Distinguishing Between Casual Talk and Academic Talk Beginning in the Preschool Years: An Important Consideration for Speech-Language Pathologists

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Purpose: The need for speech-language pathologists (SLPs) to consider an academic talk (AT) register in addition to an everyday casual talk (CT) register of oral language with children beginning in the preschool years is presented, the AT and CT registers are distinguished in a comprehensive manner, ideas regarding AT language assessment are proposed, and suggestions for fostering children’s skills with the AT register are offered.

Method: Extant research and scholarship from a wide variety of disciplines are integrated and organized.

Results: The author discusses the role of the SLP in supporting AT skills beginning in the preschool years and the added risk of difficulties with the AT register for children with language impairment who are from diverse backgrounds. Two broad categories—social-interactive and cognitive—that give rise to linguistic features that differentiate between the CT and AT registers are deduced from extant scholarship.

Conclusions: SLPs should consider children’s competence with the AT register as they work to prepare preschoolers and older children for the language demands of school.

The ability to use and understand academic language is a prerequisite for school success.

—Scheele, Leseman, Mayo, & Elbers, 2012, p. 419

In this article, casual talk (CT) and academic talk (AT) are approached as two broad registers of oral language that are important to consider in children as young as the preschool years, as AT is one important readiness skill for later academic success. Everyday CT is the broad pattern of language use that is employed when engaged in everyday life in order to get material things done and maintain relationships with other people. AT is the broad pattern of language use that is employed when engaged in teaching and learning, allowing teachers and other adults to transmit, and children to develop and display, ideas and knowledge. The term register is used to refer to these two broad patterns of language use because registers refer to the different co-occurring patterns of language features that serve different purposes of language (see, e.g., Biber, 1995; Halliday, 1978). Although a growing body of research and scholarship has focused on a broad academic language register in school-aged children (for syntheses of this literature, see Scarcella, 2003; Schleppegrell, 2001, 2004; Snow & Uccelli, 2009), this focus is only very rarely extended to the preschool level (although see Kantor, Green, Bradley, & Lin, 1992; Kleifgen, 1990; Kondyli & Lykou, 2008; Scheele et al., 2012; Yifat & Zadunaisky-Ehrlich, 2008).

A compelling reason to begin considering AT at the preschool level is that once in school, children are rarely directly taught the AT register if they do not already know it. In other words, it remains part of the hidden curriculum (e.g., Christie, 1985; Giroux & Penna, 1979; Jackson, 1968), which scholars such as Mercer (1995) and Stubbs (1976) define as being those aspects of the school experience that are generally not explicitly taught, but are nonetheless essential to success in school. Having the nature of the language of schooling as part of the hidden curriculum certainly creates challenges for children with language impairment (LI) from all backgrounds, given that they are not strong language learners under the best circumstances.

The hidden curriculum tends to favor the typical communicative interaction experiences of children from White, middle-class homes. This means that children from culturally (economically, ethnically, and/or racially) and...
linguistically diverse (CLD) backgrounds with LI may be at even greater risk for weaknesses with the AT register. As Schleppegrell (2004) notes, “many teachers are unprepared to make the linguistic expectations of schooling explicit to students” with the result that “students from certain social class backgrounds continue to be privileged and others to be disadvantaged in learning, assessment, and promotion” (p. 3).

In tandem with the recently growing scholarship focused on academic language for school-aged children, coupled with the direct focus on academic language in the widely adopted Common Core State Standards (CCSS), many scholars have begun suggesting various ways of explicitly teaching academic language to children at risk for academic underachievement (e.g., Bunch, 2013; Cummins, 2014; Gebhard, Chen, & Britton, 2014; Haneda, 2014; Moore & Schleppegrell, 2014; Zacarain, 2013; Zwiers, 2008; Zwiers & Crawford, 2011). This work, being quite recent, has yet to filter into the mainstream of elementary school educational practice (Uccelli et al., 2014). Furthermore, waiting until children at risk for academic difficulties are in elementary school to focus explicitly on academic language would put many of them substantially behind at the starting gate because preschoolers whose parents have higher levels of education are often proficient at understanding and using developmentally appropriate levels of academic language before they ever enter formal schooling. Speech-language pathologists (SLPs) and other professionals involved in children’s education need to provide this same advantage to all children by focusing on AT beginning in the preschool years.

The goals of this article are (a) to elaborate upon the increased risk for weakness in the AT register for children with LI who are from CLD backgrounds, (b) to consider the role of the SLP as it pertains to AT at the preschool level and beyond, (c) to flesh out the distinctions between the CT and AT registers, (d) to provide initial direction for assessing the AT register, and (e) to offer some preliminary ideas for targeting children’s knowledge of the AT register in language intervention.

Children With LI Who Are From CLD Backgrounds: An Increased Risk for Weak AT Skills

Children with LI are by definition weak in all oral language skills, regardless of any specific register, and hence are weak in AT in addition to CT. Furthermore, children with LI who are from CLD backgrounds are at risk for having even greater difficulties with the AT register, compared with the CT register, upon entry into elementary school. This occurs because they are likely to get little exposure to AT at home.

Durham, Farkas, Scheffner Hammer, Tomblin, and Catts (2007) note that “the typically more positive school performance by children from higher socio-economic status (SES) families is largely determined by differential oral language skills that are provided to their children by more highly educated parents” (p. 301). Indeed, research on mother–preschooler interaction that has compared different SES or maternal education levels supports this claim (e.g., de Mendoza, 1995; Eisenberg, 2002; Hammer, 2001; Hart & Risley, 1995; Heath, 1982; Hoff, 2003; Hoff-Ginsberg, 1991; Korat & Haglili, 2007; Korat, Klein, & Segal-Drori, 2007; Leseman & de Jong, 1998; Ninio, 1980; Rodriguez, Hines, & Montiel, 2009; Schacter, 1979; Vasilyeva, Waterfall, & Huttenlocher, 2008; Wells, 1985a). Furthermore, the language features more prevalent in the AT register overlap considerably with the language features shown to be more prevalent in mother–preschooler interactions among mothers with higher education and/or SES levels during book sharing and during other routine activities in the home. These features include more talk, greater sentence complexity, longer mean length of utterance, more elaborated language, more discussion of complex concepts, and more decontextualized language. The focus here is on mothers only because the vast majority of research has been conducted with mothers. Interactions with fathers are also undoubtedly important.

This difference in language used with preschoolers by mothers with different education levels is not surprising. The more education a child’s mother has, the more likely she is to use a school-like or academic register with her child at home, even when engaged in everyday living activities. In a sense, more-educated mothers are implementing the goals of CT and AT simultaneously in many of their interactions with their children. Of course, these mothers need to get the business of daily life accomplished, but they also appear to be rather constantly attempting to simultaneously advance their child’s intellectual understanding of the world. So, for example, making cookies together with the child becomes very much like an academic lesson, with lots of step-by-step verbal explanation. The more the child is exposed to the AT register in daily interactions in the home, the more familiar she or he will be with it upon arrival in school.

As a result of this differential language socialization at home as preschoolers, children with higher maternal education levels tend to arrive at school equally able to understand and use both the CT and AT registers. In contrast, many preschoolers with lower maternal education levels (and children from CLD backgrounds are overrepresented in this group) tend to arrive at school relatively unfamiliar with the pattern of language used during lessons in school (e.g., Hasan, 2009; Heath, 1983; Michaels, 1981; Williams, 1995).

Academic Talk: The Role of the SLP

One of the major ways in which AT relates to later school success is that it is one of the skills foundational to later reading comprehension, which provides the backbone for much of school success (see Nystrand, 2006, for a review of the literature focused on school-aged children; Uccelli et al., 2014). The roles and responsibilities of the SLP in fostering foundations for later literacy in preschoolers with LI have long been established in the discipline (American
Speech-Language-Hearing Association, 2001). So, for example, SLPs have become involved in interventions with children with LI as early as the preschool years by focusing on phonological awareness in order to foster one critical foundation to later word decoding in reading (e.g., van Kleeck, Gillam, & McFadden, 1998). Others have focused on print awareness as another decoding foundation (e.g., Justice, Skibbe, McGinty, Piasta, & Petrill, 2011). There have also been interventions designed for preschoolers with LI to foster higher-order oral language skills important to later reading comprehension, such as using language inferentially (e.g., van Kleeck, Vander Woude, & Hammett, 2006). Here it is suggested that fostering foundations for later reading comprehension as early as the preschool years should be expanded to include the many co-occurring dimensions of language more prevalent in academic talk, and as will be seen, focusing on language consciously (e.g., phonological and print awareness) and using language inferentially are but two aspects of the language register. As such, the concept of the AT register provides an integrative framework for many different features of language important to school success.

A second aspect of school success of increasing interest to SLPs relates to the CCSS for education that have now been adopted in 43 states, the District of Columbia, and four territories (see www.corestandards.org). “The advent of the CCSS in the United States has focused the attention of policy-makers and educators on the centrality of academic language for students’ overall educational growth” (Cummins, 2014, p. 146). For this reason, in considering the oral language foundations for later school success, the SLP will want to consider AT not just because of its relationship to reading comprehension, but also because it is now being targeted explicitly in current school standards.

Given these two major areas in their scope of practice (providing foundations for literacy and supporting the CCSS), SLPs should be incorporating the scholarship focused on the AT register both in direct service provision and in collaboration and consultation with families and teachers. When providing direct services to children with LI, SLPs need to be consciously fostering both the CT and AT oral language registers because children with LI will have weak skills in both of these registers. Also, SLPs need to be aware that not all children they work with will be equally exposed to the AT register in their homes. This will allow the SLP to consult and collaborate with families in a culturally sensitive manner. And finally, SLPs’ knowledge of language in general, and of AT in particular, will be an asset in consulting and collaborating with preschool, kindergarten, and early elementary school regular and special education teachers regarding the need to focus explicitly on fostering AT in the classroom for all children at risk for academic difficulties, and not just those with language impairments.

The AT construct presented here extends beyond current SLP practices for fostering language skills important to educational attainment first of all because it highlights the need to begin fostering the AT register during the preschool years (in addition to fostering language used for everyday casual purposes) and not waiting until children are school-aged. In addition, thinking of the language used during lessons in school as a register offers a framework for simultaneously integrating numerous co-occurring language features that are now often focused on separately. Furthermore, this approach illuminates the ways in which focusing on the cognitive and social-interactive functions of language as they are used during teaching and learning will often automatically engage the use of corresponding linguistic features. This would move the focus of the SLP from particular linguistic goals to cognitive and social-interactive goals that employ particular linguistic forms.

Differences Between the CT and AT Registers

Some of the specific co-occurring dimensions of the two broad patterns of language use being presented here were first proposed in the communication sciences and disorders discipline many years ago by Westby when she discussed oral versus literate messages (Westby, 1985, 1995). However, this groundbreaking work has had no discernable impact on our disciplines’ thinking about oral language abilities for children as young as preschoolers. The synthesis of the features distinguishing CT and AT provided here builds on this early work as well as other syntheses continuing to accrue in the literature on school-aged children (e.g., Scardella, 2003; Schleppegrell, 2001, 2004; Snow & Uccelli, 2009). It also incorporates information from many additional empirical investigations and scholarly discussions from a wide variety of disciplines. Furthermore, a unique, comprehensive framework for the features distinguishing the CT and AT registers is offered.

The scholarship consulted has focused on adults in addition to preschoolers and school-aged children. This was done to help the reader understand the overall nature of the CT and AT registers, even though some of the features are beyond the developmental level of preschoolers and early elementary school-aged children. Future research will be needed (a) to fill in the gaps in our current understanding of these two registers because there are undoubtedly still features of these two registers that have yet to be established, and (b) to determine those co-occurring features that might distinguish CT and AT as used by and with children in different contexts and activities beginning with the preschool years.

It should also be noted that there are no clear boundaries between the CT and AT registers. Each register is defined instead by the relative prevalence of a number of co-occurring characteristics of the features associated with it. As such, the features should be viewed as reflecting continua, with the characteristics of CT being simply more prevalent in CT than in AT. So, for example, one cognitive feature is the degree of support from the immediate context (both social and physical). CT is characterized by more support from the immediate context, and AT by less. Yet further along this continuum is academic written language (Biber, 2003). That is, the characteristics of AT will be most prevalent in academic written language, will be found with intermediate...
frequency in the AT oral language register, and will be found with the lowest frequency in the CT register.

In spite of this idea that these dimensions exist along continua, the registers themselves are not viewed here as being along a developmental continuum, as many scholars have espoused (e.g., Stillman & Wilkinson, 1991; Westby, 1985, 1995; Wilkinson & Stillman, 2000, 2008). That is, the position forwarded here is that children are not viewed as making progress over time from casual to more literate language. On the contrary, for children whose parents have higher education levels, the research briefly reviewed earlier shows that these children are exposed to and will likely develop CT and AT in tandem from the onset of their language development. For other children who have not learned AT at home, the AT register is still not viewed as being on a developmental continuum from the CT register to the AT register, but as being a different pattern of language features used for different purposes. In fostering AT then, the SLP should not first firmly establish a child’s skill with using language for everyday casual purposes (i.e., CT) before moving on to fostering the AT register, even with young preschool-aged children. Instead, both registers should be a focus of intervention from early in language development.

The distinctions between the CT and AT registers are organized here into two broad categories—the social-interactive and cognitive—that flow from differences in the overall function between them. Recall that CT functions to get things done and have relationships as one goes about the business of daily living, whereas AT functions to advance one’s general intellectual and scientific understanding of the world (Gee, 2005). Many of the social-interactive and cognitive features are shaped by cultural values, beliefs, and practices. Within each register, differences between the various social-interactive and cognitive features are for the most part manifested automatically in linguistic features. For this reason, in the following sections, the linguistic features will be embedded in the discussion of the social-interactive and cognitive features (see Figure 1).

This idea aligns well with those expressed by Halliday in his systemic functional linguistics (e.g., Halliday, 1970). Very basically, he purports that social and cultural contexts shape the functions of language, which in turn shape the linguistic features. Systemic functional linguistic theory has had a large impact on some of the work in academic language focused on school-aged children (e.g., Gebhard et al., 2014; Moore & Schleppegrell, 2014), although the theory is employed differently in this article. Here the cultural influences shaping the social and cognitive features of the two registers are explored. In turn, those social-interactive and cognitive features are viewed as manifesting in the linguistic features (see Table 1 for a summary of these linguistic features). Although the linguistic features arise automatically from the social-interactive and cognitive features, they are the more visible and hence more measurable aspects of the two registers. As such, the linguistic features are critically important to be aware in order to be able to assess adults’ and children’s use of the two registers in research and in clinical and educational practice.

### Social-Interactive and Subsequent Linguistic Features

The social-interactive features of CT and AT include the two broad categories of (a) the rules for participating in interaction (which has three subcategories) and (b) the degree of formality generally required. These features are influenced by broader cultural values, beliefs, and practices characteristic of collectivist versus individualist cultural tendencies.

#### Rules for Participating in Interaction

Western culture, and particularly mainstream American culture, is often defined as being more individualist as opposed to collectivist (for discussion, see van Kleeck, 2006a). This influences interaction in mainstream culture institutions, such as schools, as well as in mainstream culture families. These interaction patterns are shaped in general ways by individualist cultural values that emphasize such things as independence, self-reliance, personal achievement, and self-determination. In contrast, more collectivist cultures emphasize interdependence with others and hence harmony, social reciprocity, obligation, and obedience. CLD groups in the United States tend toward more collectivist values (see van Kleeck, 2013).

*Degree of autonomy encouraged.* In valuing obedience, families having more collectivist values are less likely to encourage autonomy in young preschool children. By placing more of a value on individuality, the AT used in mainstream culture institutions (such as schools), and the combined CT and AT often used in mainstream culture families, will provide more encouragement of autonomy, which “appears to provide children with subtle messages about psychological individuality and intentional behavior” (Degotardi & Torr, 2007, p. 769).

Talk that allows children choice and control over directives and requests they are issued are examples of how talk to children can encourage their autonomy very early in life (Degotardi & Torr, 2007). This may be one way in which talk in everyday contexts prepares children for academic language in school, since support for autonomy in preschool is one aspect of parenting that is linked to academic success (Mokrova, 2012). Using different terminology, but a very similar concept to encouragement of autonomy, Williams (1995, 1999, 2001) looked at the ways adults preface messages with clauses that mention states of consciousness of preschoolers (Do you wonder if . . .?) or adults (I hope that . . .) as fostering the child’s individuation of consciousness. Williams’s concept also overlaps with the use of mental state talk being prevalent in AT than in CT that will be discussed with cognitive features.

*Nature of verbal display.* In collectivist tending cultures, children are often expected to learn via quiet observation from those more accomplished at a particular skill.
In contrast, in individualist cultures, those with less skill are often cast in the role of exhibitionist rather than spectator (Scollon & Scollon, 1981). In the exhibitionist role, children are often expected to display their nascent abilities to adults, the reverse of what might be true in many other cultures where the more competent person would be expected to display their abilities to those less competent (Richards, 1981).

In Western culture schools and mainstream culture homes, this exhibitionist role manifests in frequent requests that children engage in verbal display. That is, in the AT register, children are very frequently expected to answer questions posed by their parent or teacher in order to verbally display what they know, and not because the adult does not have the information requested (Scollon & Scollon, 1981; Watson, 2001; Westby, 1995). Educators have referred to these kinds of questions as test questions (e.g., Nystrand, Wu, Gamoran, Zeiser, & Long, 2003), known information questions (e.g., Mehan, 1979), and questions with known answers (e.g., Macbeth, 2003). Indeed, these kinds of questions abound in school (e.g., Reid, 2000), creating a “central organizing resource” in classroom lessons (Macbeth, 2003, p. 244). Because questions requesting that children verbally display their knowledge are so prevalent, children familiar and comfortable with them when they arrive at school will be better able to participate in classroom interaction (for discussion, see van Kleeck, 2003).

For children from some cultural backgrounds, adult requests for verbal display of already acquired knowledge may function differently, or may not be part of children’s language socialization in the home. Heath (1983) found that the African American children from working-class families in her study were rarely asked this type of question, and when they were, it was often to chastise them. Where verbal display is present in African American culture, such as in the use of hip-hop and rap, it is not supplied at the request of an adult in authority. Indeed, these often striking displays of verbal dexterity are generally not valued in the classroom context (but see Kelly, 2013, for an alternate perspective).

Heath (1989) also observed that Mexican-American families tend to refrain from known-information questions, except when they are teasing children (see Valdés, 1996, for more on the children of Mexican immigrants). And finally, Harris (1998) reported that Native American children may be socialized to not respond to known information questions. Awareness of this potential cultural variation in responding to requests for verbal display is critically important because teachers are likely to think that children who do not display specific knowledge do not have that knowledge, rather than considering the possibility that they may have been socialized differently regarding displaying knowledge.

Children as young as preschoolers can also be asked to verbally display their thinking, rather than their already acquired knowledge (an idea introduced by van Kleeck & Schwarz, 2011). This is similar in concept to a variety of constructs discussed in the education literature with school-aged children, including learning talk (Mercer, 1995, 2000), progressive discourse (Bereiter, 1994; Wells, 1999), instructional conversation (Tharp & Gallimore, 1988), and accountable talk (Michaels, O’Connor, & Resnick, 2008). Most of these education scholars suggest that teachers should focus their questions at this more challenging level in which responses are open ended and avoid the frequent use of verbal display of known information question that have closed-set responses. However, empirical work focusing on the book-sharing conversations of middle-class parents with

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**Figure 1.** The subcategories of social-interactive and cognitive features that impact the various linguistic features distinguishing the casual talk (CT) and academic talk (AT) registers.
Table 1. Summary of linguistic features of casual talk and academic talk emanating from social and cognitive features.

<table>
<thead>
<tr>
<th>Social and cognitive features</th>
<th>Linguistic features more prevalent in casual talk</th>
<th>Linguistic features more prevalent in academic talk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal display</td>
<td>Found in hip-hop and rap in African American culture</td>
<td>Used to display knowledge, thinking, and autonomy</td>
</tr>
<tr>
<td>Questions are genuine requests for information</td>
<td>Questions are often not genuine requests for information</td>
<td></td>
</tr>
<tr>
<td>Topic participation</td>
<td>Generally equally controlled by participants, with spontaneous and balanced contributions</td>
<td>Typically controlled by teacher, participation elicited by teacher, more teacher talk</td>
</tr>
<tr>
<td>Formality</td>
<td>More colloquial vocabulary</td>
<td>More literary vocabulary</td>
</tr>
<tr>
<td>More simple, common, high-frequency, familiar words</td>
<td>More unfamiliar words</td>
<td></td>
</tr>
<tr>
<td>More Germanic words</td>
<td>More Latin and Greek words</td>
<td></td>
</tr>
<tr>
<td>Shorter words</td>
<td>Longer words</td>
<td></td>
</tr>
<tr>
<td>More contractions</td>
<td>Fewer contractions</td>
<td></td>
</tr>
<tr>
<td>More personal pronouns, especially first person</td>
<td>Fewer personal pronouns</td>
<td></td>
</tr>
<tr>
<td>Contains appreciative markers that convey attitude interest, values, and involvement</td>
<td>Leaves out appreciative markers</td>
<td></td>
</tr>
<tr>
<td>Variety of sentence moods</td>
<td>Mainly declarative</td>
<td></td>
</tr>
<tr>
<td>More active sentences</td>
<td>More indefinite and demonstrative pronoun usage</td>
<td></td>
</tr>
<tr>
<td>Degree of contextual support</td>
<td>More indefinite and demonstrative pronoun usage; more proverb DO usage</td>
<td>Less indefinite and demonstrative pronoun usage</td>
</tr>
<tr>
<td>(relates to explicitness)</td>
<td>Exophoric reference—referents for pronouns found in physical context</td>
<td>Endophoric reference—referents for pronouns found earlier in the linguistic context</td>
</tr>
<tr>
<td>Generality of information</td>
<td>More activity verbs</td>
<td>Less activity verbs</td>
</tr>
<tr>
<td>Verbs represent actions; identifiable agents (e.g., people) perform actions</td>
<td>Abstract concepts can “perform” actions</td>
<td></td>
</tr>
<tr>
<td>More temporal and spatial adverbials indicating involvement with concrete reality</td>
<td>Less temporal and spatial adverbials</td>
<td></td>
</tr>
<tr>
<td>Nouns more frequently represent persons, places, and things</td>
<td>More nominalization (e.g., turning verbs to nouns with –ion, –ment, –ness, etc., as in development); more abstract subjects (this suggestion); more abstract nouns</td>
<td></td>
</tr>
<tr>
<td>Less superordinate (animal) and subordinate (tabby) category labeling</td>
<td>More superordinate and subordinate category labeling</td>
<td></td>
</tr>
<tr>
<td>Precision of concepts</td>
<td>“Fuzzy” terms (sort of, something like) are frequent</td>
<td>Domain specific, precise academic vocabulary (Tier 3 vocabulary)</td>
</tr>
<tr>
<td>Morphologically simple words</td>
<td>Morphologically complex words</td>
<td></td>
</tr>
<tr>
<td>Type of reasoning</td>
<td>Locally coherent, topic-associative narrative structure</td>
<td>Globally coherent, topic-centered narrative structure</td>
</tr>
<tr>
<td>A few commonly used conjunctions serve a variety of discourse functions</td>
<td>More varied set of conjunctions used in more restrictive ways</td>
<td></td>
</tr>
<tr>
<td>Level of reasoning</td>
<td>More literal language</td>
<td>More inferential language</td>
</tr>
<tr>
<td>Less language about thinking</td>
<td>More language about thinking</td>
<td></td>
</tr>
<tr>
<td>Less metalanguage vocabulary</td>
<td>More metalanguage vocabulary</td>
<td></td>
</tr>
<tr>
<td>Little awareness of derivational morphology</td>
<td>Derivational morphology awareness (metamorphology)</td>
<td></td>
</tr>
<tr>
<td>Fewer expressions of possibility, probability, typicality, and certainty</td>
<td>More expressions of possibility, probability, typicality, and certainty</td>
<td></td>
</tr>
<tr>
<td>Sparse lexical density</td>
<td>More content words</td>
<td></td>
</tr>
<tr>
<td>Less lexical diversity</td>
<td>Higher lexical diversity</td>
<td></td>
</tr>
<tr>
<td>Fewer prepositional phrase sequences and expanded noun phrases</td>
<td>More prepositional phrase sequences and expanded noun phrases</td>
<td></td>
</tr>
<tr>
<td>Shorter sentences</td>
<td>Longer sentences</td>
<td></td>
</tr>
<tr>
<td>Less informational load</td>
<td>Greater informational load</td>
<td></td>
</tr>
<tr>
<td>More linguistically redundant</td>
<td>Less linguistically redundant</td>
<td></td>
</tr>
<tr>
<td>Less topic elaboration</td>
<td>More topic elaboration</td>
<td></td>
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</tbody>
</table>
their preschoolers repeatedly shows that discussion focuses on known or literal information approximately 60% of the time, and higher-level thinking approximately 40% of the time (see van Kleeck, 2006b, for a discussion that integrates several of her studies to arrive at these averages).

This ratio has been interpreted as reflecting two different goals for asking questions and for interaction in general, at least with preschool-aged children: Requesting verbal display of knowledge keeps children engaged and successful, whereas requesting verbal display of thinking helps children take risks in their verbal participation and potentially build new knowledge (van Kleeck, Gillam, Hamilton, & McGrath, 1997). Indeed, some prominent education scholars agree that known information questions have their place if used in balance with higher-level questions (Caedzen, 2001; Wells, 1999). Nonetheless, the ideal ratio of focus on known information versus new information to foster learning in an individual remains an unanswered question in educational research. Also, the ratio may differ at different points in development.

**Topic participation.** In addition to verbal display rules, other rules for participating in interaction that differ between CT and AT appear to be more related to the unique multiparty nature of classrooms, typically with one teacher and many children. In CT (at least as it is used in mainstream culture), topics are generally controlled fairly equally by those interacting together, and participants are allowed to spontaneously contribute to them. In AT in classrooms, topics are generally more controlled by the teacher, and the teacher elicits contributions (Westby, 1995). Contributions to interactions are also generally more balanced in CT, but in AT are more dominated by the teacher (see, e.g., Reid, 2000), even though this domination may not be considered ideal (see, e.g., Wells, 1999).

**Degree of Formality**

Registers are often distinguished by degree of formality (see, e.g., Joos, 1962), and the broad CT and AT registers are no exception. CT tends to be more informal, whereas the more scholarly focus of AT tends toward an impersonal and objective orientation that increases formality. This leads to a number of linguistic distinctions between CT and AT at the lexical and sentence levels. At the lexical level, vocabulary can be more colloquial in CT (e.g., *fetch, kid, reckon, yonder*), and it is often more literary in AT (e.g., *ascertain, optimal, despite, constitute*; Chafe & Danielewicz, 1987). In the CT register, one uses simpler, more common or higher frequency vocabulary, whereas in AT, lower frequency words are common (Westby, 1995). Another distinction relates to the derivation of vocabulary. In CT, we find more Germanic words (e.g., *eat, hand*), whereas in AT we find more formal sounding Latin and Greek words (e.g., *dine, manual*; Bar-Ilan & Berman, 2007). In comparison to AT, CT is also characterized by more frequent use of contractions, personal pronouns (particularly more use of the first person nominative or subjective *I*), and the use of appreciative markers (*sure, awesome, wow*) that convey attitude, interest, values (Gee, 2005), and involvement (Snow & Uccelli, 2009).

At the sentence level, less formality is marked in CT by the use of a variety of moods (declarative, interrogative, imperative); in AT mainly the declarative is used (Schleppegrell, 2001). Sentence voice is also less formal in CT, with more active sentences being used, compared with more frequent use of the passive in AT (Biber, 2003; Chafe & Danielewicz, 1987).

**Cognitive and Subsequent Linguistic Features**

Like many of the social-interactive features, the cognitive features distinguishing the CT and AT registers are also shaped by cultural values, beliefs, and practices. For example, Nisbett (2003) summarized cultural differences between Eastern (more collectivist) and Western (more individualist) thought by noting such things as the focus in Western thinking on causal, analytic logic. That is, Westerners tend to divide the world into discrete objects that have particular attributes that can be categorized in clear ways. The world is viewed as stable, and so phenomena are perceived to continue on in time in the same linear direction. This allows developing rules for understanding the world, and continuing to refine the categories to which those rules apply. These general cultural orientations to thinking underlie the characteristics of cognitive features organized here that distinguish the CT and AT registers, and include (a) the degree of social and physical contextual support, (b) the generality of information, (c) the degree of precision of concepts, (d) the type of reasoning, (e) the level of reasoning, (f) the level of “meta-” skills, and (g) the degree of confidence in information (see Figure 2 for these broad features and the characteristics of these features that are manifested in the AT register).

**Degree of Social and Physical Contextual Support**

In comparison with AT, the language used in CT generally has more support from the immediate physical and social context for deriving meaning from messages. Talk in CT is more often about the immediate physical context (perceptually present objects and events), and this is even more pronounced in talking with preschoolers. CT also has more support from people in the immediate social context, which extends to nonpresent physical contexts by virtue of socially shared experiences with significant others. That is, we more often talk in everyday life contexts with people with whom we have more shared past experiences, and this provides cognitive support for interpreting messages even for physically nonpresent people, places, and events. A decreasing reliance on the immediate physical (and to an extent the immediate social) context is frequently discussed as a feature of language use with preschoolers that is important to later school success, and this is often referred to as decontextualized language (e.g., De Temple & Beals, 1991; McKeown & Beck, 2003; Snow, 1983; Snow & Dickinson, 1991; Watson, 2001). The amount of decontextualization increases across children’s academic careers. Language that is more decontextualized in this manner is more cognitively
demanding because it places greater representational demands on children. In other words, they need to “use mental representation to transcend the observable present” (Sigel & McGillicuddy-DeLisi, 1984, p. 75).

It should be noted, however, that the term “decontextualized” is sometimes considered inaccurate because academic language is also certainly contextualized, although in different and often more complex ways than everyday social talk (e.g., Gee, 2014; Nystrand, 1983). As used here and in other research, decontextualized language refers specifically to language use that is somewhat removed from the shared background knowledge of socially intimate, immediate physical, and familiar nonpresent physical contexts. Examples of other terms used to indicate the same lack of support from the immediate social and physical contexts include immediate versus nonimmediate language (e.g., Dickinson, De Temple, Hirschler, & Smith, 1992), distancing language (e.g., McGillicuddy-DeLisi, 1982), and disembedded language (e.g., Donaldson, 1978; Wells, 1985a). The greater degree of immediate social and physical contextual support found in the CT register, compared with the AT register, results in a number of different linguistic manifestations in the two registers. Many relate to needing to be more explicit in the AT register because less shared familiarity of experiences can be assumed and less information can be conveyed by the nonverbal context, so more must be linguistically expressed.

Most obviously with respect to explicitness is the use of anaphora in the two registers (i.e., words, such as pronouns, for which listeners must go elsewhere to know the exact referent). In CT, there is more exophoric reference (Snow & Uccelli, 2009), in which the referents for pronouns are found in physical context (e.g., saying, *Hand me that* as your gaze looks at a hammer out of your reach while you are on a ladder). In AT, endophoric reference is more common (Snow & Uccelli, 2009), in which referent for pronouns are found earlier in the linguistic context (e.g., the use of they in *Bats are nocturnal creatures. That means that they sleep during the day, and come out at night*). In a similar vein, because it is more explicit than CT, AT contains fewer indefinite (e.g., anybody, everything) and demonstrative (e.g., this, those) pronouns referring to specific things, and less frequent use of the pro-verb do (Biber, 2003). When the demonstrative pronoun this is used in AT, it often refers to a previously stated concepts in their entirety, and as such is referred to as conceptual anaphora (Biber, Conrad, & Reppen, 1998).

The need to be more explicit will relate to other linguistic features that are also likely shaped by other cognitive features to be discussed next. These linguistic features that
cut across a variety of cognitive features will be discussed at the end of this section.

**Generality of Information**

Another cognitive dimension along which CT and AT are also likely to vary is the generality of information that is discussed. Because of its overall function of accomplishing the business of daily living, CT is more often about specific, familiar, and personally relevant people, animals, places, activities, and so forth. In contrast, because AT is in the service of more formal, scientific learning, it is more frequently used to discuss general characteristics and qualities of categories of objects, peoples, and so forth (e.g., Bruner, 1966; Wells, 1985b; Westby, 1985). When AT is about specific people, places, and events (as in history lessons), these are less personally familiar and relevant to a child’s daily life. They are generic in the sense of being known by the wider, educated public in the culture.

Focusing on preschoolers specifically, and discussing the shifts in language use from home to school, Watson (2001) noted how topics in the home are more focused on action, whereas in school they are more focused on reflection and discussing the world on a more general level. Indeed, she noted how in school, “what the child can do with the object is less important than the verbal reports she can produce” (p. 50). Show and tell (also known as circle time, rug time, sharing time, and news time) has often been studied to illuminate the teacher’s efforts in getting children to shift from personal talk to talk that is focused on learning about the world on a general level. Wertsch (1991), for example, discussed a show and tell episode involving a lower middle-class child’s familiar, specific, and personally relevant piece of lava rock. Although this treasured item was initially discussed by the child from his personal point of view, hence using the CT register, it was then shaped by his teacher into a more scientific discussion of the properties of rocks in general, thereby shifting the discussion into the AT register as the child was asked, “Okay, is it rough or smooth?” and “Is it heavy or light?” (pp. 113–115).

Linguistically, the generality of information influences lexical choices regarding verbs, adverbs, nouns, and general vocabulary. CT, because it is about more specific things, typically includes more verbs representing actions (Biber, 2003), with identifiable agents (e.g., people) performing those actions (Nagy & Townsend, 2012). In contrast, in AT, abstract concepts can “perform” actions (Nagy & Townsend, 2012, p. 94), as in: *Photosynthesis converts energy from sunlight to chemical energy.* Compared with AT, CT employs more temporal and spatial adverbials indicating involvement with concrete reality (Biber, 2003; Chafe & Danielewicz, 1987). Likewise, the locative *there* is more common in CT (e.g., *There are my glasses; I’ve been looking everywhere for them*), whereas the existential *there* is more common in AT (e.g., *There is a great deal of controversy regarding social group differences in language use;* Biber et al., 1998). In CT, nouns more frequently represent persons, places, and things (Nagy & Townsend, 2012), whereas in AT, there is more nominalization (e.g., turning verbs to nouns with –*ion*, –*ment*, –*ness*, etc., as in the word *destruction, development, and happiness*). Along the same lines, AT also employs more abstract subjects (*this suggestion*) and more abstract nouns (Biber, 2003). CT also has less superordinate (*animal*) and subordinate (*tabby*) category labeling than AT (Watson & Shapiro, 1988), which can be considered related to more abstract forms of knowledge, or what Bruner (1986) has called paradigmatic knowledge. Many of these lexical features of AT align with Tier 2 vocabulary, which Beck and colleagues refer to as general academic word knowledge (Beck & McKeown, 1985; Beck, McKeown, & Kucan, 2002, 2013). The three tiers of this system are shown in Figure 3. Tier 2 vocabulary consists of words used across the various disciplines that make up school subject content areas (e.g., Nagy & Townshend, 2012). Examples include *annual, demonstrate, instance, sequence, accurate, and pattern.*

**Degree of Precision of Concepts**

In CT, reasoning can be based on juxtaposing ideas to create associations that may actually obscure systematic relationships. In other words, CT favors general and vague relationships (Gee, 2005). Aligning this conceptual tendency with linguistic manifestations in the register, precise vocabulary is used less frequently. In fact, we might call the educated person who uses precise vocabulary in everyday social contexts “pedantic” (in other words, they talk like a teacher). Similarly, CT allows “fuzzy” terminology, such as *sort of* and *something like,* and *kind of* (Snow & Uccelli, 2009).

In AT, speakers are asked to consider differences and details of underlying mechanisms. Although information becomes increasingly general in AT, the concepts used become increasingly precise. Photosynthesis, for example, is a very general concept that applies to all green plants, but is also a very precise term for a specific chemical

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**Figure 3.** A visual depiction of the ideas regarding three tiers of vocabulary that were discussed by Beck and colleagues (Beck & McKeown, 1985; Beck, McKeown, & Kucan 2002, 2013).
process. Words such as photosynthesis are considered Tier 3 vocabulary—they are specific to a particular academic area of study (refer to Figure 3). Other examples of Tier 3 vocabulary that might be taught as young as the preschool level include eclipse, lava, evaporation, migration, hibernation, and metamorphosis. A unit on volcanoes might include several Tier 3 words, including molten, crust, mantle, magma, and lava. Besides the use of more domain- or discipline-specific vocabulary, the greater precision of concepts in AT manifests linguistically in morphologically more complex words (e.g., unmanageable, disentanglement, inescapable, antidisestablishmentarianism; Nagy & Anderson, 1984; Nippold, 2007). This morphological complexity is also likely related to findings of longer words in AT than in CT (Biber, 2003).

**Type of Reasoning**

In CT, the “natural” knowledge of everyday life efficient for everyday tasks abounds (Reif & Larkin, 1991). Reasoning can be informal and based on unjustified beliefs. There is frequently a lack of consideration of alternative arguments. In fact, speakers may discard evidence that contradicts their position (Kuhn, 1991). AT, in contrast, increasingly requires reasoning that is analytic, reflective, logical (premises and conclusions that are based on formal rules), hierarchical, and linear or step-wise (e.g., Bruner, 1986; Schwarz & Glassner, 2003; Snow & Uccelli, 2009). Accordingly, alternative perspectives must be considered in AT (Scarcella, 2003).

As a result of these differences, the organization of information conveyed in CT is often locally coherent, but with associated segues into new topics. AT, on the contrary, requires a globally coherent, logical organization (Reif & Larkin, 1991). This results linguistically in different narrative structures. Westby (1995) noted how casual conversations allow a topic-associative organizational structure, in which one idea can lead to another in a chainlike fashion. Indeed, we might end up saying to our conversational partner, “My goodness, how did we get on this topic?” The goal in CT is to tell a good story, which deals with human (or human-like) intentions and their vicissitudes (Bruner, 1986). Indeed, stories about the everyday have been considered an important way in which we come to endow our quotidian experiences with meaning (Bruner, 1986).

In academic contexts, narratives have a topic-centered organization with a linear structure focused on a single topic (Westby, 1995). Bruner (1986) discusses how, instead of telling a good story, the goal of a more scientific narrative is to provide a well-formed argument that convinces the audience of its truth, rather than its lifeliness. He further notes that rather than dealing with human intentions, the goal is “to make a world invariant across human intentions” (p. 50). Reasoning is applied to more and more abstract concepts as AT evolves over time in school, reaching the point where discussions can center on abstract concepts and the relations among them (Gee, 2005). The discussion here of the CT and AT registers provides a good example.

For many decades, children’s use of narratives during show and tell in early elementary classrooms has frequently been studied from the perspective of narrative structure (e.g., Michaels, 1983). So, for example, African American children will sometimes produce topic-associated or episodic narratives during sharing time (e.g., Hyon & Sulzby, 1994). Furthermore, not being aware of the different narratives structures can take, their teachers will often have difficulty helping these children recontextualize their narratives into the structure preferred in school (term used by Caizden, 2001). Lacking conscious knowledge of this variation in narrative structure, teachers often negatively evaluate these children’s efforts as being, for example, “uncommunicative and unacceptable” (see review by Barletta, 2008, p. 16).

One linguistic manifestation of these different narrative structures is found in the use of conjunctions. In CT, a few commonly used conjunctions (such as and, so, and then, but) serve a variety of discourse functions (Schleppegrell, 2001). In the topic-centered narratives more typical of AT, a more varied set of conjunctions and adverbs is used in more restrictive ways (Schleppegrell, 2001) to express more precise additive (furthermore, similarly, in addition), causal (because, as a result, therefore, since), temporal (finally, at the same time, before, after), and adversative (however, but, on the other hand) relationships between the ideas presented in the narrative (see Halliday & Hasan, 1976). These relationships are also reflective of the logical, linear reasoning more characteristic of the AT than of the CT register. Adverbials may also be used differently in each register. So, for example, since and while are typically used to indicate time in CT, but since most often indicates reason and while concession in AT (Biber, Johansson, Leech, Conrad, & Finegan, 1999).

**Level of Reasoning**

The level of reasoning required in the language used with and by children as young as preschool age has often been distinguished as lower-level literal versus higher-level inferential (e.g., van Kleeck, 2008; van Kleeck et al., 2006), and AT tends to involve more inferential language than CT (Reif & Larkin, 2001). When language is literal, the information needed to produce or comprehend it is directly available. As examples, a child might be asked to label or describe characteristics of an object she or he can directly observe. Inferential language requires going beyond literal meaning and using information that is not directly stated to do things such as explain, problem solve, categorize, talk about cause and effect, hypothesize, predict, summarize, generalize, compare, contrast, describe, define, justify, analogize, give examples, evaluate, interpret, and synthesize (see van Kleeck et al., 1997).

These various functions of linguistic utterances also often entail the use of verbs and nouns related to thinking. Examples of Tier 2 vocabulary (see Figure 3) of this nature...
might include verbs such as predict, compare, analyze, anticipate, evaluate, hypothesize, conclude, doubt, plan, and summarize. Nouns might include hypothesis, plan, evidence, solution, reason, and motive.

**Level of Metacognitive and Metalinguistic Skills**

“Meta-” skills involve conscious reflection upon or awareness of cognitive processes (e.g., memory, comprehension, learning, and thinking) or of language and its various components (e.g., phonology, morphology, and syntax), as well as the subsequent abilities to manipulate and regulate them. For example, some degree of awareness of the sound units of spoken language, called metaphonology or phonological awareness, is essential to learn to read an alphabetic script such as English. Although literacy is needed to carry out the business of everyday life, almost all children are taught to read in school. Indeed, all of the “meta-” skills are typically used only in formal schooling.

There is the cognitive awareness itself, and there is also the language and specific vocabulary related to that awareness that is part of the AT register. In learning to read, for example, young children learn metalanguage vocabulary such as word, letter, sound, rhyme, and represent. As they learn to write, they learn metalanguage vocabulary such as paragraph, spelling, and punctuation (and the terms for various types of punctuation). As they explicitly learn about grammar, metalanguage extends to words such as noun, verb, adverb, clause, and so forth. Having these labels is essential to learning the concepts they represent.

Once children are in school, continued expansion of vocabulary relies overwhelmingly on learning new words derived from the root words that were the staple of vocabulary acquisition through the preschool years (Anglin, 1993). To aid in this process, children benefit greatly by becoming aware of the units of meaning comprising the derivational morphology that creates the prefixes and suffixes that form new words, or what is referred to as metamorphology. They can, for example, learn the general meanings of prefixes such as un-, en-, in-, dis-, re-, and a; or suffixes such as –ize, –ify, –able, –less, –ful, –ness, –en, –hood, and –ment. A meta-analysis of 22 morphological interventions conducted by Bowers, Kirby, and Deacon (2010) showed that instruction in morphological awareness had a positive impact on literacy outcomes when it was integrated with other components of literacy instruction, and this was particularly true for less able readers.

**Degree of Confidence in Information**

In CT, as mentioned earlier, general and vague relationships are often conveyed, and there is also less accountability required in terms of expressing one’s degree of confidence in the information being offered. In AT, there is a “need to be explicit about the credibility of one’s claims” (Snow & Uccelli, 2009, p. 124). Linguistically, the need to modulate certainty is manifested in expressions of possibility, probability, typicality, and certainly. This occurs in mental state talk that includes verbs (guess, know, believe, doubt), nouns (possibility, guess, doubt), adjectives (likely, clear, certainly, definitely), adverbs (maybe, perhaps, probably, definitely, usually, frequently, sometimes, always, undoubtedly, presumably), modal auxiliaries (may, might, could), and phrases (fairly certain, in fact, in my opinion, to a certain extent).

**Linguistic Features Resulting From a Variety of Cognitive Features**

Some linguistic features that distinguish AT from CT likely arise from a combination of numerous cognitive features of AT. These might include the need to present information in a logical and linear fashion, the frequent use of higher-level reasoning, the need for greater precision in concepts expressed, and the need to modulate certainty. In comparison with CT, many of these features might in combination result in AT containing more content words (e.g., Nagy & Townsend, 2012; Snow & Uccelli, 2009), having greater lexical diversity, and having longer sentences (Chafe & Danielewicz, 1987). Beyond the lexical level, these cognitive features might often require the use of expanded noun phrases and prepositional phrase sequences, a feature discussed at length by Biber, Gray, and Poonpon (2011). The following sentence provides an example of an expanded phrase: The nature of the effects of high-stakes standardized testing on student performance during the elementary school years, especially for those at risk for academic difficulties, is often debated. In a more casual register, such as CT, this same sentiment might be expressed as follows: People argue about whether or not all this testing in schools is helping at-risk kids learn.

Also emanating from a number of cognitive features in CT versus AT is the relative informational load in each register. In CT, people tend to be more redundant, whereas in AT they tend to be more concise (e.g., Ong, 1982). This leads to relatively more sparse amounts of information in CT, and more dense amounts in AT (e.g., Snow & Uccelli, 2009), thereby increasing the information processing demands of AT. Furthermore, elaboration on a topic is more common in AT than in CT, beginning at the preschool level (Williams, 1995, 1999, 2001).

**Summary of Distinctions Between CT and AT**

To summarize, this section has considered social-interactive and cognitive features distinguishing the CT and AT registers, as well as how these features are manifested linguistically (see Table 1). In a great deal of the empirical research cited in this section, typically only one or a small number of features have been considered in any one study. Future research should consider the many co-occurring distinctions that define a register. The work of Biber (2003), in which he analyzed a 2.7 million-word corpus of adult language, offers a model for how to do this. His multidimensional analysis allowed simultaneous analysis of a
large number of linguistic features to illuminate those that co-occurred in the oral-to-literate factor identified from his large language corpus. In this way, he located AT (college classroom lectures in his data set) as falling quantitatively in between casual talk and written academic textbook language on the oral-to-literate dimension of the language data (see Figure 4).

Assessing CT and AT

There have been some efforts to create formal tests that specifically target academic language or classroom discourse. At the preschool level, Blank and colleagues were true pioneers, first developing a formal, norm-referenced test designed to assess preschool classroom discourse in 1978 (Blank, Rose, & Berlin, 1978), which was revised 25 years later (Blank, Rose, & Berlin, 2003). The test has four levels, with each further removed from using language to discuss perceptually present things. The higher two levels have been interpreted as tapping primarily inferential language (van Kleeck et al., 2006).

At the school-aged level, Uccelli and colleagues (2014) developed an assessment instrument for children from fourth through eighth grade that taps a variety of co-occurring language forms and functions that are aspects of academic language skills (e.g., connectives prevalent in academic language, derivational morphology, complex sentences, anaphora, and argumentative narratives). Other efforts will undoubtedly become available as professionals become increasingly aware of the construct of academic language.

These kinds of more formal measures are useful for answering the yes/no question of whether a child has problems with the AT register. That is, they help to determine the general existence of such difficulties. Formal measures will not provide information about where a particular child will provide information that can lead to specific intervention goals regarding academic talk. Indeed, this type of criterion-referenced assessment has yet to be developed at the school-aged level, where a focus on academic language has begun to be highlighted in recent years. At this juncture, appropriate assessments are still “an undeveloped area in the field of academic language” (Nagy & Townsend, 2012, p. 104).

Fostering the AT Register

Research on the genetic bases of different kinds of language skill provides optimism that the environment (i.e., intervention) could have a substantial impact on children’s facility with the AT register. In a study of 380 twins with an average age of 7.13 years, DeThorne et al. (2008) found a heritability index of .70 for conversational language skills as measured by language sample analyses (here referred to as CT skills). This means that 70% of the variance was attributable to hereditary factors, with 30% being attributable to the environment. This was contrasted with what they referred to as “formal” language skills, that is, those determined by a formal discrete point test (and here referred to as AT skills). Here, the heritability index was .45. These results suggest that the environment (i.e., adult language input) has more of an opportunity to influence AT than it does CT.

Efforts to foster academic language beginning in the preschool years will need to focus on the full range of both the social interactive and cognitive features that comprise this register. Furthermore, in line with the notion of a register, many of these features will co-occur. When focusing on these social and cognitive features of the AT register, the linguistic features should arise automatically. As such, the SLP, or the teacher he or she consults with, does not have to be thinking about fostering the many linguistic features of the AT summarized in Table 1. In addition to not having to think directly about the linguistic features of AT, at least not with children in preschool and early elementary school grades, social-interactive features regarding the formal nature of the register would likely be beyond the developmental purview of children in this age range. Teaching other social-interactive features should be fairly straightforward, therefore taking little time to establish.

For example, after a few reminders, it is likely that most children would understand how verbal display works in school, although children with LI might need additional reminders and practice. With practice and gentle and supportive encouragement, they should become increasingly comfortable with participating verbally. Van Kleeck and Schwarz (2011) offered specific ideas for explicitly teaching children less familiar with verbal display how it works. SLPs can use this information in therapy, or they can share it in consultation with teachers. Of course, for children with LI, the gist of these rather long instructions would need to be both simplified and presented more times than for children without LI.

For verbal display of known information, they suggest the SLP or teacher might say, “Because we are in school, I’m going to ask you and the other children questions I already know the answer to. If you know the answer, I want

Figure 4. Biber’s findings regarding the statistical “location” of the AT register as falling between CT and written textbook language using mean dimension scores along an oral (positive mean dimension scores) to literate factor (negative mean dimension scores) that was derived from a very large corpus of data from each of these contexts.

<table>
<thead>
<tr>
<th>Casual Talk</th>
<th>Academic Talk</th>
<th>Written Academic Language</th>
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<tbody>
<tr>
<td>Service Encounters</td>
<td>Classroom Talk</td>
<td>Textbook</td>
</tr>
<tr>
<td>+10.5</td>
<td>+4</td>
<td>-9</td>
</tr>
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</table>

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you to raise your hand, and tell me the answer. In school, tell me answers I already know so I can see if you know the answer. That helps me know if I’m doing a good job teaching you. If you don’t know the answer, that’s okay, too. Maybe another child or I will give the answer” (van Kleeck & Schwarz, 2011, p. 7).

For verbal display of thinking questions, van Kleeck and Schwarz (2011) recommended saying something like: “Sometimes, you might not know the answer to questions I ask, but you can think about what the answer might be, and you can tell us what you are thinking.” The SLP or teacher can also model this process, and say something like, “I wonder who this book is going to be about? I haven’t read this book before, so I don’t know for sure who it is about. But I can use hints from the cover to guess who the book might be about. There is a picture of a bear and a bird on the cover, so maybe the book is about the bird or the bear, or maybe about both. But, I’d have to read the book to find out if I made a good guess or not” (p. 7). Here we also see many instances of the adult modeling his or her level of certainty about the information being conveyed, which is a cognitive feature of the AT register (e.g., wonder, don’t know for sure, guess, maybe).

This type of modeled response to verbal display of thinking questions is often called a think aloud in scholarship on reading comprehension strategies with older children who are reading independently (e.g., Davye, 1983), but adults can begin modeling think-alouds early in the preschool years. Even after children understand the social-interactive requirements of verbally displaying their thinking, think-alouds should become a regular part of the SLP’s or teacher’s response when children are unable to effectively or correctly respond themselves. These modeled responses should also be peppered with words that let the children know the adult is not sure and is making a guess, reinforcing that guessing is okay, but also showing the children the thought process involved in making a logical guess. Think-alouds provide “error-free” learning, meaning that after waiting sufficient time for the children to respond, the adult scaffolds them when they are unable to respond (or when they respond inaccurately) by showing them a possible way to answer such questions, and doing so in a natural and nonjudgmental manner.

As noted earlier, show and tell is frequently used to try to shift children into language that is more characteristic of the AT register. In the show and tell example reported by Wertsch (1991) that was discussed earlier, in which a young child brought in his special piece of lava rock, the SLP might advise preschool and early elementary teachers to explicitly tell children how show and tell works. So, for example, they might say something along the lines of the following: “When you talk about your special rock in school, you may quickly tell us why it is special to you, but then we also want to talk together about what kind of rock it is. That way, we can use your special rock to learn about lots of rocks. I’ll help you by asking you some questions as you tell us about your special rock. And we really appreciate that you brought your rock to school to help us learn more about all kinds of rocks.”

Among other features, AT register focuses cognitively on learning about the world in general terms, more frequently employing higher-level thinking, and increasingly relying less and less on support of the social and physical context. In Figure 5, these cognitive features of the AT register are depicted simultaneously to demonstrate both that they are independent features that can be manipulated individually in constructing interventions, and that they can also co-occur. The activities listed in Figure 5 from left to right move from the greatest amount of social and physical support from the immediate context to the least amount (ongoing activity > past activity > book sharing > future activity > independent test performance). A second feature relates to the location of information as being either in or beyond the current talk or text, which captures lower-level literal language versus higher-level inferential uses of language. Finally, information can go from specific to more general within any of these activities, or when using either literal or inferential language.

For example, if you were reading the children’s book, Mooncake (Asch, 1987), to a group of preschoolers, the activity would already be removed from the immediate real world physical context because the book would be creating the context via words and illustrations. However, the adult reading the book to the children could be providing social support for them by scaffolding the information in the book with discussions and questions. Comments or questions that went beyond the text could be either literal (asking, “What color is the bear?” or commenting “There’s a brown bear,” while pointing to the brown bear in an illustration) or inferential (asking, “Who do you think this book might be about?” after reading the title and looking at the cover).

After the book had been read a couple of times, even with children as young as preschool age, the story about a specific bear and bird could be used to launch into more general, scientific information. At one point in this story, Bear’s friend Little Bird said to Bear, “I would like to go with you, but winter is coming, and I must fly south with the flock.” This information about a particular bird flying south could serve as a catalyst for a discussion about the general phenomenon of migration. Or similarly, the information about Bear falling asleep when winter came could eventually launch into a discussion about hibernation. Discussions of migration and hibernation also, of course, move into the realm of precise concepts requiring more domain specific vocabulary.

Also, after the book had been read a couple of times, the adult might ask, “Who remembers what this book is about?” This would attempt to elicit a logical, linear narrative from a child. If no one remembers, the stage is set for a discussion about the memory aspect of metacognition. In this case, the adult could ask something like, “I wonder what might help me remember what this story was about? Maybe I could look at each of the pictures, and that would help me remember.”

Practice with topic-centered narratives should become a regular part of all kinds of classroom activities, not just
book sharing. For example, children could retell the sequence of events that happened on a recent field trip, perhaps aided by photos taken that day. They could also create books of their own documenting an activity completed in class (e.g., making papier mâché masks) to take home to retell to family members, and so forth.

Conclusions

For all academically at-risk children, waiting until they are in elementary school to become concerned about the AT register, as is the predominant current thinking, will simply put those children not already competent with this register that much further behind. This article is a call to make AT explicit in both research and practice with children as young as preschool age. As practitioners, SLPs can help to make knowledge of the AT register explicit to teachers beginning in the preschool years, so the teachers can begin to recognize which children are and are not proficient at using it. Without such awareness, “how teachers use or react to language and the judgments they make about students in the process, because they are seldom thought through, may often have unintended, negative effects” (Reid, 2000, p. 14). From the children’s perspective, early in their academic careers, they come to view themselves as either competent or incompetent learners (Delpit, 1995; Ogbu, 1990). A child’s ability to participate in classroom talk is one factor influencing her or his self-identity as a learner (Stables, 2003).

Reinforcing the need for the SLP to work with the classroom teacher in supporting the development of AT is large-scale research showing that the most important preschool classroom variable in fostering preschoolers’ language skills is teacher instructional interaction (which was defined in ways that mirror many aspects of AT; e.g., Mashburn et al., 2008). Furthermore, this study found that teacher instructional interaction is typically of poor quality, especially for teachers serving low-income children. This finding has been supported in other research (Howes et al., 2008; LoCasale-Crouch et al., 2007; Pianta et al., 2005).

We do not need to denigrate or eliminate any child’s, parent’s, or teacher’s language, dialect, or patterns of language use in order to foster the use of AT in English. All of us are capable of mastering more than one register, dialect, or language and switching among them as needed for different functions and in different contexts (Reyes & Ervin-Tripp, 2010). Recently, it was suggested that the best way to do this with parents might be to “blame the schools” for recommending parent–child interaction patterns, to be practiced at least some of the time, that may be contrary to the family’s cultural values and beliefs, and subsequent communication practices (van Kleeck, 2013).
Wells (2006) notes that “at no stage is [the interactional relationship between the teacher and student] more important than in the child’s first few months at school” (p. 77). With growing numbers of children enrolled in preschool in the United States (74% of 4-year-olds in 2008–2009; Barnett, Epstein, Friedman, Sansanelli, & Hustedt, 2009), and with increasing numbers of them from economically, culturally, and linguistically diverse backgrounds (e.g., Magnuson & Waldfogel, 2005), it is imperative that we add a focus on AT to the other areas of school readiness we endeavor to begin fostering during the preschool years and that we continue to support children’s proficiency with the AT register as they progress through the elementary school grades.

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