Teaching multiple meaning words with jokes

A cornerstone of language comprehension is the ability to develop and retrieve interpretation of word meanings that are consistent within the context in which they are encountered (Fisher, Kaplan, & Rogness, 2010) (Chabeli, 2008). For a child who presents with language impairment this process becomes particularly difficult when faced with specialized language containing words that are lexically ambiguous and thus are comprised of multiple meanings. According to Bromley 2007, seventy percent of the most frequently used words have multiple meanings. When a child with language impairment is faced with a word containing multiple meanings they are unable to choose one meaning and simultaneously retain the opportunity to use the alternate meaning. Furthermore, the associated deficits of their impairment may also affect their ability to maintain various representations in the course of understanding a future phrase or sentence. It is important for these children to understand and learn to use context in deriving appropriate meanings for words. For example, down can have many meanings (e. g., toward the floor, soft feathers, to push against).

According to Gill and White (2010), lexical humor may provide an avenue for learning multiple meanings of words, a particular need for children with language disorders. Research suggests that the development of humor is related to intellectual, social and emotional development (McGhee, 2010). Children and adolescents who present with language impairment frequently demonstrate deficits in comprehending verbal humor (Bernstein, 1986; Spector, 1990; Spector, 1992). As a result, they are unable to comprehend the cognitive, perceptual, and linguistic constraints which are fundamental to humor (Glass, 2003).

In the academic setting linguistic humor occurs frequently in textbooks and in discussions with peers and adults. A study by Klein 1985 explained that utilizing humor as an approach to intellectual challenges enables learning and builds confidence. Furthermore, she adds that humor establishes a relationship between the development of a sense of humor, a motivation to learn, the mastery of some material, and positive responses to instructional content.

The purpose of this study was to gauge the effects of lexical humor as an approach for multiple meaning word instruction on a student who presents with language impairment. This approach directly reflects what has been designed by Gill and White (2010). The research was guided by the following questions: Will children who present with language disorders, and who cannot show two meanings of target words increase their ability to identify the funny answer to lexical jokes/riddles on which they a) have been trained on and b) have not been trained on? Additionally, if they can show two meanings for lexical jokes, but not identify the funny answer, change for jokes/riddles on which they c) have been trained on and d) have not been trained on? Finally, (e) is humor a good way to teach multiple meanings? (Gill & White, 2010)

Literature Review

A number of researchers have investigated the role of humor comprehension and linguistic ambiguity in children who present with speech and language impairment and accompanying disorders. The literature was reviewed to find the prevalence from various studies to examine the relationship between humor comprehension and language impairment.

Autism Spectrum Disorders. Children who present with autism spectrum disorders may have difficulty with humor comprehension characterized by poor comprehension of language (Bartak, Rutter, & Cox, 1975; D. V. M. Bishop, 1979; D. V. M. Bishop, 1997; Kjelgaard & Tager-Flusberg, 2001). These de¬ cits in comprehension are principally apparent when integrating information within a context to deduce implicit meanings (D. V. Bishop & Adams, 1992; Jolliffe & Baron-Cohen, 2001; Norbury & Bishop, 2002) or to resolve ¬ gures of speech, homographs, and similar ambiguous expressions (Goldie, 2008; Happe, 1997; Kerbel & Grunwell, 1998; Norbury, 2004). In addition, these children possess a literal understanding of what they hear and read and exhibit socially inappropriate behaviors. Furthermore, they present with deficits encompassing cognitive flexibility, incorporating information, and drawing inferences which also affects the comprehension of humor (Emerich, Creaghead, Grether, Murray, & Grasha, 2003).

Speech and Language Impairment. According to Norbury (2005), children with language impairment experience problems joining composed ideas in context to resolve ambiguous communication. Children become increasingly more capable of enjoying and producing a wider variety of humor as they integrate increasingly richer knowledge and more complex cognitive mechanisms (Semrud-Clikeman & Glass, 2008). However, children with language impairment possess deficits which make this integration exceedingly difficult. Principal deficits in their semantic knowledge and sentence processing may account for these difficulties. According to Abrahamsen 2005, children demonstrate more difficulty with phonological

humor only if the error word is due to their articulation error in children with articulation impairment.

Hearing Impairment. Children with hearing impairments exhibit decreased levels of reading comprehension as opposed to peers with normal hearing which leads to vocabulary deficiency (Aceti & Wang, 2010). Researchers suggest that much of the vocabulary deficiency exhibited by children with a hearing impairment is directly associated to their reduced access to the multiple meanings of numerous high-frequency words (Aceti & Wang, 2010; Paul & Gustafson, 1991).

Many aspects of linguistic ambiguity and comprehension of humor have been studied in recent years. However, the literature has been relatively silent regarding the comprehension of humor and lexically ambiguous words on children who present with language impairment.

Why is Humor Important?

Normal Developing Children. According to Lovorn (2008), humor is a natural approach to communication and interaction in normally developing children. It has the power to enhance creativity and critical thinking skills. In addition, it can teach ethical behavior, accountability, confidence, and gives them an alternative to managing sorrow, frustration, and grief.

In addition, Bergen & Fromberg (2009) states that in an academic setting humor is very evident in play and social interaction. This type of humor involves cognitive incongruity, which establishes what knowledge children have. By applying puns, jokes, and word play, children demonstrate their

intelligence and achieve power and joy in altering their world knowledge in incongruous ways.

Teaching Tool. Humor is also an effective and motivating way to teach. According to Chabeli (2008), learners mention that humor has the power to make teachers more likeable, facilitate understanding of course material, lower tension, boost morale, increase learners' attentiveness and promote a sense of communicating. Motivation is a critical element in how successful a lesson will be. Teaching with riddles ensures students will be laughing and engaged.

According to Chen & Chia (2006), jokes can increase and enrich student participation in a more communicative approach. Jokes are rule-governed; they embody a culture and employ language skills. In addition, jokes integrate socio-linguistic, psycholinguistic, and strategic use of language in discourse. Speech behaviors and speech acts are also learned and/or facilitated by jokes.

Attention. According to Chabeli (2008), utilizing humor in teaching a lesson and/or in presentations of stimulus materials holds the learner's attention, therefore aiding them to retain the information they are learning. Humor reduces the boredom and monotony of a long stressful day in school for the student.

Academic Difficulties. When language impaired students do not understand humor it can cause academic difficulties. According to Masten (1986), academic and social competencies were associated with humor production, comprehension, and mirth which are difficult for children with language

impairment. Her results proposed that cognitive abilities account for most of the relationship between academic and social competence and humor. Masten further suggested that social awareness or " social cognition" may mediate humor and overall social competence (Glass, 2003).

Social Difficulties. Research studies have established that children with language impairment are at high risk for social difficulties. They also possess fewer friends than typical peers and may become the targets of social exclusion and victimization (Conti-Ramsden & Botting, 2004; Fujiki, Brinton, Morgan, & Hart, 1999). Furthermore, classroom peers consider them as less desirable playmates and teachers consistently report poor social skills and challenging behaviors (Fujiki et al., 1999; Gertner, Rice, & Hadley, 1994; Goldie, 2008).

Method

Participants

The participant is a 10-year-old English-speaking Hispanic male from a lower-middle class background. He is enrolled in the 5th grade at a public school in Texas. At the time of this study, the participant was receiving special education services for a language disorder and learning disability. Language goals in his current Individualized Education Plan (IEP) include: acquisition and employment of multiple meaning words, idioms, and inferences in structured sentences. A speech and language evaluation was conducted in March 10, 2010. The participant was found to have vision, hearing, articulation, fluency and voice skills within normal limits. He was administered the Clinical Evaluation of Language Fundamentals-4 (CELF-4). Results revealed a core language score of 66, which is more than 2 standard deviations below the mean, indicative of a language disorder. He was eligible for speech and language therapy for language impairment. Further review of his records revealed he has difficulties with reading comprehension and grade-level vocabulary.

Materials

Baselines and treatment were provided in the speech therapy room located in the public school the participant attended. A 100 word Multiple Meaning Word Pool was utilized to obtain a Present Level of Performance (PLOP) of multiple meaning words. For each multiple meaning word an array of six pictures was presented to the participant. Two different photos within each page correctly depicted the multiple meaning word. The participant was asked, " Show me two pictures that mean _____." If the participant only

pointed to one picture, he was then prompted with, " What else means____?" The participant's responses were recorded on the Multiple Meaning Words PLOP data sheet. (see Appendix C).

Each of the one-hundred multiple meaning words was incorporated in the context of a joke. One-hundred jokes were read aloud to the participant with four answer choices, one of which provided a funny answer to the joke. The participant was instructed to choose which answer was funny. The participant's responses were recorded on the Lexical Humor PLOP data sheet.

Design and Procedures

The present study implemented a single-subject, ABA design. Two baseline sessions were conducted with the participant until a stable baseline was observed. A week was allowed to transpire between baseline administrations to ensure the efficacy of data collected. The participant was individually treated at his home campus, by a graduate SLP clinician, in a regular classroom from the inception of the study through completion.

Initial baseline procedures included administration of both the Multiple Meaning Pool and the Baseline Humor Pool to establish Baseline AB. In administering the Multiple Meaning Pool, the author explained to the participant (change throughout) that he was going to see a word at the top of each page, followed by a series of six pictures. He was instructed to point to a picture(s) representing the printed word. The graduate SLP clinician gave the following instructions: " Show me two pictures that mean _____". If the participant answered by pointing to only one picture the following

directive was given: " what else means _____?" The author recorded all responses on the Multiple Meaning Words Present Level of Performance Sheet. A correct response was represented by a (+), a (-) represented an incorrect response, and a (NR) represented a no-response. Each word on the form required the entry of two responses. Following the administration of the Multiple Meaning Word pool, the clinician created two lists. List A was comprised of the words for which the participant knew two meanings. List B was comprised of the words for which he did not know two meanings.

Utilizing words from List A, and the Baseline Humor Pool, the creation of Baseline A was established (see Appendix E). Baseline A was a list of jokes from the Baseline Humor Pool which employed words appearing in List A. A list of twenty jokes was developed for Baseline A. Utilizing words from List B and the Baseline Humor Pool, the creation of Baseline B was established (see Appendix E). Baseline B was a list of jokes from the Baseline Humor Pool which employed words appearing in List B. A list of twenty jokes was developed for Baseline B.

The clinician administered Baseline A and B by reading aloud the joke and four answer choices derived from the Baseline Humor Pool. The joke and the answers were read to the participant, along with the four choices. The clinician gave the following instructions: " pick the answer that makes the joke funny". Utilizing the Lexical Humor Present Level of Performance Data Sheet, a correct response was represented by a (+), a (-) represented an incorrect response, and a (NR) represented a no-response.

Upon analyzation of the participant's responses, additional jokes were acquired from the Baseline Humor Pool to replace those in either List A or B that the participant answered correctly until a list of 20 jokes from List A and 20 jokes from list B was obtained (Baseline AB). Baseline AB was re-administered to the participant one week later. Once the participant's responses showed a stable baseline, and treatment began.

The intervention took place during an 8-week period; the participant attended one 30 minute session each week individually. Intervention focused on the training of twenty jokes containing the target multiple meaning words, with an instructional emphasis on lexical humor. The clinician compiled a selection of ten jokes the participant answered incorrectly on Baseline A, and ten from Baseline B. The twenty jokes selected served as the treatment stimulus for each session.

The clinician initiated treatment by presenting each joke to the participant and circling the multiple meaning word. Next, the clinician wrote the multiple meaning word on a graphic organizer and discussed and explained both meanings (see Figure 1).

Figure 1. Multiple meanings for the word cell (Webster 2010).

The clinician illustrated a spontaneous picture for each meaning on a separate sheet of paper with a standard box of Crayola® colored pencils. The clinician then made a sentence containing the target multiple meaning word based on the illustrations created. The participant was then instructed to use the target meaning in a sentence.

The joke was then presented to the participant again and he was instructed to circle the word containing two meanings. The clinician discussed each meaning as it related to the joke. Next, the participant was instructed to identify which meaning of the joke was funny. This course of instruction was repeated for the remaining nineteen jokes. Treatment sessions in the series included a review of all previously learned jokes at the beginning of each therapy session.

Following a three week period, the clinician re-administered Baseline AB. If the participant was able to produce answers with 80% accuracy, therapy was discontinued. However, if the participant produced less than 80% correctly, therapy would progress in the same manner. If progressing, the author continued treatment until all jokes had been rendered or a six week time period had elapsed, whichever came first. Baseline AB was administered thereafter, followed by re-administration of the Multiple Meaning Pool. A two week cessation of treatment followed after which Baseline AB was re-administered.

Results

Preliminary Analysis

Knowledge of multiple meaning words was assessed through pre-and post-test measures of the Multiple Meaning Word Pool (MMWP). Pre-test scores indicate the participant was able to identify 51 of 100 multiple meaning words for a score of 51% (see Table 1).

Table 2

Results of Pre and Post-Test Administration of Multiple Meaning Pool

Multiple Meaning Pool

Percentage Correct

Pre-Test Administration

51%

Post-Test Administration

Using a multiple baseline design, performance on multiple meaning words in the context of jokes was administered via Baseline AB during the subsequent two sessions. Treatment was introduced for three sessions utilizing stimulus comprised of ten jokes from Baseline A and ten jokes from Baseline B (see Figure 2).

Although formal data analysis is yet to be completed, he has completed his first week of treatment thus far. The participant has been fully compliant with the protocol up to now. In addition, he verbally reports general satisfaction with the stimulus material. Post-test results from the MMWP will provide valuable information regarding treatment efficacy and the potential impact of lexical humor based language intervention for the comprehension of multiple meaning words.

Tests of Hypotheses

Research Question 1: Will children who present with language disorders, and who cannot show two meanings of target words increase their ability to

identify the funny answer to lexical jokes/riddles on which they have been trained on?

Research Question 2: Will children who present with language disorders, and who cannot show two meanings of target words increase their ability to identify the funny answer to lexical jokes/riddles on which they have not been trained on?

Research Question 3: If they can show two meanings for lexical jokes, but not identify the funny answer, change for jokes/riddles on which they have been trained on?

Research Question 4: If they can show two meanings for lexical jokes, but not identify the funny answer, change for jokes/riddles on which they have not been trained on?

Research Question 5: Is humor a good way to teach multiple meanings?