Three types of verbs were included in this project: action, metalinguistic, and metacognitive (Nippold, 2016; Justice & Ezell, 2016).

- Metalinguistic verbs refer to acts of speaking (e.g., tell, exclaim).
- Metacognitive verbs refer to acts of thinking (e.g., decide, know).
- Action verbs refer to acts of doing or states of being (e.g., eat, walk, come).

An aspect of decontextualized language which is used to discuss abstract ideas and is characteristic of advanced language observed in reading and writing includes metacognitive and metalinguistic verbs (Nippold, 2016; Curenton & Justice, 2004).

Metacognitive and metalinguistic verbs have an atypical trajectory pattern as compared to action verbs.

- Acquisition of action verbs occurs shortly after a child’s development of nouns, comprising a child’s early lexicon. A gain in acquisition of action verbs is primarily seen throughout the second year of life (Justice & Ezell, 2016; Papapragou et al., 2007; Golinkoff & Hirsh-Pasek, 2008).
- Metalinguistic verbs develop throughout childhood and into adulthood. These verbs are acquired in part by a child’s experiences with written language, meaning they cannot be understood by use of visuals, imitation, or shared experiences (Justice & Ezell, 2016).
- Acquisition of metacognitive and metalinguistic verbs is also based largely upon a child’s theory of mind because they are used to convey one’s beliefs, feelings, or thoughts (Papapragou et al., 2007; Swannenthal & Henderson, 1998; Schneider, 2008).

A context which includes the use of all 3 verb types is narratives. Proficiency in narrative discourse is largely related to a child’s communicative success as reflected in the ELA Common Core State Standards. For example:

- Reading Standards for Literature, Grades K–5: “Retell stories, including key details, and demonstrate understanding of their central message or lesson”
- Anchored Writing Standards, Grades 6–12: “Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences”
- Significant increases in the use of abstract nouns and metacognitive verbs in writing has been observed in adolescence (Sun & Nippold, 2012). However, other research has not seen age-related growth in the use of mental verbs in narrative retells (Greenhalgh & Strong, 2001).

To explore the development of verbs within the context of oral narratives, the authors sought to answer the following research questions:

1. Does age predict use of action, metacognitive, and metalinguistic verbs in students with typically developing language within oral narratives?
2. Is there a difference in verb use across verb types between students with typical language and language impairment?

A coding system was developed for the three verb types: action (AV), metacognitive (MVL), and metalinguistic verbs (MLV).

- A scoring system was used for the three types of verbs: action (AV), metacognitive (MVL), and metalinguistic verbs (MLV).
- A consensus line coding method was utilized to ensure coding reliability; all differences were discussed and agreed upon.
- The primary and secondary coders were blinded to the students’ ages and language statuses.
- The additional measures of Subordination Index, Total Number of Words, Number of Different Words, and Total Number of T-Units were obtained using SALT software.

- Data analysis was incorporated into SPSS.
- A repeated measures analysis of covariance (ANCOVA) was conducted for data in both questions 1 and 2.

**Methods**

**Participants**

- 130 samples of the “Alien Story” were collected from a trained CSD student using Systematic Analysis of Language Transcription (SALT) software (2018) and checked by a second examiner.
- A coding system was developed for the three verb types: action (AV), metalinguistic (MVL), and metalinguistic verbs (MLV).
- A consensus line-by-line coding method was utilized to ensure coding reliability; all differences were discussed and agreed upon.
- The primary and secondary coders were blinded to the students’ ages and language statuses.
- The additional measures of Subordination Index, Total Number of Words, Number of Different Words, and Total Number of T-Units were obtained using SALT software.

**Procedures**

- Data was incorporated into SPSS.
- A repeated measures analysis of covariance (ANCOVA) was conducted for data in both questions 1 and 2.

**Results**

**Question 1:**

Does age predict use of action, metacognitive, and metalinguistic verbs in students with typically developing language within oral narratives?

<table>
<thead>
<tr>
<th>Age in Months</th>
<th>Action Verbs</th>
<th>Metacognitive Verbs</th>
<th>Metalinguistic Verbs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>224*</td>
<td>289**</td>
<td>163</td>
</tr>
<tr>
<td>Action Verbs</td>
<td>603**</td>
<td>689**</td>
<td>163</td>
</tr>
<tr>
<td>Metacognitive Verbs</td>
<td>562**</td>
<td>163</td>
<td>163</td>
</tr>
</tbody>
</table>

- Weak positive correlations were observed between age and use of action and metacognitive verbs. No significant correlation was observed between age and use of metalinguistic verbs.
- Moderate, positive correlations were observed between the different types of verbs (i.e., action and metacognitive, action and metalinguistic, and metalinguistic and metacognitive).

**Question 2:**

Is there a difference in verb count across verb types between children with typical language and language impairment?

- Huynt-Felch analysis indicated significant main effect (F[1,108]=12107, p<.0001)
- Significant effects for each type of verb based on language ability were observed when controlling for age.

**Discussion**

**Question 1:**

- Within the context of oral narratives, students with typically developing language skills were more likely to utilize a larger number of action and metacognitive verbs. However, a similar relationship was not observed for metalinguistic verbs.
- These results support previous research which has indicated that verb use continues to develop into adolescence (Papapragou et al., 2006).
- It is unclear whether the type of task (i.e., oral narrative) impacted the ability to observe a relationship between age and the use of metalinguistic verbs.

**Question 2:**

- Similar to other advanced language structures (e.g., clausal density and MLU), students with language disorders used significantly fewer action, metacognitive, and metalinguistic verbs as compared to typically developing peers.

**Recommendations**

Prior research has shown children with language disorders frequently exhibit less complex syntax, and decontextualized language is associated with complex syntax. Therefore, targeting these verb structures may be beneficial to children with language disorders and may lead to more complex language in other areas (e.g., clausal density).

The impact of the task utilized continues to warrant additional research to determine whether this impacts the ability to observe differences as well as target and elicit specific structures which may need to be assessed or treated.

**Selected References**

Justice, A., & Ezell, H. (2016). The concept handbook: Everything you learned about syntax...but forgot (2nd ed.). Austin, TX: ProEd

The authors have no relevant financial or nonfinancial relationship with the products or services in this poster.