




Does Native Script Exposure Influence Second Language Early Literacy Skills?: A Preliminary Study in South Indian Preschoolers

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Abstract

The preschool period is marked by the development of several domains such as communication, cognition, social skills, and literacy skills. As language and literacy skills overlap during the preschool period, it is important to understand the dynamics of language and literacy in early school years. Due to language diversity, India does not bear a single-language system, and often the language spoken at home may not be the same at school for curricular instructions. Therefore, the present study focuses on the influence of script in bi- or multilingual scenarios in India. More importantly, the home language may or may not have its specific script; thus, facilitating early literacy skills at home can be questionable. The study followed a cross-sectional study design. One hundred and forty participants were divided into two groups based on their native language (Malayalam and Tulu groups). Each group was further divided based on their age, younger and older groups. An early literacy checklist and a parent perception questionnaire were developed to assess the early literacy skills in second language (L2). The findings revealed a developmental trend in early literacy skills in children with the older group performing better than the younger group. The study results also shed light on this less researched domain of influence of native script on L2 learning in a linguistically diverse country like India. The study's findings emphasize the parental understanding of the importance of home literacy-based activities for children and evaluation of early literacy skills which will help in early identification and treatment.

Keywords

- ▶ early literacy skills
- ▶ preschoolers
- ▶ script
- ▶ L2 learning
- ▶ bilinguals
- ▶ home literacy

Introduction

The preschool period is marked by developmental changes¹ in sociopragmatic skills and emotional regulation,² communication and literacy skills,³ and cognitive skills.⁴ This period plays a vital role in setting the stage for children to enter adulthood as potential candidates to achieve overall success in life.⁵ The foundation for literacy and language development occurs during the preschool period. Language can be defined as a system of rules and symbols advocated to

communicate one's thoughts or feelings and combine them into meaningful units⁶ and literacy is activities involving using, accessing, and communicating about print or images accessed through any modality.⁷ The difference between oral language skills and literacy is that oral language skills are acquired, whereas literacy skills are taught explicitly through structured and systematic instructions mainly in schools.⁸ Early literacy skills often fall between the continuum of language and conventional literacy instructions. As there is

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an overlap between language skills and early literacy skills during the preschool period, it is important to understand these skills in early school years.

Early literacy skills act as the basis for learning to read and write which are present before reading or writing itself develops. These skills can be described as the knowledge of letters, letter sounds, and basic concepts of print skills that are precursors for future reading and writing abilities required for school readiness.^{9,10} The National Early Literacy Panel¹¹ has noted six early literacy skills, that is, (1) print awareness, (2) print motivation, (3) phonological awareness, (4) vocabulary, (5) narrative skills, and (6) alphabetic knowledge, crucial and predictors of later academic success. Several studies have concluded that phonological awareness, phonemic awareness, and letter identification are the strongest predictors of early reading skills.^{12,13} Among these, phonological awareness and phonemic awareness are considered to be vital in bridging the relationship between oral language and written language acquisition.^{9,14} The possible factors that influence the relationship between reading and phonological skills include verbal ability, letter knowledge, phonological memory, and preexisting reading levels.¹⁵ Print concepts, such as print motivation and awareness, also play a crucial role in the early reading comprehension skills of children¹⁶ and have been associated with phonological awareness¹⁴ and letter identification.^{9,16} Premathematical skills are another domain that has been related and are predictive of later reading skills.¹⁵ This relationship is explained by several researchers as cognitive, environmental, and genetic links.¹⁷ Thus, it is important to assess premathematical skills during an early literacy assessment.

The development of early literacy skills during the preschool period is a dynamic process involving a complex interaction between numerous factors at multiple levels. Research indicates some factors that might affect the child's early literacy development during the preschool age, such as sociocultural factors, family factors, child-related factors, and home literacy environment.^{9,16} Home is the general natural setting where the child encounters the language and literacy for the first and hence home environment plays an important role on child's development.¹⁸ Parent role is considered to be fundamental in the early literacy development of a child.¹⁹ The home literacy environment plays a significant role in the development of early literacy skills in children. The home literacy environment provided to the child depends on the child's literacy interest,²⁰ and this literacy interest also influences the early literacy skills of a child.²¹ Children who have a good home literacy environment show increased reading proficiency in later academic domains.¹⁹

Research evidence reveals that children who have poor early literacy skills would experience academic difficulties and would find it immensely difficult to reach par with their peers in academic success.²² Children with developmental disabilities, specific language impairment, attention deficits, and behavioral deficits exhibit difficulties in early reading skills compared with typically developing children.²³ However, studies also show that early reading difficulties could

increase the chances of children developing behavioral deficits.²⁴ A study done by Boudreau and Helberg²⁵ on early literacy skills in typically developing and children with specific language impairment confirmed that children with specific language impairment performed poorer than the normal peer group in print concepts and narrative skills. Effective monitoring of early literacy skills can predict academic performance in children during later years. This is based on the argument that children with problems in early literacy skills require a structured and formal intervention opportunity to develop these skills.²⁶ Research evidence proves that an early intervention targeting early literacy skills in preschoolers has a significant impact on the child's literacy skills.^{9,26}

India is a country well known for its linguistic variety. The Census of 2011²⁷ revealed that there are as many as 255 million bilinguals and 87.5 million multilinguals in India. There are 22 major languages in India categorized under five main language families. Malayalam and Tulu are languages included under the Dravidian language family. According to the census of India,²⁷ approximately 3 billion and 1,846,427 people in India speak Malayalam and Tulu, respectively. The Malayalam language follows the Abugida or α -syllabary script.²⁸ This script has a shallow orthographic depth in comparison to English which is opaque in nature. Studies have reported that the orthographic depth of first language (L1) could influence and transfer into learning the second language (L2).²⁸ Tulu is a language that uses the Tigalari script that is very similar to the script used for Malayalam. However, this script is not in vogue and, in general, uses the Kannada script for its literary work.

Due to language diversity, India does not bear a single language system, and often the language spoken at home may not be the same at school for curricular instructions. Therefore, the environment that parents provide at home for their child's literacy development is pivotal in developing literacy skills. However, when the home language may or may not have its specific script, facilitating early literacy skills at home can be questionable. Specifically, stimulating certain skills requiring written materials, such as picture books with labels, storybooks, environmental print awareness, print motivation, and alphabetic knowledge, become challenging. Therefore, parents have to adopt the written materials from other languages with a script and use it at home in such situation. Studies reveal that some of the factors influencing the child's literacy are the accessibility of literacy material at home, child's literacy interest among others.^{20,29}

The area of early literacy skills has received considerable research in the Western scenario where most often, the native language and medium of instruction are the same. However, the results from Western studies are not generalizable to the Indian population where schools follow the three languages with English as L2 or third language (L3). As the bilingual reading acquisition is a joint function of shared phonological skills and orthography, it will be interesting to understand the nature of early literacy skills in children who have different languages as L1 and medium of instruction as

the phonological and orthographical nature of Indian languages are different from English.¹⁴ Therefore, the present study aims to explore the effect of native script exposure on early literacy skills in L2 (English) in the Malayalam–English and Tulu–English bilingual preschoolers in an Indian scenario. The study hypothesized that there would be a difference between the performance of children with Malayalam and Tulu as L1 as a result of native script exposure.

Method

The present study followed a cross-sectional study design and employed a convenient sampling method. Participants for the study were from the Dakshina Kannada district of Karnataka and the Thrissur District of Kerala, both of which are states of India. Preschoolers studying in schools with English as a medium of instruction and following the state government's educational curriculum were included in the study.

Participants

The study participants included 140 typically developing preschoolers with Malayalam ($n = 70$) and Tulu ($n = 70$) as L1 between the age range of 3.6 to 5.6 years with no prior exposure to English (L2). Children were divided into two groups with the younger group including children between 3.6 years to 4.6 years and the older group including children between 4.6 years to 5.6 years. ►Table 1 depicts the participant distribution across the age ranges.

Selection Criteria

The present study adhered strictly to the selection criteria. The Assessment of Language Development (ALD)³⁰ test material determined the receptive and expressive language abilities of preschoolers. This test material relies on the basal and ceiling scores for determining the recep-

tive and expressive language age of children between 0 and 7.11 years. A basal score was obtained when the child produced three consecutive correct responses and a ceiling is achieved when a child responds incorrectly for five consecutive items. Children with age-appropriate receptive and expressive language skills were included in the present research. The bilingual status of the child was determined using the Language Experience and Proficiency Questionnaire.³¹ Children who were identified to be Sequential bilinguals were included in the study. The study required the child to have some form of home-based literacy exposure (Malayalam or Kannada story-books, magazines, etc.) before attending school. Preschoolers belonging to middle socioeconomic status (ascertained by the modified Kuppusswamy Socio-Economic Scale³²) were included. Children who were simultaneous bilinguals or had any history of speech and/or language, communication, oromotor, neurological, sensorimotor, cognitive, and academic difficulties were not included in the study.

Procedure

The investigators developed an early literacy checklist to address the objectives of the study and a parent perception questionnaire to understand parental perspective. The investigators followed the below-mentioned steps for the development of the early literacy checklist and parent questionnaire

Focused Group Discussion and Literature Review

A focused group discussion reviewed the existing literature and assessment tools. The information obtained through this was used to choose the domains that are important to determine the early literacy skills of preschoolers. The review revealed that the commonly

Table 1 Description of participant demographic details

| Participant details | | Younger group | Older group |
|------------------------------------|---------------------------|--|--|
| Tulu-L1 group ($n = 35$) | Age | 4.0 (0.3) years | 5.1 (0.4) years |
| | Gender | Males = 17; females = 18 | Males = 17; females = 19 |
| | Home literacy environment | Story books, magazine, newspaper in Kannada (>2 hour/day with greater oral language exposure than written) Written material contained Kannada script but oral language used to describe was Tulu | Story books, magazine, newspaper in Kannada (>2 hour/day with greater oral language exposure than written). Written material contained Kannada script but oral language used to describe was Tulu. |
| | Socioeconomic status | Middle socioeconomic status | Middle socioeconomic status |
| | type of bilingual | Sequential | Sequential |
| Malayalam-L1 group ($n = 35$) | Age | 4.2 (0.5) years | 5.3 (0.4) years |
| | Gender | Males = 15; females = 20 | Males = 18, females = 17 |
| | Home literacy environment | Story books, magazine, newspaper in Malayalam (L1; >2.5 hours/day) | Story books, magazine, newspaper in Malayalam (L1; >2.5 hours/day) |
| | Socio economic status | Middle socioeconomic status | Middle socioeconomic status |
| | Type of bilingual | Sequential | Sequential |

assessed skills were letter naming, phonological awareness, vocabulary, and segmentation.

Textbook Analysis

Scrutiny of textbooks of preschoolers from the younger (3.5–4.5 years) and older groups (4.6–5.6 years) was performed to analyze the framework of chapters and activities in the book. The use of language components in each of these sections was studied to determine the suitable words and activities that could be included in the parental perception questionnaire and early literacy checklist. Both, the checklist and the questionnaire used questions pertaining to domains that were in line with the curriculum.

Preparation of Early Literacy Checklist and Parent Questionnaire

Through literature survey, focus group discussion, and textbook analysis, we determined the domains to be included in the parental perception questionnaire and early literacy checklist. Six early literacy domains were included in the early literacy checklist as follows: (1) print motivation, (2) print awareness, (3) phonological awareness, (4) letter knowledge, (5) prewriting skills, and (6) premathematical skills. The parental perception questionnaire consisted of questions about early literacy skills such as print awareness and motivation, letter knowledge, prewriting, and premathematical skills. A three-point Likert's scale with 1 indicating frequently and 3 indicating never was used to rate the parental perception questionnaire

Validation of the Test Material and Questionnaire

The parental perception questionnaire and early literacy checklist were subjected to the critical review by five speech language pathologists who had work experience of over 5 years in the domain of child development and child language disorders. The content validators assessed the appropriateness of the parental perception questionnaire and early literacy checklist for the domain definition, representation, and relevance. Before the commencement of content validation, the content validators were explained by the investigator about the research procedure and purpose. The content validation was designed using a 5-point Likert's scale where 1 indicated highly relevant and 5 indicated highly irrelevant to arbitrate the relevance of the content and appropriateness of the questions. The scoring system employed by both the questionnaires was independently scrutinized and scored as either "Appropriate" or "Inappropriate." An Item-based content validation Index (I-CVI) was considered and a score of >0.79 indicated that the item could be retained in its original form. Based on the content validity, some of the questions were revised and the modified Early Literacy Checklist consisted of 32 questions under six domains. Calculation of internal consistency using Cronbach's α resulted in a score of 0.8 which indicated high internal consistency; therefore, the total number of questions in the Parental Perception Questionnaire was 36.

Administration of Test Material and Questionnaire

The institutional ethics committee granted ethical clearance prior to the commencement of the study (identifier no.: KMC MLR 12–17/273). Collection of demographic details (age, gender, class, and native language) of the participants preceded the administration of the early literacy checklist. Children were familiarized with the stimulus, and the testing was done in a distraction-free environment. The children were instructed about each task, and the instructions were repeated as and when required. Each correct response received verbal reinforcement. The instruction was "I am going to ask you some questions. Please answer them. You can take time to answer, and if you have any doubt, I can repeat the questions." Task administration continued in a similar manner and responses were scored.

Statistical Analysis

Statistical analysis using SPSS (17-version) was done to examine the developmental trend of the children and to compare performance based on the native language. Analysis of mean, standard deviations, and range of scores of all the scores across the two groups was calculated using descriptive statistics. An independent sample *t*-test was applied to analyze the significance of performance for each task between the groups. The scores obtained for each task were subjected to statistical analysis using the SPSS software version 17.0. Statistical analysis of the scores obtained was done using descriptive statistics with mean and standard deviation. Pearson's correlation was performed to analyze the correlation between the parent perception questionnaire and the early literacy checklist.

Results

The present study findings are described based on the early literacy checklist developed and used, as well as the parent perception questionnaire. We have described the study results under two domains narrated hereinafter.

Comparison of Early Literacy Skills in L2 across the Two Language Groups as a Function of Age

The participants belonging to Malayalam and Tulu groups were subdivided into younger and older groups based on their age. We have summarized the research findings with respect to performance across native language and as a function of age below.

Across Native Language Analysis

A comparison of performance across the two groups was analyzed using descriptive statistics. ► **Tables 2 and 3** reveal the mean and standard deviation values obtained for the across group analysis of Malayalam and Tulu speaking children.

The above results indicate a significant difference between the Malayalam and Tulu groups in domains such as print motivation, prewriting skills, letter knowledge, and premathematical skills in their L2 (English). This statistically significant difference ($p < 0.005$) was observed in both

Table 2 Mean and standard deviation across Malayalam and Tulu younger groups

| Variables | Malayalam young (n = 35) | Tulu young (n = 35) | t-Value | p-Value |
|-------------------------|--------------------------|---------------------|---------|---------------------|
| | Mean ± SD | Mean ± SD | | |
| Print motivation | 7.7 ± 0.9 | 5 ± 1.6 | 8.6 | <0.001 ^a |
| Print awareness | 3.2 ± 1.4 | 2.9 ± 1.5 | 0.8 | 0.409 |
| Phonological processing | 2.03 ± 0.2 | 1.5 ± 0.5 | 5.7 | <0.001 ^a |
| Prewriting skills | 11.9 ± 0.2 | 8.1 ± 1.7 | 13.5 | <0.001 ^a |
| Letter knowledge | 12.9 ± 3 | 7.6 ± 2.8 | 7.6 | <0.001 ^a |
| Premathematical skills | 9.1 ± 2.2 | 6.7 ± 1.5 | 4.95 | <0.001 ^a |

Abbreviation: SD, standard deviation.

^aIndicates statistically significant scores.

Table 3 Mean and standard deviation across Malayalam and Tulu older groups

| Variables | Malayalam old (n = 35) | Tulu old (n = 35) | t-Value | p-Value |
|-------------------------|------------------------|-------------------|---------|---------------------|
| | Mean ± SD | Mean ± SD | | |
| Print motivation | 8 ± 0 | 5.2 ± 1.4 | 11.9 | <0.001 ^a |
| Print awareness | 6 ± 0 | 3.7 ± 1.1 | 13.1 | <0.001 ^a |
| Phonological processing | 3.3 ± 2.3 | 2.03 ± 1.2 | 2.8 | 0.007 ^a |
| Prewriting skills | 12 ± 0 | 8.6 ± 1.6 | 12.5 | <0.001 ^a |
| Letter knowledge | 16 ± 0 | 10.3 ± 1.8 | 18.4 | <0.001 ^a |
| Premathematical skills | 12 ± 0 | 8.1 ± 1.1 | 19.99 | <0.001 ^a |

Abbreviation: SD, standard deviation.

^aIndicates statistically significant scores.

younger, as well as older groups and the Malayalam native language preschoolers outperformed the Tulu group. No significant difference was observed in print awareness in the younger group. However, a significant difference ($p < 0.005$) was observed in the older group for print awareness and phonological processing between the Malayalam and Tulu speaking preschoolers.

Analysis as a Function of Age

Within group analysis of children with Malayalam and Tulu as native languages revealed significant differences in the domains of early literacy skills. ► **Tables 4** and **5** depict the

mean and standard deviation values obtained for the within group analysis of Malayalam and Tulu speaking children, respectively.

An overall analysis of the Malayalam group indicated a significant difference between the younger and older groups. A statistically significant difference ($p < 0.01$) was observed in the domains of print awareness, phonological awareness, premathematical skills, and letter knowledge with the older group exhibiting better performance than the younger group. A similar level of performance was observed for print motivation and prewriting skills between both younger and older groups.

Table 4 Mean and standard deviation within Malayalam younger and older groups

| Variables | Malayalam young (n = 35) | Malayalam young (n = 35) | t-Value | p-Value |
|-------------------------|--------------------------|--------------------------|---------|---------------------|
| | Mean ± SD | Mean ± SD | | |
| Print motivation | 7.7 ± 0.99 | 8 ± 0 | 1.7 | 0.096 |
| Print awareness | 3.2 ± 1.4 | 6 ± 0 | 12.3 | <0.001 ^a |
| Phonological processing | 2.03 ± 0.2 | 3.3 ± 2.4 | 3.2 | 0.003 ^a |
| Prewriting skills | 11.9 ± 0.2 | 12 ± 0 | 1.4 | 0.16 |
| Letter knowledge | 12.9 ± 3.03 | 16 ± 0 | 6.1 | <0.001 ^a |
| Premathematical skills | 9.1 ± 2.2 | 12 ± 0 | 7.8 | <0.001 ^a |

Abbreviation: SD, standard deviation.

^aIndicates statistically significant scores.

Table 5 Mean and Standard deviation within Tulu younger and older groups

| Variables | Tulu young (<i>n</i> = 35) | Tulu old (<i>n</i> = 35) | t-Value | p-Value |
|-------------------------|-----------------------------|---------------------------|---------|---------------------|
| | Mean ± SD | Mean ± SD | | |
| Print motivation | 5 ± 1.6 | 5.2 ± 1.4 | 0.6 | 0.522 |
| Print awareness | 2.9 ± 1.5 | 3.7 ± 1.1 | 2.5 | 0.016 ^a |
| Prewriting skills | 8.1 ± 1.7 | 8.6 ± 1.6 | 1.4 | 0.168 |
| Letter knowledge | 7.6 ± 2.8 | 10.3 ± 1.8 | 4.8 | <0.001 ^a |
| Premathematical skills | 6.9 ± 1.5 | 8.1 ± 1.1 | 4.1 | <0.001 ^a |
| Phonological processing | 1.5 ± 0.5 | 2.03 ± 1.2 | 2.4 | 0.022 ^a |

Abbreviation: SD, standard deviation.

^aIndicates statistically significant scores.

Correlation between the Parent Perception Questionnaire and Early Literacy Checklist

Data were collected through two methods: parent perception questionnaire and early literacy checklist which consisted of questions pertaining to six domains. Karl–Pearson correlation analysis was done to assess the correlation between the parental perception questionnaire and early literacy checklist. Questions were similar in both the questionnaire and checklist. After content validation, the section of phonological processing was removed from the parents' questionnaire, as it was difficult for parents to rate those skills; therefore, an analysis was not performed for this domain. The analysis was done for all the groups based on age and native language, and results revealed that there was no correlation between the questionnaire and the checklist in the Malayalam younger group. However, there was a

positive correlation in almost all domains in the Tulu younger group. Correlation analysis was performed only for the younger group as the older group had similar performance in both languages. ► **Fig. 1** illustrates the correlation analysis for the Tulu group.

Discussion

Early literacy skills are the basis for reading and writing. Children are exposed to different literacy experiences during the first few years of life, and hence the literacy development that they show when they enter the school will be different based on the literacy exposure that they have experienced. The present aimed at exploring the effect of native script exposure on early literacy skills in L2 (English) in bilingual preschoolers with Malayalam/Tulu as their native language

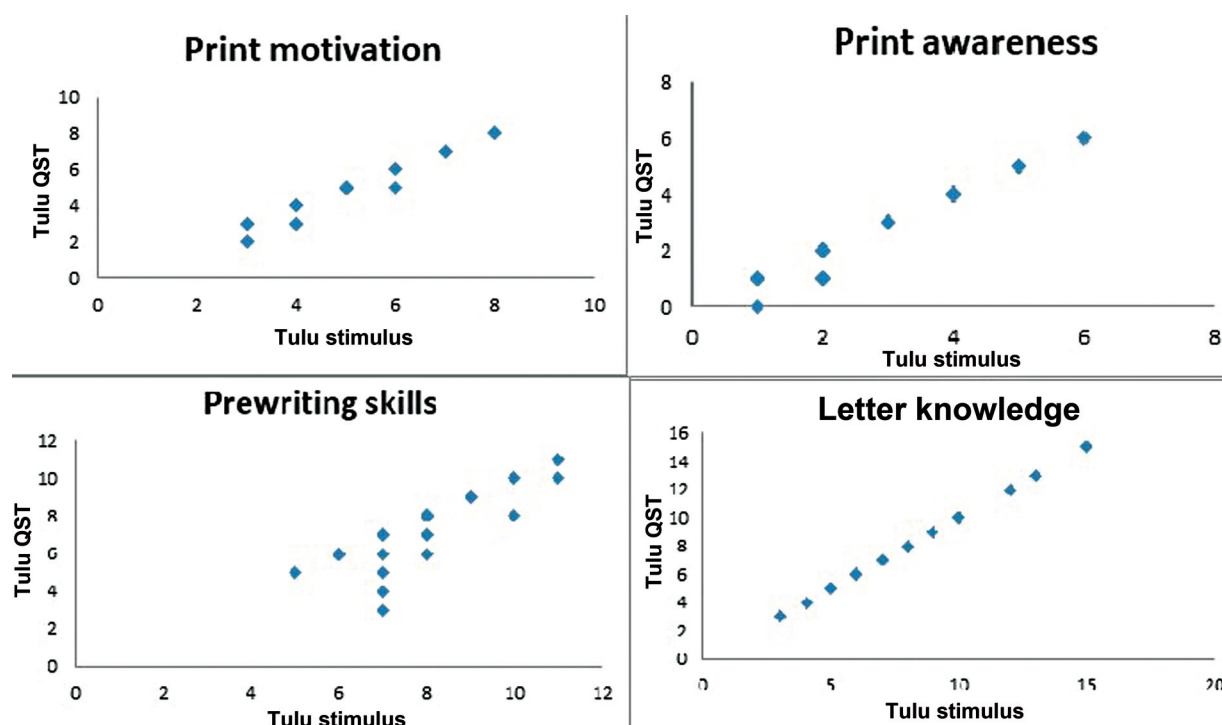


Fig. 1 Correlation between questionnaire and early literacy skills checklist in Tulu younger group. QST, questionnaire.

(L1) in an Indian scenario. The results of the present study observed several interesting findings that are discussed in the sections hereinafter.

Comparison of Early Literacy Skills in L2 across the Two Language Groups as a Function of Age

Across Native Language Groups

We observed significant difference in domains, such as print motivation, prewriting skills, letter knowledge, and pre-mathematical skills, across the different Malayalam and Tulu age groups. Some of the interesting observations of this section are described below:

- Results of the present study suggest a relationship between native script exposure and L2 early literacy skill performance as, children in the Malayalam group demonstrated superior performance on print skills than the Tulu group. Specifically, for print skills, early print experiences that children in the Malayalam group received, positively enhanced their performance in L2 early literacy skills.^{19,33} Malayalam language has a transparent orthography with good phoneme-grapheme correspondence. As individuals who learn to read in regular orthographies have better print concepts, this in turn could have augmented Malayalam group's performance in print concepts.³³ Children with Tulu as native language had informal literacy experiences (shared book reading at home) in Kannada which is an α -syllabary script usually used in Karnataka, but unlike the Malayalam group, they never received a formal literacy experience (e.g., writing name and teaching letters and sounds) which is important for code-based learning.¹⁹ Lack of a specific print to follow could have caused an increased difficulty in the identification of the phoneme-grapheme correspondence. Therefore, although children with Tulu had informal literacy experiences, the present study findings suggest that native language script plays a significant role in the development of early literacy skills in L2.
- Phonological properties are another domain that demonstrated a better performance by the Malayalam group than their peers in the Tulu group. Phonological properties are constrained by the orthographic input³⁰ and as the Malayalam group had prior orthographic exposure, they outperformed their peers in the Tulu groups in the phonological skills. Children tend to apply their knowledge of literacy skills learnt in L1 to L2 orthography which consecutively helps in shaping their L2 perception of phoneme.³⁴ The better performance of Malayalam speaking children could be due to the early exposure to orthographical input at home. The shallow orthography of Malayalam could also have facilitated the emergence of phonological skills earlier than the rest in these children.³⁵ The findings of this study are in contrast to that by Somashekara et al¹⁴ who report that there is no effect of Dravidian languages with α -syllabary script on phonological awareness on L2 (English)
- With respect to prewriting skills and letter knowledge, children with Malayalam, as their native language, obtained higher scores than the Tulu group. This could be attributed to a combination of informal and formal literacy experiences that these children have been exposed to at an early age which could have influenced their primitive drawing skills, as well as the ability to scribble. Malayalam has an α -syllabary or Abugida script that has certain similarities and differences with the alphabetic script that English follows. Both these languages share the feature in that the phonology of the words are conveyed through symbols. This feature being common in both L1 and L2 of children in the Malayalam group, L1 could have had a positive influence on the prewriting skill, and letter knowledge skill performance.³⁶ However, unlike the alphabetic scripts, α -syllabary scripts have a wider visuo-spatial complexity, more extensive orthographies, and simultaneous representation of information at syllable and phoneme level.³⁷ This exposure to a more complex form of orthographic representation could have helped the children in the Malayalam group demonstrate a better performance.³⁸

The development of mathematical skills commences at an early age. Studies reveal that mathematical skills, language, and literacy skills share similar developmental milestones,³⁹ as well as have mutual positive influence on each other.⁴⁰ The present study witnessed a similar trend in the domain of pre-mathematical skills with the Malayalam group performing better than the Tulu group. The National Research Council⁴¹ reported that linguistic minority groups are at risk for poor mathematical performance. This could explain the reduced performance of the Tulu group in comparison to their Malayalam group peers.

Analysis as a Function of Age

For print awareness tasks, both younger and older groups with Malayalam/Tulu as native language showed a similar pattern of response and hence there was no significant difference found in the within group comparison. These findings are in congruence with the reports by Hiebert⁴² who noted that print awareness had no observable difference when a comparison was made between 3- and 4-year old children. Although not proficient, children showed mastery in print concepts prior to word concepts.

Results of the phonological processing tasks for both Malayalam and Tulu speakers show significant differences within groups where the younger group performed poorer. This could be attributed to lower exposure to literacy skills. This is in consonance with the evidence from literature which states that phoneme awareness typically begins to develop postcommencement of formal instructions for reading.⁴³

The domain of prewriting skills revealed no significant difference in performance in both Malayalam, as well as Tulu speaking children, as a function of age. These findings are in agreement with the Yang and Noel⁴⁴ who opined that as these skills are typically mastered by 3 years of age, there will

not be any significant difference in the performance among 4 or 5 year olds. They also reported that drawing and scribbling patterns by preschoolers were almost similar which can support a similar response obtained for the younger and older groups in the present study. Letter knowledge included upper- and lower-case recognition, as well as word spellings in which the older group (4.6–5.6 years) demonstrated a better performance than the younger group, and this was observed in both Tulu and Malayalam speakers. This could be due to the increased exposure to the letters and words as a part of their curricular activities. The results of the pre-mathematical skills domain revealed a significant difference between the older and younger group where the former showed a better response than the latter in a similar manner across both the language groups. This could be ascribed to the improvement in early literacy skills with age.

Correlation between the Parent Perception Questionnaire and Early Literacy Checklist

Home literacy practices have an important contribution to the child's reading and writing skills as this provides the parent with opportunities to expose their child to print and writing materials. Studies have shown that home literacy environment has an impact on the child's later academic and social development.⁴⁵ The home environment acts as the first place where the child learns to recognize, use print, and other writing materials. The current study implemented the use of a parent's questionnaire in which parents rate the child according to their perception of the child's performance. With a natural setting, such as a home environment, a child's performance can be evaluated well. Therefore, parent questionnaires reduce some potential difficulties that can arise from the formal assessment.⁴⁶ Studies have shown that parent evaluation of a child's literacy skills is found to be positively correlated with the early literacy measures and performance on the tasks.^{46,47} Hence, questionnaire plays a vital role in the assessment of preschoolers. Parents completed the parent questionnaire with 36 questions. Questions pertaining to early literacy skills, such as print awareness and motivation, letter knowledge, prewriting, and pre-mathematical skills, were included in the questionnaire.

The correlation obtained between the responses from the parent questionnaire and the early literacy checklist in native Malayalam speakers revealed that there was no correlation observed in the younger group. The correlation analysis could not be performed in the older group in both Malayalam, as well as Tulu speakers, owing to similar performance among all the older group participants. Results from a study done by Boudreau⁴⁶ support these findings as they noted that there was a weak relationship between the parent's report and the examiner assessment of early literacy in preschoolers.

In contrast to the findings of Boudreau, Tulu speaking children demonstrated a positive correlation between the parent perception questionnaire and the early literacy checklist in the younger group. Dickinson and DeTemple⁴⁸ have explained that the parents report is a reliable source of

information on child's literacy skills, and there was a significant correlation seen between the parents' report and the formal assessment, supporting that formal assessments of language and vocabulary skills significantly correlated with the parents' reports on child's performance.

Conclusion

Early literacy skills are an important part of child's development, as it influences various developmental aspects like language, reading, writing, and social skills. The present study was conducted to understand the influence of native script on the development of early literacy skills in L2. The findings of the study shed light on this less researched domain in a linguistically diverse country like India. The results of the study conclude that exposure to native script influences the development of early literacy skills in L2. Although children in the Tulu group had some form of exposure to script at home (Kannada, α -syllabary script), they still demonstrated poorer performance in all the domains of early literacy skills in L2. This emphasizes the importance of native script exposure and its influence on early literacy skills. The results also highlight on the parental understanding of the importance of home literacy-based activities for children. The early literacy checklist and parent questionnaire developed in the present study will be useful in the early identification and intervention of children at risk of developing reading and writing deficits. Though the study had several contributing findings, there were certain limitations, such as not assessing vocabulary and narrative skills, parental literacy level and home reading environment were not controlled. Identification of the factors that determine home literacy, as well as influence of parental literacy levels on early literacy skills of their child, could be targeted in future research.

Conflict of Interest

None declared.

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