and bidialectal, (g) years worked with students who are bilingual, bicultural, and bidialectal, (h) proficiency in a language other than English, and (i) proficiency in a dialect. None of the predictor variables were significantly related to *personal efficacy*. This information suggests there is no relationship between the predictor variables and personal efficacy.

One of the predictor variables (Race/Ethnicity, specifically, Hispanic/Latino) was significantly related to *general efficacy*. This information suggests there is a relationship between Race/Ethnicity, specifically, Hispanic/Latino, and general efficacy. Perhaps, these SLPs believed the field, in general, had a greater "handle" on providing competent services to students who identified as Hispanic/Latino due to the exponential growth of this population in the state of Florida. Because of the greater likelihood of having these students on their caseloads, perhaps, they felt more comfortable. The bivariate correlations also revealed that the two criterion variables were significantly related to each other: personal efficacy and general efficacy. There is a strong positive relationship between these two variables, suggesting a high correlation between them (http://faculty.quinnipiac.edu/libarts/polsci/Statistics.html, n.d.).

While two of the predictor variables displayed statistically significant beta weights for personal efficacy— Race/Ethnicity (Other Race) and Years worked with students who are bilingual, bicultural, and bidialectal, both predictors displayed small beta weights. Interestingly, an inverse (negative) relationship exists between these predictor variables: Race/Ethnicity (African American/Black, Hispanic/Latino, and Other Race) and Years worked in the field of speech-language pathology, and personal efficacy. Similarly, two of the predictor variables displayed statistically significant beta weights for general efficacy— Race/Ethnicity (Hispanic) and Years worked with students who are bilingual, bicultural, and bidialectal, both predictors displayed small beta weights as well. Similar to personal efficacy, an inverse (negative) relationship exists between some predictor variables (Race/Ethnicity -African American/Black, Hispanic/Latino, and Other Race, Years provided speech-language services to children and youth, Frequency of time spent with students who are bilingual/ bicultural/ bidialectal, and Proficiency in a dialect) and general efficacy.

Perhaps, the SLPs who identified with being non-White, as well as those with more experience were more aware of the challenging task of assessing the language skills of students who are culturally and linguistically diverse. It is important to note that the presence of negative correlation does not automatically imply a causal relationship. These results have implications for graduate preparation programs preparing future SLPs, school districts and their processes for hiring and professional development, and future research (discussed in greater detail following this section).

Limitations

Self-reported data presents limitations. Participants may provide responses they perceived to be the "correct answer" or "socially acceptable. Another limitation was the threat to population validity and ecological validity (McMillan, 2000; Onwuegbuzie, 2003). Also, the participants in this study were limited to SLPs employed by two central Florida school districts. It is possible that SLPs who reside in other areas of the state or elsewhere in the nation could report different levels of professional efficacy beliefs as well as supports and barriers to assessing the language skills of students who are bilingual, bicultural, and bidialectal. Further, the percentage of female participants substantially outnumbered their male counterparts. As a result, the multiple regression analysis did not compare responses by gender. Missing from the data were observations of participants' practices when assessing bilingual, bicultural, and bidialectal students. Actual observations of participants' practices would have allowed the researcher either to corroborate or refute the presence of the reported beliefs.

Implications

Implications for Graduate Programs

In an effort to increase efficacy beliefs, SLPs need to acquire knowledge and skills in areas derived from active research agendas. Based on the findings of this study, three recommendations can be made for graduate SLP programs. First, graduate programs should actively recruit individuals who represent a rich variety of culturally and linguistically diverse backgrounds. Having a culturally and linguistically diverse representation of SLPs will increase the number of professionals prepared to assess the language skills of a diverse group of students.

Second, the curricula used should be relevant and designed to provide a wide variety of exposure to students and families who are culturally and linguistically diverse. Preservice SLPs should be given multiple opportunities to work with students and families who are culturally and linguistically diverse while completing their clinical practicum and internship experiences. To assist with this goal, graduate programs must form partnerships with local school districts and other educational agencies, paying close attention to those located in areas representative of a large number of culturally and linguistically diverse learners. Further, faculty preparing SLPs to provide culturally responsive services to students and families who are culturally and linguistically diverse should be knowledgeable in the areas of linguistic diversity, second language acquisition, cultural variations in language development, and culture-specific views related to disability. Increasing the number of diverse scholars of color and those interested in multicultural issues will expand the knowledge base and assist graduate school programs in preparing SLPs with this challenge.

Third, language tests written in languages other than Spanish are lacking. Most standardized tests have not included bilingual populations in their normative sampling (Banotai, 2004). More tests that include languages other than Spanish should be developed. Even tests with a Spanish language version need to take the many dialectal variations of this language into consideration.

Currently, there are only two norm-referenced test developed that takes dialectal variations into consideration. One norm-referenced test, the Diagnostic Evaluation of Language Variation (DELV) was developed with African American English (AAE) speakers in mind. The other norm-referenced test, the Preschool Language Scales-Fifth Edition (PLS-5) made accommodations for dialectal variations. The standardization sample for this test included 4.2% of children who were AAE speakers, 5.8% who spoke Spanish-influenced English, 4.4% speakers of Southern English, and less than 3% speakers of other dialects (Chinese-influenced English and Appalachian English) (Zimmerman, Steiner, & Pond, 2011). Tests developed with considerations for dialectal variations should include a greater representation of children who are speakers of the various dialects that exist in the standardization sample.

Implications for School District Level Supervisors

To meet the needs of this diverse clientele, school districts must ensure that their faculty has access to necessary resources to perform adequate services. Such resources should include: (a) actively recruiting (internationally and nationally) speech-language pathologists who are bilingual, bicultural, and bidialectal to fill vacancy positions; (b) assisting immigrant speech-language pathologists with work visas; (c) providing more professional development workshops that focus on specific issues of cultural diversity with real-life examples; (d) utilizing local and national consultants who are experts in multicultural issues; (e) providing employees with extensive training to serve as lead clinicians in this area; and (f) collaborating with nearby school districts to pool resources in the area of diversity ("borrow" speech-language pathologists who are bilingual, bicultural, and bidialectal and share the cost of bringing in consultants or interdistrict trainings).

Implications for Future Research

Future research should focus on developing cases of real-life examples or specific scenarios related to the assessment and treatment of students who are culturally and linguistically diverse. The survey used in this study primarily grouped students who are bilingual, bicultural, and bidialectal as a whole. Perhaps, a modified questionnaire would separate the above into separate distinctions and provide the researcher with data that may identify differences in professional efficacy beliefs that speech-language pathologists may have regarding students who are bilingual and bidialectal (BBB). A final recommendation is to replicate the study and include a larger sample size. Replicating the study may confirm findings, increase generalizability, and add to the limited knowledge base in this area of research.

CONCLUSION

While there is a wealth of literature on teachers' efficacy beliefs, there is little know about the efficacy beliefs of related service professionals such as SLPs. Specifically, there is a dearth of information about the perceived efficacy beliefs of SLPs in relation to their responsive and effective assessment practices with students who are (culturally and linguistically) diverse. Since SLPs are oftentimes directly involved with distinguishing between a language difference and disorder and responsible for implementing appropriate services, it is imperative that SLPs' efficacy beliefs are examined and understood. Such information would reveal important results for tailored technical assistance and intervention.

The limited presence of research focused on SLPs in this area justifies the need for the present study. The findings from this study provide a rationale for the active recruitment of SLPs who are culturally and linguistically diverse, more practicum and internship experiences with students who are bilingual, bicultural, and bidialectal, cultural competence training at the preservice and inservice levels, and research focused on multicultural speech-language issues. Further, these findings support the need for more research in this area. Information gathered from subsequent studies may expand the current dialogue, add to the knowledge base of SLPs professional efficacy beliefs, and identify supports and barriers to assessing the language skills of bilingual, bicultural, and bidialectal students.

As our nation's schools increasingly serve more culturally and linguistically diverse students, the need becomes greater to accommodate these differences in today's classrooms. The implication is that in order for teachers to be successful, they need to be prepared to teach children who are from culturally and linguistically diverse backgrounds (Ladson-Billings, 1994). The same can assumed to be true for SLPs.

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ECHO

INDIVIDUAL IDENTITY, AUTHENTICITY, AND CULTURAL COMMUNITY: THE PERCEPTION OF DIALECT BY STUDENTS FROM A HISTORICALLY BLACK COLLEGE/UNIVERSITY

Sheila Bridges-Bond, PhD
North Carolina Central University
Durham, NC

Robin C. Gillespie, PhD
North Carolina Central University
Durham, NC

Jasmyne Speller, MEd
Pitt County Schools
Greenville, NC

James Osler, PhD
North Carolina Central University
Durham, NC

Tom W. Scheft, PhD
North Carolina Central University
Durham, NC

ABSTRACT

The American Speech-Language-Hearing Association (ASHA) charges speech-language pathologists (SLPs) to be culturally competent in the delivery of services, including those deemed elective, because clinicians have both a "social and ethical responsibility … to objectively discuss the use of target dialect" (ASHA, 2003a, p. 2). Elective services, which are driven by an appreciation for and a thorough understanding of social attitudes, require data driven evidence. It is vital to the profession of speech-language pathology that SLPs understand the speaker's perspective, especially given ethical charge from ASHA to provide culturally responsive services. The purpose of this article is to discuss the role of dialect in the perception of individual identity, authenticity, and cultural community from a cross disciplinary perspective and from the perspective of college students attending a Historically Black College /University (HBCU).

A 27-item electronic survey was administered to 108 college students attending an HBCU to identify their attitudes and perceptions regarding the use of African American English (AAE). The results of this study indicated that the students' perceptions related to individual identity, authenticity, and cultural community proved to be strongly associated with the use of dialect.

KEY WORDS: African American English (AAE), dialect, Standard American English (SAE), college students, identity, Historically Black Colleges and Universities (HBCU)

Corresponding Author:
Sheila Bridges-Bond, PhD
Email: bridges@NCCU.EDU

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Sheila Bridges-Bond, PhD
North Carolina Central University
Durham, NC

Robin C. Gillespie, PhD
North Carolina Central University
Durham, NC

Jasmyne Speller, MEd
Pitt County Schools
Greenville, NC

James Osler, PhD
North Carolina Central University
Durham, NC

Tom W. Scheft, PhD
North Carolina Central University
Durham, NC

INTRODUCTION

Clinicians have a social and ethical responsibility to provide potential clients and their families with the opportunity to objectively discuss the use of the target dialect as well as the educational and social ramifications of second dialect acquisition. Clinicians must provide individuals with sufficient information on the historical background, origin, features, and social implications of both the first and the target dialect to facilitate an informed decision. (ASHA, 2003, p. 2)

ASHA has also mandated that speech-language pathology services be provided "without jeopardizing the integrity of the individual's first dialect. The approach of the elective service must be functional and must emphasize the appropriateness of the first and second dialects for different contexts" (ASHA, 2003, p. 2).

Best practices, according to ASHA, require that "the speech-language-pathologist should also have an appreciation for the communities and cultures of speakers of American English (AE), as well as a thorough understanding of the social attitudes toward dialect use. Just as competencies are assumed necessary in the treatment of communication disorders, relevant competencies are also necessary in the provision of elective services to speakers from all American English dialect communities" (ASHA, 2003, p. 1).

Individual Identity, Authenticity, and Cultural Community

Language, in part, is connected to our self-perception (Appiah, 2005). The use of language gives meaning to who we are in its all-encompassing diverse faceted existence. Wolfram and Schilling-Estes (2006) state that differences in language and dialect have many times been addressed as a study of "self or group awareness" (p. 21). They further state that group members may recognize language differences to be defining features of identity or place (Wolfram & Schilling-Estes, 2006). Language is inextricably connected to culture with the ability to carry the rules of social interaction, rituals of the community, and cultural stories of ancestry (Bialystok, 2001).

Language, reflective or descriptive, determines how the identity of a people adapts across time (Tatum, 1997). Taylor explains "it is the dialogue with other people's understandings of who I am that I develop a conception of my own identity" (Taylor, 1991, as cited by Appiah, 2005, p. 20). Kwame Appiah addresses identity in terms of authenticity, explaining that authenticity can be defined as being true to oneself regardless of "distorting influences" (Appiah, 2005, p. 17). Many are committed to what they believe is an authentic existence, giving special attention to characteristics that tie their existence to a culture, a community, and a people. Language can be viewed as a part of this identity

existence, as it embodies a systematic grouping of linguistic descriptives such as gestures, facial expressions, turn-taking rules, prosody, and full-body posture that transmit the social conventions of a specific group of people (Bialystok, 2001). This can sometimes be seen in the descriptions of interactive communicative exchanges--dialectic, social, and familial (Bialystok, 2001). "I can define my identity only against the background of things that matter" (Taylor, 1991, as cited by Appiah, 2005, p. 19).

Appiah (2005) juxtaposed an authentic identity against an existentialist formation, which is defined as existing first and then developing given social circumstances. Further, identity itself has to be addressed when considering many social circumstances, such as history, family, society, religion, peers, and the demands of solidarity (Taylor, 1991, as cited by Appiah, 2005, p. 20). Taylor further states "the very material out of which our identities are shaped is provided ... by language in a broad sense comprising not only the words we speak, but also other modes of expression whereby we define ourselves" (Taylor, 1991, as cited by Appiah, 2005, p. 20). Bialystok writes, "[language] stands as the expression of the individual - I am what I speak" (Bialystok, 2001, p. 240).

It is noted, however, that focus on individual and group identity in relationship to English dialects is often thought to be overemphasized (especially when addressing AAE) by the majority population in the United States where Standard American English (SAE) is viewed politically as part of the holistic bond of the country (Wolfram & Schilling-Estes, 2006). If language is indeed central to individual and group identity, then language variability can certainly bring about controversial feelings in a country that values "the power of language as a proxy for broader sociopolitical and cultural issues" (Wolfram & Schilling-Estes, 2006, p. 21). Therefore, persons who believe that the only acceptable form of English is that dialect which is called SAE may use it as part of the litmus test that divides that dialect which is accepted from those which are rejected.

Beverly D. Tatum (1997) wrote that the strong relationship between identity and language should be recognized by educators when responding to minority students' use of language in the classroom. She states that the use of the home language should not be diminished in order to increase the use of SAE (Tatum, 1997).

Dialect

Dialect can be defined as a variation of a language spoken by a group that shares cultural, social, and geographical contexts (ASHA, 2003; Bailey 2012). Persons in the same group may speak with similar linguistic parameters; phonology, morphology, syntax, semantics, pragmatics, suprasegmental features and kinesics (ASHA, 1983; Wolfram, Adger, & Christian, 1999). Some forms of dialect include but are not limited to AAE, Appalachian English, southern English, New-England dialect, and Spanish influenced English (ASHA, 1983).

While each and every person can be identified with a cultural group that is different from the others, society does not hold forms of dialect to be of equal status or value in this country (Wolfram, Adger, & Christian, 1999). Bodies of research have viewed AAE as a social or cultural deviant form (Battle, 2010; Wolfram, Adger, & Christian, 1999; Wolfram & Schilling-Estes, 2006). Wolfram, Adger, and Christian (1999) write that "dialect" carries negative connotations depending upon hierarchical and social positioning, as well as the collective and definitive cultural features of a specific group. Dialectal features could include pronunciation, choice of vocabulary, grammatical/syntactical use, and social forms that govern specific social exchanges (Wolfram, Adger, & Christian, 1999).

ASHA stated in its 2002 position paper "American English Dialects" the following:

> Given that SAE is the linguistic variety used by government, the mass media, business, education, science, and the arts in the United States, speakers of other varieties of American English (AE) may find it advantageous to be able to speak SAE. (ASHA, 2003, p. 2)

Standard American English (SAE)

ASHA (2003) writes that the language spoken in the United States is called American English (AE). However, various historical, social, and geographical factors are reflected in the variations of AE (ASHA, 2003; Wolfram, Adger, & Christian, 1999). "To speak a language is to speak some dialect of that language" (ASHA, 2003, p. 1 as cited by Wolfram, 1991). Therefore, Standard American English (SAE) is one of many dialects of AE.

It is difficult to define the dialect called Standard American English (SAE) used in the United States. "Those who seek stability in English seldom find it; those who wish for uniformity become laughingstocks" (Bailey, 2012, p. 15). Here in the US, there is no language academy that establishes what is considered a normative standard. In France, language academies exist to determine what will be included in the "normative standard" (Wolfram & Schilling-Estes, 2006). Frequently used in the academic arena in the United States are grammar books (or websites), dictionaries, and/or thesauruses. Therefore, the use of the term SAE dialect is somewhat ambiguous (Wolfram & Schilling-Estes, 2006) though widely accepted. The use of the terms "proper English or academic English" are used to describe the sociocultural language ideologies that have been socially constructed in this country (Wolfram & Schilling-Estes, 2006). As a result, other nonstandard dialects are described as "improper" or "incorrect."

"Normal" reflects basic expected patterns of behavior as seen by the mainstream (Harry, Arnaiz, Klinger & Sturgess, 2008). The Center for Applied Special Technology (CAST) states, "Diversity is the norm, not the exception, wherever individuals are gathered, including schools. When curricula are designed

to meet the needs of the broad middle—at the exclusion of those with different abilities, learning styles, backgrounds, and even preferences, they fail to provide all individuals with fair and equal opportunities to learn" (Bridges-Bond, Gillespie, & Phillips, 2012 ; CAST, 2009, p. 3). On a broader scale, socially constructed ideologies give added value to SAE while ascribing lesser value to its variations. CAST (2009) reminds readers that diversity should be normal and not an exception. If socially constructed concepts of language only positively serve a specific group while excluding those with different cultural backgrounds, those perceived as nonstandard speakers will lack equal and fair access to a wealth of opportunities.

SAE is the dialect required and taught in educational institutions. It is conservative in nature, not given to a great deal of evolution based on persons, places, or times (Wolfram & Schilling-Estes, 2006). SAE is the academic language taught and required by educators when grading essays, presentations, and most any other academic product (Fisher & Lapp, 2013; Scarcella, 2003).

However, SAE can be found across an array of performance modes from nonstandard to standard. Ratings of how standard any person may or may not be is based on the listener's subjective judgment. Given differentiation in regions, dialects, and socioeconomic status, standardness of presentation could be judged variably from person to person. Preconceived notions and biases reflecting socially constructed ideologies also affect how one judges the standardness of another person's English. Grammatical structures which are deemed stigmatized are relegated to the status of nonstandard (Wolfram & Schilling-Estes, 2006).

Wolfram and Schilling-Estes (2006) further explain vernacular as a "nonstandard" dialect, meaning that the dialect is a local or native version of language that is judged to have inconsistencies with SAE. For example AAE is often referred to as African American Vernacular English (AAVE), a nonstandard dialect.

Majority users of SAE regard the dialect as not having any stigmatized grammatical structures. By terming it the "standard", perceptions about it include false notions of perfection or at the least being the right way, proper/acceptable, way to speak. Therefore in the extreme, SAE users might judge a nonstandard dialect speaker as wrong, unacceptable, or incorrect.

African American English (AAE)

The National Black Association for Speech-Language and Hearing (NBASLH, 2000) wrote in their 1997 position paper that Ebonics, or AAE is a rule-governed system with historical context in West African language mixed with SAE, which evolved from social, historical, and linguistic influences. AAE dialect has established morphological, syntactic, phonological, semantic and lexical patterns (Green, 2002). AAE dialect, a morphosyntactic derivative of SAE, is spoken in varying degrees (Craig & Washington, 2002) across a continuum within the same group of people depending upon location and region of use (Holt, 2013). Therefore, variations in AAE depend upon regional influences (Holt, 2013).

Use of the label African American English evolved as African Americans tried to dismantle the stigmas associated with labels such as Negro English, Substandard, Non-Standard, Black English, and Afro-American English. Other stereotypical labels include, Vernacular Black and African American Language (Wolfram & Schilling-Estes, 2006). Conner and associates wrote that there are both conscious and unconscious negative reactions to AAE, which include judgment regarding intelligence, employability, and linguistic ability (Conner, Pearson, LeRay, & Jackson, 2013). Decisions regarding disability identification for speech and language placement have been historically attributed to "dialect differences in phonology and grammar" (Taylor & Payne, 1983; Vaughn-Cook, 1986; Wyatt & Weddington, 2010, p. 5). The devaluation of AAE as "broken" or "deviant" language, as well as the prohibitive social response to its use, has been discussed in the literature.

Historically speaking, AAE is in fact a defined dialect that houses its own controversial place in the world of speech and language. African American speech use brings about a number of controversial conversations regarding the use of "proper speech, dialogue, and discourse" (Todd, 1997, p. 1). In the article "Ebonics is Defective Speech and a Handicap for Black Children" Todd (1997) utilized the term "Ebonics" and defined it as unacceptable language. The article stated that the use of this "afranized" dialect would be harmful for adulthood, citing possible failure in successful job seeking activities (Todd, 1997, p. 1). This article further pointed out that education in the US has its foundation in the use of SAE. To support his disdain for accepting the use of AAE in the public education system, he further wrote that the economic world of the United States is also based on the acceptable use of SAE (Todd, 1997). However, ASHA states in its Position Statement, "Social Dialect" (ASHA, 1983) and again in its "Technical Paper on American English Dialects" (ASHA, 2003) that "no dialectal variety of American English is a disorder or a pathological form of speech or language."

Stereotypes and Language

Pitch, intonation, and rate contribute to variability in language and serve to distinguish dialect differences. Similarly, these distinct features of dialect variation have contributed to listeners' judgments of speakers' character, personality, and cultural background (Fuertes, Gottdiener, & Martin, et.al, 2011; Ng & Bradac, 1993). Giles and Billings (2004) also concluded that differences in language use affect how others comply with requests and form social decisions that involve the speaker (Fuertes, Gottdiener, & Martin, et.al, 2011). However, Todd (1997) states emphatically that AAE is a "fancy political cover for abnormal, defective, or dysfunctional speech" (p. 1). He continues to argue that these conversations are normally spoken about impoverished African American children "from the ghetto"

who are "disadvantaged by" lack of language correction (Todd, 1997, p. 3). These social judgments are formed by listeners based on the speakers' language use in comparison to what the listener views as normal and dominant in the communicative environment (Fuertes, Gottdiener, & Martin, et.al, 2011). Again, Todd (1997) states that children who speak AAE need to be identified as "language disordered" in order to receive supportive services to treat the disability. Wolfram (2013) noted that language prejudice is often overlooked and, in some cases, even promoted. An example of promoting language prejudice, as well as stereotyping, is apparent in Todd's following quote: "Whether it is a hillbilly child, an African American child, or other, respect for the child has little to do with tolerating or not tolerating incorrect English" (Todd, 1997, p. 3). ASHA's response to dialogue such as this is to proclaim that "each [dialect] serves a communicative function as well as a social-solidarity function" (ASHA, 1983, 2003).

Some researchers have shown that listeners ascribe personality attributes (good, nice, bad) even physical characteristics based on speech recordings of SAE and nonstandard dialect (Fuertes, Gottdiener, & Martin, et.al, 2011; Krauss, Freyberg, & Morsella, 2002). Rosenthal conducted an experiment in which children were offered the opportunity to choose drawing materials from two boxes. Box A had a recording of a person (Steve) speaking SAE. Box B had a recording of a person (Kenneth) speaking AAE. Given a choice to choose drawing materials from either Box A or B, the children chose Box A. The reasons given included, "I like him [points to Steve] 'cause he sounds nice… Steve is good" (Wolfram, 2013, p. 27).

American English and AE dialects are multifaceted concepts that include both positive and negative linguistic and social factors. The literature review has demonstrated that dialect is not deviant but has the possibility of negative reaction in various social contexts. The purpose of this article is to discuss the role of dialect use in the perception of identity (individuality, authenticity and cultural community).

Following is the methodology, procedures, and an analysis of survey responses by college students at an HBCU rating their understanding of dialect in relationship to their perception of individual identity, authenticity, and cultural community .

METHOD

Procedures

The sample population consisted of undergraduate and graduate college students attending an HBCU with an enrollment of 8,093 students. College student participants were recruited through faculty members, classroom instructors, and student group leaders who disseminated a participant letter announcing the research and providing a web link to the on-line survey. Email announcements were sent to course instructors introducing the purpose of the study *... to find out college students' opinions and experiences in code switching, in the use of African American English/Ebonics, and use of Standard American English.* A description of the study was provided along with the reassurance of anonymity and the option for participants to withdraw at any point in time. The researcher asked the participants to complete the on-line survey at the Empliant link.

Instrument

This research study utilized an electronic on-line, web-based survey instrument (Empliant) designed to measure HBCU college students' attitudes and perceptions regarding the use of AAE. A 27-item survey utilizing multiple-choice, forced choice (yes/no) and open-ended questions was constructed. As an introduction to the survey, key terms and definitions of code switching, dialect, AAE, and SAETGri were provided. Survey questions pertained to student demographics (e.g., age, student academic classification, race/ethnicity, gender, primary and secondary language use, and dialect use), and perception of dialect relevant to individual identity, authenticity and cultural community. Participants completed the survey anonymously on-line and electronically submitted the survey upon completion.

Participants

One-hundred-and-eight (n=108) students participated in the survey. Undergraduate students represented 68 % of the population and graduate students represented the remaining 32%. The participants ranged in age from 18 years to 44+ years. Seventy-three percent of these were 18 - 24 years of age and 27% were 25-44+ years of age. Females made up 78 % of the participants, while 22% were males. Ninety -two percent of the participants were self-reported as African American and other (e.g., biracial and other minority groups). Eight percent self-identified as Caucasian or other. The student participants self-identified their social status according to the following three classifications: upper, middle or lower class. Sixty-nine percent selected the classification of middle class, while the remaining students identified with lower class (26%) or upper class (5%).

Data Analysis Process and Procedures

The data were analyzed using the Tri-Squared Test which consists of the following steps: 1) select appropriate trichotomous categorical variables and trichotomous outcome variables; 2) establish the research effect size, and sample size with an associated alpha level; 3) formulate mathematical hypotheses about interactions between categorical variables; and 4) use the Tri-Squared test to determine which interactions are significant (Mutisya, Osler, Bitting, and Rotich 2014).

The Tri-Square statistical analysis methodology and applied trichotomous detailed data analysis procedures offers a high level of precision in the data analysis methodology. This is the core of the Trichotomous–Squared Test (Osler, 2014). Initially, data were gathered from the research study participants. Next, the data were analyzed via qualitative descriptive statistics and the Tri-Squared (Osler & Mutisya, 2013). The research data analyzed using the Trichotomous Tri-Squared Three

by Three Table was designed to analyze the trichotomous research questions with the following Trichotomous Categorical Variables (as previously listed): $\mathbf{a}_1$ = Perception of Identity/ Individuality; $\mathbf{a}_2$ = Perception of (and relating to) Authenticity; and $\mathbf{a}_3$ = Perception of Cultural Community. The research outcomes were carefully and meticulously calculated according to the following Trichotomous Outcome Variables: $\mathbf{b}_1$ = Level of Agreement; $\mathbf{b}_2$ = Level of Disagreement; and $\mathbf{b}_3$ = Level of Unsureness. An effect size was determined based upon n_{Tri} = 108. Data were categorized according to n_{Tri} = 108 and placed into specified Trichotomous Categorical Variables. A Standard Tri-Squared Test 3 × 3 Matrix was developed according to the research questions described above and the extracted research participant instrument outcomes. Data were analyzed trichotomously according to actual qualitative responses and transformed into quantitative results derived from the existing Trichotomous Categorical Variables. The Tri-Squared Test was used to test the mathematical hypotheses and to determine the level of significance of the research findings. The Mathematical Research Hypotheses used in the study were as follows: $\mathbf{H_0: Tri^2 = 0}$ **and** $\mathbf{H_1: Tri^2 \neq 0}$, respectively.

RESULTS

Specific to this study was the examination of two critical issues relevant to the use of dialect among college students attending an HBCU. The first issue under investigation was the frequency and use of language and dialect by college students. The second issue was the impact of dialect use on self-identity—specifically the interrelatedness of dialect and perception of college students' individual identity, authenticity and cultural community .

Language Use

English was the primary language spoken by 97% of the participants. Three percent of the participants identified other languages as their primary language (e.g., French, Spanish and Arabic). Second languages were spoken by 23% of the participants. For those students who spoke a second language, Spanish was the language most frequently used.

Dialect Use

When asked to rate frequency of dialect use, SAE was reported as used *regularly* to *very often* by 95% of the students and used only *sometimes* by 5% of the students. African American English was described as used *regularly* to *very often* by 48% of the students and used *sometimes* to *infrequently* by 34%. Nineteen percent of the students reported that they *rarely* used AAE. Southern English, Spanish-influenced English and Caribbean-influenced English were described as other dialects used.

Student participants' responded to open ended questions addressing their use of dialect, AAE and SAE. Respondents described code switching strategies and rationale for dialect use. Three categories of responses were evident in their descriptive use of dialect. The following reflect student responses and emerging categories.

Individual identity. Student respondents described using SAE for professional advancement and sense of inclusion.

"I use SAE/code switching to feel the acceptance of other racial groups other than my own."

"I use it (SAE) because, unfortunately, I feel like I still have to prove myself to others although we are no longer enslaved."

"I learned that unfortunately, people tend to determine your intelligence based on the way you speak. If someone doesn't think you're intelligent, you may not get the job…I use SAE (code switching) to play the game to help me obtain what I need or want."

"Even though I know there is nothing wrong with speaking a dialect, I feel that as a professional I am expected to speak SAE to appear more intelligent."

Authenticity. Student respondents describe using AAE to support their "authenticity."

"I don't use SAE, because I feel it's an unauthentic attempt by me to 'fit in' with another group.

"[Dialect] Naturally used depending on who is around."

Cultural community. Student respondents described using AAE to maintain their connection to community, family, and friends.

"I learned AAE from my friends. AAE is a part of my AA identity: I use SAE because AAE is not socially acceptable in professional situations and reflects education even outside of professional situations."

"I use AAE because most of my family members didn't go to college so certain words that I use they don't understand."

"I use code switching (SAE/AAE) because I just do. When I'm with my friends, I can talk freely."

Perception of Identity

The research question under investigation in this study asks, *Is there a significant effect in the use of dialect (AAE) by college students attending an HBCU and their perception of identity as it relates to* ($\boldsymbol{a_1}$) *individual identity,* ($\boldsymbol{a_2}$) *authenticity and* ($\boldsymbol{a_3}$) *cultural community?* The null hypothesis (Ho) specific to this investigation states there is no significant difference in HBCU students (n_{Tri} = 108) use of dialect (AAE) relative to their perception of ($\boldsymbol{a_1}$) identity/individuality, ($\boldsymbol{a_2}$) authenticity and ($\boldsymbol{a_3}$) cultural community.

The converse of the null hypothesis, identified as H1, states that there is a significant difference in HBCU students (n_{Tri} = 108) use of dialect (AAE) relative to their perception of ($\boldsymbol{a_1}$) individual identity, ($\boldsymbol{a_2}$) authenticity, and ($\boldsymbol{a_3}$) cultural community.

The following survey statements were rated by the participants in an effort to examine the variables specific to identity/individuality *AAE is important to my cultural identity;* authenticity–*I am comfortable when speaking AAE among non-African American individuals;* and cultural community—*I am comfortable when speaking AAE among African Americans and AAE perpetuates negative stereotypes about African American people.*

Table 1. Code-Switching Tri-Squared Test. Reported below is a Trichotomy–Squared Test illustrating the standard 3 × 3 Tri-Squared Formula and qualitative table of outcomes reporting results using the standard Tri-Squared 3 × 3 Format. The data analyzed using the Trichotomous Tri-Squared Three by Three Table was designed to analyze the trichotomous research questions with the following Trichotomous Categorical Variables (as previously listed): a_1 = Perception of Identity/Individuality; a_2 = Perception of (and relating to) Authenticity; and a_3 = Perception of Cultural Community. The 3 × 3 Table has the following Trichotomous Outcome Variables: b_1 = Level of Agreement; b_2 = Level of Disagreement; and b_3 = Level of Unsureness. The Inputted Qualitative Outcomes are reported as follows:

$n_{Tri} = 108$

$\alpha = 0.025$

TRICHOTOMOUS OUTCOME VARIABLES	TRICHOTOMOUS CATEGORICAL VARIABLES		
	a_1	a_2	a_3
b_1	66	51	154
b_2	29	38	29
b_3	13	18	33

$$Tri^2\ d.f. = [C - 1][R - 1] = [3 - 1][3 - 1] = 4 = Tri^2_{[\bar{x}]}$$

The Tri–Square Test Formula for the Transformation of Trichotomous Qualitative Outcomes into Trichotomous Quantitative Outcomes to Determine the Validity of the Research Hypothesis:

$$Tri^2 = T_{Sum}\ [(Tri_x - Tri_y)^2 : Tri_y]$$

Sample Table One Research Report: Tri^2 Critical Value Table = 11.143 (with *d.f.* = 4 at α = 0.025). For *d.f.* = 4, the Critical Value hypothesis test at probability greater than 0.025 is 11.143. The Calculated Tri–Square Value is 24.338 thus, [the null hypothesis ($\mathbf{H_0}$) is rejected by virtue of the hypothesis test which yields the following: Tri-Squared Critical Value of 11.143 < 24.338 [the Calculated Tri-Squared Value].

Table Summary

A summary of Table 1 results yielded the following data: Table 1 illustrates the qualitative transformation into quantitative data as a mathematical application of the Trichotomous-Squared ("Trichotomy-Squared", "Tri-Squared" or "Tri-Square") statistical analysis procedure on the dialect data extracted from the assessment instrument.

Perception of Cultural Community Identity

Table 1 shows that participants primarily and overwhelmingly selected the "Agree" Outcome Variable (a_3b_1 = 154) in terms of agreement with dialect use in their perception of *"Cultural Community."* In addition to this specific data, overall Trichotomous Categorical Variables were reported respectively in the **Cultural Community** variable as: variables of agreement, "Strongly Agree and Agree" (a_3b_1 = 154); variables of disagreement, "Disagree and Strongly Disagree" (a_3b_2 = 29); and variables of Uncertainty, "I Don't Know" (a_3b_3 = 33). The mathematical formula for the Tri-Squared Test is reported and illustrates the final outcome of the research hypothesis test. Thus, the null hypothesis (H_0) is rejected at $p > 0.025$ is 11.134 (Osler, 2012). The statistical evidence illustrates that dialect use is strongly aligned/interrelated with these HBCU College students' (n_{Tri} = 108) perception of identity (individuality, authenticity, and cultural community).

Two survey questions addressed perception of "cultural community": "I am comfortable when speaking AAE among African Americans" and "AAE perpetuates negative stereotypes about AA people." The initial statement addressing comfort in the use of AAE among AA individuals result s in a high level of agreement from the student participants, reflecting a significant relationship between comfort level in use of AAE and perception of community identity.

It had been stated that language and culture are so inextricably connected that the driving force by which one is driven (e.g., language drives culture and vice versa) is often blurred and interchanging. However, it can be said, as evident in this population's judgment, that dialect serves not only a communicative function but a "social-solidarity" function. AAE is not spoken by all African Americans, as reported in this study, It is critical to note at this point that defining AAE and the AA speech community remains ambiguous and a source of debate (Holt, 2013). To the professional community, ambiguity lies in an evolving definition whose roots were founded in the use of such derogatory terms as "ghetto and uneducated speech" to more current terminology, such as AAVE and AAE.

Within the community of AA speakers, AAE is often equated with "slang" or " improper English." However, the diverse speech community of African Americans navigates across speech acts that reflect a wide range of grammar, syntax, and morphology rules that define word usage and meaning. AAE is further defined by prosody, with less measurable yet community defined variables relative to age, gender, region and communicative context (Holt, 2013).

The second survey statement pertaining to perception of cultural community reads: "AAE perpetuates negative stereotypes about AA people." This statement speaks to a community of listeners with preconceived notions pertaining to accents and dialects. Kenny and Shah (2011) investigated listeners' perception of dialect and accents across seven language variations. Their findings revealed that listeners ascribed physical and personality traits (intelligent, friendly, honest, etc.) based on stereotypes reflecting preconceived notions which were unrelated to the speaker's true physical and personality characteristics. Similar findings were reported by Fuertes et al. (2011) as a result of their meta-analysis of speakers' accents on interpersonal evaluation.

Wolfram, Adger and Christian (1999) state that language prejudice is often overlooked and, in some cases, even promoted. They go on to say that "dialect prejudices remain one of the most resistant and insidious of all prejudices in our society" (p. 29).

In spite of the strong agreement that AAE perpetuates negative stereotypes about AA people cultural community proved to be the strongest categorical effect regarding dialect and the students' perception of identity.

Perception of Individual Identify

While the strongest Categorical Variable effect size was found in cultural community identity, a significant Categorical Variable effect was evident in the students' perception of individuality/ independent identity. In response to the statement "AAE is important to my cultural identity," student participants selected the "Strongly Agree to Agree" Outcome Variable (a_1b_1 = 66) in terms of agreement with dialect use in their perception of "individual identity."

The student participants' strong agreement that *AAE is important to their cultural identity* gives credence to the high value placed on dialect in defining one's personal and individual identity. To perceive that the focus placed on one's dialect in defining the complexities of one's individual identity is overstated silences the voices of these students who identify AAE as important to their cultural identity. Tatum (1997) states that language, reflective or descriptive, as stated from others, determines how identity of a people adapts across time. Identity is an ongoing journey that evolves with and across time. The English language in American society is intricately tied to social, political and cultural variables. Given these ties, a sense of identity as it relates to the use of AAE often evokes controversial feelings" (Wolfram & Schilling-Estes, 2006).

Perception of Authenticity

A third trichotomous categorical variable was perception of *authenticity*. A significant effect was evident in the students' response to the statement, "I am comfortable speaking AAE among Non-African American individuals." Student participants selected the "Strongly Agree to Agree" Categorical Outcome Variable (a_2b_1 = 51), indicating that they were comfortable in their use of AAE among Non-African American individuals, evidencing a strong effect relationship between the use of AAE and perceived authenticity. Taylor (1994) explains that "it is the dialogue with other people's understandings of who I am that I develop a conception of my own identity" (p .154). Appiah (2005) and Bialystok (2001) reveal that the true, authentic self is defined regardless of "distorting influences" while giving

special attention to those characteristics tied to people, culture, and community. Those characteristics of language which are tied to authenticity encompass not only the grammar and phonology of one's linguistic community, but also the pragmatic nuances of gestures , facial expression, turn-taking, prosody, and posture.

DISCUSSION

The purpose of this article is to examine from a broad cross disciplinary perspective the role of dialect in the perception of individual identity, authenticity and cultural community). In addition the purpose of this article is to examine the role of dialect along these 3 parameters from the perspective of college students attending an HBCU. The data analysis procedures based upon the Tri-Square statistical analysis methodology and applied trichotomous detailed data analysis procedures offered a high level of precision in the data analysis methodology. The results reveal that dialect use is strongly aligned/interrelated with HBCU College students' (n_{Tri} = 108) perception of individuality, authenticity, and cultural community.

While it is outside of the purview of this study to define code switching practices of HBCU college students, it is interesting to note student participants' responses to open-ended questions addressing their use of dialect (AAE and SAE). Their comments lend further insight to their perception of dialect and its perceived relationship to individual identity, authenticity and cultural community.

Dialect use and individuality. Dialect use was strongly aligned/ interrelated with HBCU College students' (n_{Tri} = 108) perception of individual identity. A common theme noted in these students' responses was the notion that use of AAE is detrimental/counter-productive to feeling accepted, making a good impression, and projecting a good image. Rather SAE was critical to feeling accepted by other groups, making a good impression with those perceived to be in authority, projecting a good image, and proving oneself to be intelligent.

"I use better English when I want to make a good impression, such as when I am talking to a teacher or person of authority. Using poor English, I think would not leave them with the image of me that I would like them to have."

Dialect use and authenticity. Dialect use was strongly aligned/ interrelated with HBCU College students' (n_{Tri} = 108) perception of authenticity. A common theme noted in these students' responses was the notion that the use of AAE was important to their feeling authentic, comfortable in a variety of settings, and natural within certain context,

"I don't use SAE, because I feel it's an unauthentic attempt by me to "fit in" with another group.

Dialect use and cultural community. Dialect use was strongly aligned/interrelated with HBCU College students' (n_{Tri} = 108) perception of cultural community. A common theme noted in students' responses was the notion that AAE was the dialect of their community, family, and friends. It was described as part of their identity: feeling relaxed, understood and able to talk freely in spite of negative stereotypes.

"AAE is a part of my AA identity and I think it is a unique form of expression. … AAE is not socially acceptable in professional situations. Without code-switching using SAE, you limit opportunities for employment."

HBCU college students are in pursuit of opportunity and career advancement. Many of their survey responses spoke to using SAE to dispel negative stereotypes associated with the use of AAE and critical to their achieving their career aspirations. In these instances SAE was the dialect of choice. At the same time, HBCU college students speak to maintaining their home dialect. AAE was important to validating their authenticity and maintaining the dialect of their home and community. HBCU college students reflect a heterogeneous population diverse in age, academic classification, language and dialect, life experiences and identity; individual, authentic and cultural community.

This article provides data which potentially gives direction to evidence-based practice critical to the delivery of elective services in serving a college population attending an HBCU. Culturally competent practices require all practicing SLPs to respect, honor, and preserve the home dialect of AAE speakers, as dialect is intimately tied to the speaker's perception of identity. The social value of these college students' dialect cannot be underestimated as it serves to not only shape but to reaffirm one's identity as an individual, validate one's authenticity in the presence of negative stereotypes and embodies a sense of community in and out of diverse contexts. Dialect is the vehicle which drives culture.

Future Research

Further research is needed examining an interdisciplinary approach to elective services for college students. Sociolinguistic and anthropological models serve to lend further insight to critical issues concerning linguistic variations within and across speech communities from an emic versus etic perspective. Psychology and multicultural counseling provide insight regarding identity and the implications of using language and approaches that perpetuate stereotypical images. Multicultural education promotes educational models that celebrate historical and contemporary images of diversity, comparing and contrasting differences while broadening the definition of "normal." Similar to bilingual education models, bidialectal models exist along the same continuum, utilizing approaches that promote the preservation of the home dialect, while instilling an appreciation for both the home and school dialects. It is anticipated that future research which pursues an interdisciplinary approach to elective services will hold much promise.

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