INTERNATIONAL JOURNAL OF NOVEL RESEARCH AND DEVELOPMENT (IJNRD)
© 2026 IJNRD | Volume 11, Issue 3, March 2026 | ISSN: 2456-4184 | IJNRD.ORG

Construction and Validation of TESAK: A Kannada Syntax Assessment Tool for Preschool Children

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Abstract

Early childhood is the key period for children's language development, during which they become familiar with basic grammatical structures that are foundational for achieving later literacy and academic development. In morphologically complex languages like Kannada, language proficiency using syntactic structures such as Person–Number–Gender indicators and case marker endings is critical for sentence structure and understanding. However, such standardized tests are scarce and need to be tailored to examine the acquisition of syntax and emergent literacy in preschool Kannada speakers. This study focused on the creation and validation of the **Test for Examining Syntax Acquisition in Kannada** (TESAK) to assess syntactic development and early literacy skills in Kannada speaking preschoolers. The tool was mainly developed to asses the syntax acquisition of preschool children with hearing loss. TESAK was designed to measure comprehension, expression, reading, writing, and cognitive skills. The five domains had 115 items, with an overall score of 100 marks. Experts were consulted and found the tool to cover different domains of early childhood education stage. The items were reviewed and certified by two special educators, speech-language pathologists, audiologists, and caregivers. After content validation, tool was standerdised. For this tool was administered to 54 typically developing Kannada-speaking preschoolers aged 3–6 years. Across age groups, the item-wise analysis indicated a distinct developmental course. Children aged 3–4 years were competent at comprehension, expression, simple cognitive and simple reading-matching tasks, whereas writing development was still emerging. The 4–5 year group revealed that the children had developing reading and partial writing skills, while 5–6 years showed age-appropriate performance in comprehension, expression, reading, writing, and cognitive tasks. The internal consistency of the scale was shown by a reliability calculation based on Cronbach's alpha value of 0.92, showing

that the tool is very consistent, and domain reliability values ranged from 0.94 to 1.00. The results indicate that TESAK is a valid and developmentally appropriate tool that can be used to evaluate syntax acquisition and emergent literacy skills in preschool Kannada-speaking children. The tool is useful for educators, clinicians, and researchers to determine patterns and language development and assist with early intervention and language assessment.

Keywords: Syntax acquisition, Kannada language development, Preschool children, Hearing loss, Emergent literacy, Language assessment, TESAK.

I. Introduction

Early childhood is considered a crucial period for language, cognitive, and socio-emotional development. During this time, children rapidly develop the foundational elements of linguistic scaffolding necessary for later academic language and communication development. Language development in this phase serves as a stepping stone to reading, writing, and cognitive development, which will support academic success and social connections. At the national policy level, the National Education Policy (NEP) 2020 emphasizes Early Childhood Care and Education (ECCE), as well as foundational literacy and numeracy, as central to lifelong learning (Ministry of Education, 2020). Similarly, the National Curriculum Framework for the Foundational Stage (NCF-FS, 2022) advocates for a curriculum that is developmentally appropriate, play-based, and inclusive for children aged 3 to 8 years (NCERT, 2022). Language learning in the early years heavily depends on regular exposure to meaningful linguistic input. However, reduced auditory access to spoken language can affect the natural acquisition of grammatical structures, which occurs during a critical phase of language development, especially for children with hearing loss. Kannada is a complex, morphologically rich Dravidian language that features a wide range of Person–Number–Gender (PNG) markers and case inflections. Syntactic competence relies on mastering these features. Some children with hearing loss, however, have less exposure to these linguistic structures. Current instruments like the Task and Stask Test for Acquisition of Syntax in Kannada (Vijayalakshmi, 1981), Syntax Screening Test in Tamil (Sudha, 1988), and Linguistic Profile Test (Karanth, 1990) predominantly target older children. There are very few preschool-specific tools to explore syntax in reading and writing contexts. Therefore, the present study designed the Test for Examining Syntax Acquisition in Kannada (TESAK) to evaluate syntactic development and emergent literacy skills among Kannada-speaking preschool children.

II. Objectives of the Study

1. To develop an assessment tool for evaluating syntax acquisition in Kannada-speaking preschool children.
2. To standardize the TESAK tool among typically developing preschool children.
3. To examine the reliability of TESAK using internal consistency analysis.

III. Method

3.1 Development of TESAK

A review of literature indicated the absence of a suitable standardized tool for assessing grammatical language production, reading comprehension, and writing skills related to PNG markers and case markers in Kannada-speaking preschool children.

TESAK was therefore developed to assess:

- syntactic comprehension
- syntactic expression

- emergent literacy skills
- cognitive linguistic abilities

The tool was reviewed by:

- two special educators
- two speech-language pathologists
- two audiologists
- caregivers

Necessary modifications were made based on expert feedback.

3.2 TESAK Tool Content

The Test for Examining Syntax Acquisition in Kannada (TESAK) was designed to assess syntactic understanding and emergent literacy skills across multiple language domains. The tool consists of 115 items distributed across five major domains: Comprehension, Expression, Reading, Writing, and Cognitive Skills. Each domain includes tasks that evaluate different aspects of language processing and usage related to syntactic development.

The Comprehension domain contains 23 items designed to assess the child's ability to understand syntactic structures and identify correct linguistic relationships based on auditory or visual cues. This section carries 23 marks.

The Expression domain includes 30 items that evaluate the child's ability to produce grammatically appropriate responses, construct sentences, and use morphological markers such as person–number–gender (PNG) markers and case markers in spoken language. This section contributes 24 marks to the total score.

The Reading domain comprises 32 items that assess early reading comprehension and the child's ability to associate written sentences with corresponding pictures, identify grammatical markers, and recognize syntactic relationships in written form. This section carries 23 marks.

The Writing domain contains 15 items designed to evaluate the child's ability to apply syntactic knowledge in written form through tasks such as filling in by selecting appropriate grammatical marker option in given options, completing sentences, and responding to picture-based prompts. This section contributes 15 marks.

The Cognitive Skills domain also includes 15 items, focusing on higher-level language-related cognitive abilities such as sequencing events, organizing pictures logically, and constructing meaningful narratives using appropriate grammatical markers. This section carries 15 marks.

Test for Examining Syntax Acquisition in Kannada (TESAK) tool comprises 115 items. The tool has a total score of 100 marks and provides a structured measure of syntax acquisition and emergent literacy abilities in Kannada-speaking preschool children.

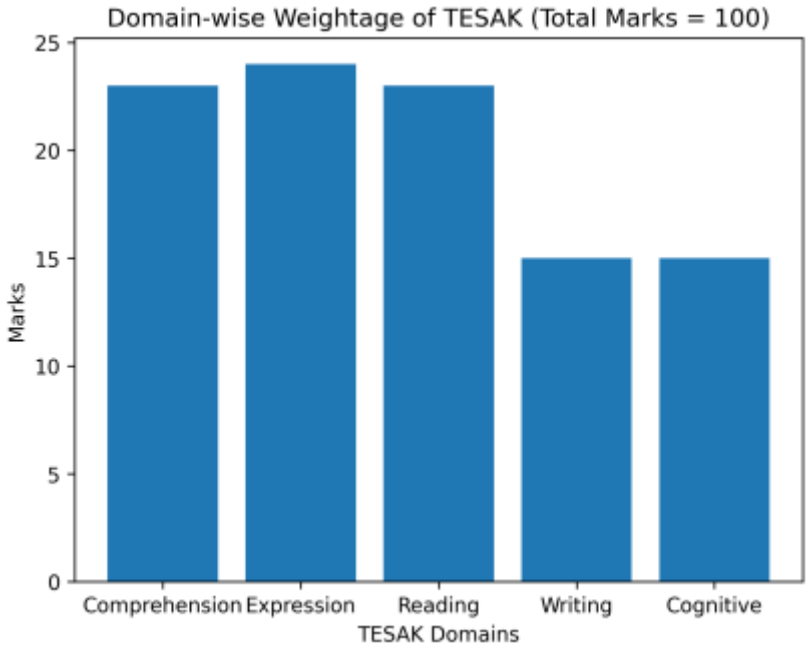
Table 1

TESAK Tool Content and Marking Scheme

Domain	Items	Marks
Comprehension	23	23
Expression	30	24
Reading	32	23
Writing	15	15
Cognitive Skills	15	15
Total	115	100

Figure 1

Domain-wise Weightage of TESAK



3.3 Alignment with Bloom's Taxonomy

Table 2 shows the alignment of the TESAK domains with Bloom's Taxonomy, showing the respective cognitive demands required based on each domain. The comprehension domain assesses lower order cognitive techniques such as remembering and understanding, requiring children to recognize and interpret the presence of grammatical structures, like PNG markers and case markers. The expression domain is related to application level; it involves children in making spoken language sentences with grammatical correctness. The reading domain encompasses understanding and application too since children need to read the written forms and apply grammatical knowledge during reading tasks. Writing tasks require more complex cognitive processes like application and analysis such as choosing the appropriate suffixes and writing meaningful responses. The cognitive skills portion involves higher levels of analysis and creation, where children sequence pictures and construct narratives based on logical and temporal connections. The weights distribution of TESAK by domain are provided by Table 3, and as such the overall test score is 100 marks. Comprehension domain has 23 items and 23% score, but expression domain has 30 items accounting for 24%. The reading section is 32 items and weightages 23%. The writing and cognitive skill domains receive 15 marks for each, with 15% for each area. This balanced distribution guarantees that receptive and expressive, and emergent literacy, and cognitive skills are present in the assessment. It reinforces the hierarchy of language development, because foundational comprehension skills precede expressive and literacy-based skills. Therefore, the domain-wise architecture of TESAK enhances the level of construct validity of the tool and results in a more complete measure of syntax acquisition and early literacy development in Kannada-speaking preschool children. The items distribution across domains was designed to reflect the developmental order of language acquisition in early childhood. Preschool children generally learn receptive language first even before they learn the expressive and written language. So, the comprehension domain contains a relatively greater number of items to address foundational syntactic

comprehension. The expression domain has a much higher quantity of items as it evaluates a child's ability to use any grammatical form in spoken language. Writing tasks are restricted in number as writing skills emerge later in early childhood and require higher levels of fine motor control and cognitive processing. The cognitive skills domain, involving picture sequencing and story narration, tests the language skills of reasoning, sequencing, and narrative construction. These domain-wise distribution of items indicates developmental growth of language and literacy skills in preschool children; thus is age-specific and balanced assessment.

Table 2

Bloom's Taxonomy Alingnment of Domains

Domain	Bloom's Level
Comprehension	Remembering & Understanding
Expression	Applying
Reading	Understanding & Applying
Writing	Applying & Analysing
Cognitive Skills	Analysing & Creating

Table 3

Domain-wise Weightage Percentage (Total Marks = 100)

Domain	**Number of items**	**Marks**	**Percentage of marks**
Comprehension	23	23	23%
Expression	30	24	24%
Reading	32	23	23%
Writing	15	15	15%
Cognitive Skills	15	15	15%

- Core syntax domains (Comprehension + Expression + Reading) = **70%**
- Literacy & higher-order transfer skills (Writing + Cognitive) = **30%**

This reflects the central aim of assessing syntax acquisition and its transfer to literacy development.

3.4 Standardization of TESAK

Following the content validation, the TESAK final version was applied to 54 typically developing native Kannada-speaking preschool children aged 3–6 years for standardization. The sample included 21 children aged 3–4, 11 children aged 4–5, and 22 children aged 5–6 years. Samples were taken from Saradadevi Anganwadi, children visiting Sri Ganapathy Sachchidananda Ashram, siblings of children attending the All India Institute of Speech and Hearing (AIISH), Mysuru. The item-wise trend across the responses showed a definite developmental path across the age groups. Children aged 3–4 years completed tasks involving comprehension, expression, and simple picture–sentence matching. The writing assignments were, for the most part, not accomplished.
However, most children were able to complete cognitive sequencing activities involving arrangement of events.

Children in the 4–5 year age group successfully completed comprehension and expressive language tasks, demonstrated emerging reading ability at the simple matching level, and showed partial writing ability in structured fill-in formats, along with satisfactory performance in cognitive skill tasks.

Children in the 5–6 year age group exhibited age-appropriate performance across comprehension, expression, sentence-level reading, and writing tasks, and were also able to complete cognitive skill activities successfully.

The observed developmental progression across the age groups supported the age appropriateness of the items, the hierarchical arrangement of tasks, and the construct validity of TESAK, indicating that the tool is suitable for assessing syntax acquisition and emergent literacy skills in Kannada-speaking preschool children.

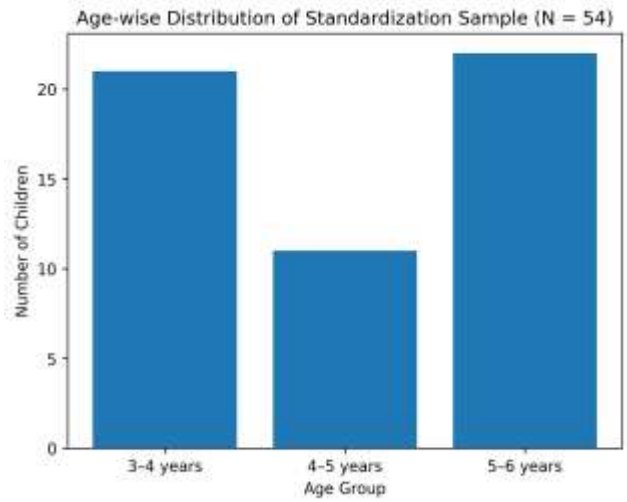
Table 4

Age-wise Distribution of Sample

Age Group	Number of Children
3–4 years	21
4–5 years	11
5–6 years	22

Figure 2

Age-wise Distribution of Standardization Sample



IV. Analysis

4.1 Developmental Performance Patterns

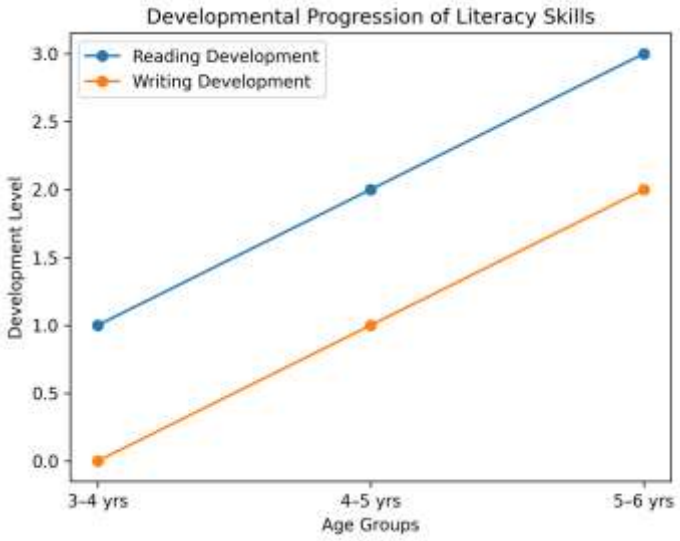
Table 5

Age-wise Performance Pattern

Domain	3–4 yrs	4–5 yrs	5–6 yrs
Comprehension	Completed	Completed	Completed
Expression	Completed	Completed	Completed
Reading	Simple match	Basic level	Sentence level
Writing	Not achieved	Partial	Completed
Cognitive	Completed	Completed	Completed

Figure 3

Developmental Progression of Literacy Skills



4.2 Difficulty Index Analysis

The difficulty index analysis of the TESAK revealed that items assessing comprehension, expression, and cognitive skills were successfully completed by all typically developing preschool children, resulting in a difficulty index (DI) of 100%, which indicates age-appropriate acquisition of these skills. Similarly, the basic reading and writing items were answered correctly by all children. However, the advanced reading and writing items showed a DI of 61%, as they were successfully attempted only by children in the 5–6-year age group. This pattern reflects the developmental progression of emergent literacy and written syntax, thereby supporting the hierarchical structure and construct validity of the TESAK.

Initially, the writing items were designed in a question–answer format. However, since more than 50% of the children were unable to attempt these items, they were subsequently modified to include matching, selection, and copying formats to ensure age-appropriate assessment.

The Difficulty Index (DI) represents the proportion of children who answered a particular item correctly.

Table 6

Difficulty Index Analysis

Domain	Level	DI (%)	Interpretation
Comprehension	All items	100	Very easy
Expression	All items	100	Very easy
Cognitive Skills	All items	100	Age appropriate
Reading	Basic	98	Very easy
Reading	Advanced	61	Moderate
Writing	Basic	80	Moderate
Writing	Advanced	61	Developing

4.3 Reliability Analysis

After the tool was finalized the reliability of TESAK was examined through internal consistency analysis using Cronbach's alpha. **The tool obtained an alpha value of 0.92**, which indicated very high reliability and strong consistency among the test items (Table 7). This showed that TESAK effectively measured syntax acquisition in the target population.

This developmental trend confirmed the age appropriateness, item hierarchy, and construct validity of TESAK, thereby supporting its suitability for assessing syntax acquisition and emergent literacy in Kannada-speaking preschool children.

Table 7

Overall Reliability

Tool	N	Items	Cronbach α
TESAK	54	115	0.92

Table 8

Domain-wise Reliability

Domain	Items	α
Comprehension	23	1.00
Expression	30	1.00
Reading	32	0.97
Writing	15	0.97
Cognitive Skills	15	0.94

The reliability values across domains ranged from **0.94 to 1.00 (Table 8)**, indicating **high internal consistency across all sections of the tool**. The comprehension and expression domains showed the highest reliability. It suggested that the items measuring receptive and expressive grammatical abilities were highly consistent.

V Discussion

The present study aimed to design and validate the Test for Examining Syntax Acquisition in Kannada (TESAK) for assessing syntactic development and emergent literacy skills amongst Kannada speaking preschool children. These results indicate a significant development of syntax across preschool age groups, thus supporting the developmental sensitivity of the tool. The age-wise performance patterns indicated that, children in the 3–4-year-old age group completed comprehension and expression tasks successfully and even managed to produce simple reading-matching activities without writing skills yet developed. The 4 to 5 year-old's group displayed some development of ability to read and to write with partial writing skills. By 5–6 years, children showed developmentally appropriate performance on all levels, including comprehension, expression, reading, writing, and cognitive tasks. - This pattern is consistent with the natural developmental order of language acquisition, with receptive language skills starting even earlier than expressive and literacy-related skills (Paul, 2009). Prior research has reported similar developmental trends in emergent literacy as children learn reading and writing skills that follow over time from oral language skills (Whitehurst & Lonigan, 1998). The structure of TESAK was reinforced by analysis of the difficulty index. Comprehension, expression and cognitive skill items recorded

very high success rates in children, highlighting the need for these skills to be developed at a young child's language acquisition. The same held for sophisticated reading and writing tasks, which showed moderate levels of difficulty and were largely completed by older children. This evolution is in-line with studies indicating that syntactic awareness is a crucial component of early literacy development (Mayer & Trezek, 2011). In morphologically enriched languages like Kannada, proficiency in Person–Number–Gender (PNG) markers and case markers is fundamental for grammatical accuracy and sentence comprehension that in turn is significant for reading and writing outcomes. The internal consistency of TESAK for the reliability test showed excellent results, with a Cronbach's alpha of 0.92 for the study and domain-wise reliability of 0.94–1.00. These coefficients reflect that the items in the instrument measure syntactic competence in a continuous manner in many types of language. High reliability coefficients are usually important criteria for determining an instrument's stability and consistency towards language assessment (Field, 2018). Thus, the high reliability values determined by the present study demonstrate the reliability strengths of TESAK as a tool for kannada language assessment. Researchers have identified that decreasing children's auditory modalities in early childhood may delay the learning of grammatical and literacy skills (Marschark & Hauser, 2012; Moeller et al., 2015). Thus, the availability of a language-appropriate and culturally appropriate method like TESAK can help to recognize the development of syntactic delays early, and thus can aid in planning targeted preschool interventions. Taken together, this study evidences that TESAK does cover the stages of syntax development and literacy formation in Kannada preschool children. The very good reliability, appropriate development and the linguistic relevance of the tool is conducive for use in language assessment in educational, clinical and research environments.

V. Educational Implications

TESAK can help in; identifying syntactic delays in preschool children, evaluate language development in children with disabilities, plan targeted language intervention programs and monitor emergent literacy development

VI. Conclusion

Test for Examining Syntax Acquisition in Kannada TESAK a valid, reliable, and linguistically appropriate tool for assessing syntax acquisition and emergent literacy in Kannada-speaking preschool children was constructed.

VII. Acknowledgements

The author thanks all the participants, the organizations who supported the study, and the guide for constant support. The author also expresses sincere thanks to Special Educator Ms. P. V. Ramanakumari for all the support extended.

References

Government of India. (2020). *National education policy 2020*. Ministry of Education, Government of India.

Justice, L. M., & Ezell, H. K. (2004). Print referencing: An emergent literacy enhancement strategy. *The Reading Teacher, 58*(1), 8–17.

Karanth, P. (1990). *Linguistic profile test*. All India Institute of Speech and Hearing.

Marschark, M., & Hauser, P. C. (2012). *How deaf children learn: What parents and teachers need to know*. Oxford University Press.

Marschark, M., Spencer, P. E., Adams, J., & Sapere, P. (2011). Evidence-based practice in educating deaf and hard-of-hearing students: Teaching to their cognitive strengths and needs. *European Journal of Special Needs Education, 26*(1), 3–16.

Moeller, M. P., Tomblin, J. B., Yoshinaga-Itano, C., McDonald Connor, C., & Jerger, S. (2007). Current state of knowledge: Language and literacy of children with hearing impairment. *Ear and Hearing, 28*(6), 740–753.

NCERT. (2022). *National curriculum framework for the foundational stage (NCF-FS)*. National Council of Educational Research and Training.

Nittrouer, S. (2010). *Early development of children with hearing loss*. Plural Publishing.

Owens, R. E. (2016). *Language development: An introduction* (9th ed.). Pearson.

Paul, P. V., & Whitelaw, G. M. (2010). Hearing loss and syntax development: A review of research. *Journal of Deaf Studies and Deaf Education, 15*(3), 227–244.

Paul, R., & Norbury, C. F. (2012). *Language disorders from infancy through adolescence: Listening, speaking, reading, writing, and communicating*. Mosby.

Snow, C. E., Burns, M. S., & Griffin, P. (1998). *Preventing reading difficulties in young children*. National Academy Press.

Spencer, P. E., & Marschark, M. (2010). *Evidence-based practice in educating deaf and hard-of-hearing students*. Oxford University Press.

Sudha, N. (1988). *Syntax screening test in Tamil*. All India Institute of Speech and Hearing.

Vijayalakshmi, M. (1981). *Task and Stask test for acquisition of syntax in Kannada*. All India Institute of Speech and Hearing.