Story Re-tell Abilities in Preschoolers Development in Kannada-speaking English Language Learners

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Abstract

Story retelling has been used to evaluate the oral narratives of preschool children. Assessment of oral language abilities in preschoolers is essential for identifying children at risk for reading difficulties in later grades. The purpose of the present study is to evaluate the development of story re-tell abilities in preschool children with native language Kannada studying in schools with English as the medium of instruction, in Mysore city. The subjects consisted of 30 participants in the age range of three to six years, enrolled in Pre-kindergarten, Lower Kindergarten and Upper Kindergarten. The children were narrated a story in English using a wordless picture book and asked to re-tell the story. Their narratives were audio recorded, transcribed, segmented into C-units and analyzed using the SALT software. The narrative measures employed to evaluate the expressive language were Number of English Words (NEW), Number of Kannada Words (NKW), Number of Proper Nouns (NPN), Mean Length of Utterance (MLU), Number of Different Words (NDW) and Type Token Ratio (TTR). Comprehension abilities were assessed using a Question-Answer Task (QAT). The results indicate that both expression and comprehension abilities show an upward developmental trend in preschoolers. Their narratives were dominated by Kannada utterances in Pre-Kindergarten but in Lower Kindergarten and Upper Kindergarten, their narratives showed dominance of English utterances. Measures such as MLU, NDW and TTR were not sensitive to the developmental changes in preschool narratives whereas measures such as NEW, NKW and NPN showed significant difference between groups. The results of the present study indicate that measures such as MLU, NDW and TTR should be used with caution while evaluating language samples with less than 50 bilingual utterances.

Key words: Oral narratives, MLU, NDW, TTR, SALT software

In the last two decades, research on early literacy has shifted its focus from school-age children to preschoolers. The preschool years are critical for the development of skills such as oral language* and emergent literacy**, which facilitate reading acquisition and predict reading achievement (Lonigan, 2006; Snow, Burns and Griffin, 1998; Storch & Whitehurst, 2002; Teale & Sulzby, 1986; Whitehurst & Lonigan, 1998). Butler (2000) reported that children with oral language problems in early years are at risk for reading and writing difficulties in later grades. Therefore,

assessment of oral language skills and emergent literacy in preschool children becomes very essential to identify those children who are at-risk for later reading failures. This paper evaluates the narrative abilities of preschool children in the age range of three to six years through story retelling task. The present study is a part of the doctoral research work of the first author on 'Development of Emergent Literacy in Kannada-speaking English Language Learners'.

Storytelling is clearly a social experience with oral narrative, incorporating linguistic features that display a "sophistication that goes beyond the level of conversation" (Mallan, 1991, p. 4). Narrative skills can be considered the "gateway to reading and writing" (Hirsh-Pasek, Kochanoff, Newcombe, & de Villiers, 2005, p.6). Researchers have widely used narrative assessments such as story re-tell to evaluate the oral language abilities of very young children (Curenton & Justice, 2004; Gazella &

**Oral language refers to the corpus of words in a child's vocabulary as well as his or her ability to use those words to understand and convey meaning i.e. syntactic and narrative skills (Lonigan, 2006).*

***Emergent Literacy describes the skills and knowledge that young children have about reading and writing prior to beginning their formal literacy instruction in elementary school (Whitehurst & Lonigan, 1998).*

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Stockman, 2003; Hewitt, Hammer, Yont & Tomblin, 2005; Leadholm & Miller, 1992; Miller, Heilmann, Nockerts, Iglesias, Fabiano & Francis, 2006; O'Neill, Pearce & Pick, 2004; Schelletter & Parke, 2004). According to the technical definition given by Labov (1972), "a narrative must contain a minimum of two sequential independent clauses on the same event or experience." Clauses in the narrative must confine to the same time, space or theme, for example, "I went to the zoo. I saw a baby elephant". Speech samples that contain unrelated utterances such as, 'I went to the zoo. I want water' would not be considered as a narrative according to Labov's definition.

Story Re-tell Task

Storytelling is a familiar discourse genre across cultures, including those without a written language. Research has indicated that oral storytelling between young children and their parents facilitate emergent literacy (Burns, Griffin & Snow, 1999). In fact, many researchers and educators believe that storytelling can contribute significantly to early literacy development (Cooper, Collins & Saxby, 1992; Glazer & Burke, 1994; Phillips, 1999). Since storytelling is popular with young children all over the world it can be used in the assessment of narrative skills.

An oral narrative is a language tool that consists of a child's spoken description of real or fictional events experienced in the past, the present or the future (Curenton & Lucas, 2007). In order to use oral narratives as an assessment tool clinicians use two elicitation techniques, story generation and story retelling. Story generation requires children to invent or recall a narrative using their own words. In story generation tasks children are shown familiar or unfamiliar pictures and asked to make up a story about what they see (Dollaghan, Campbell & Tomlin, 1990; Liles, 1993). This task allows children to be creative and original in their stories. Generating a story for the first time is not the same task as telling a story that one already knows. If speakers were familiar with a story, then asking them to talk about it would be a retelling task (Gazella & Stockman, 2003). In a story retelling task the subject is presented with a novel or a familiar story by the clinician and asked to immediately re-tell the story. Presenting a novel instead of a familiar story minimizes the effect of past experiences with the story and allows the examiner to control the stimulus input.

Wordless picture books have been widely used to elicit fictional stories from children. Stories that depict a character that encounters a problem, engages in goal-based actions to solve the problem and resolves the conflict are very popular with preschoolers (Benson, 1997; Pearce, 2003; Shapiro & Hudson, 1991). Research has also indicated that without sequenced illustrations, preschoolers produce short and unelaborated stories (Kadaravek & Sulzby, 2000; Shapiro & Hudson, 1991). Since young children have small attention spans, wordless picture books are used to overcome the role of memory in recalling the characters or the sequence of events in the story. Interesting characters and colourful pictures make story retelling an appealing assessment tool for preschoolers. It can be used to evaluate several features of oral language such as speech intelligibility, grammatical structure, lexical diversity and formulation skills.

Measures of Story Re-tell Responses

For the assessment of narratives the story retelling or story generation task should be audio or video recorded and later transcribed verbatim. Computer programs are available for transcription and analysis of narratives (such as, CLAN, Child Language Analysis, McWhinney, 1995; SALT, Systematic Analysis of Language Transcripts, Miller & Chapman, 1993). The transcription rules vary based upon the computer program used. It is acceptable to transcribe only the child's narrative during the story retell task when the examiner only provides consistent non-leading neutral prompts (McCabe, 1997b), such as "What happened next?" or "What do you see in this picture?" Irrelevant comments, unintelligible utterances, false starts and retraces made by the child maybe deleted during transcription (Curenton & Justice, 2004).

After a narrative has been transcribed, it must be segmented into meaningful language units. While listening to a child's narrative it is often difficult to determine how to break the stream of speech into meaningful units. Manner in which utterances are segmented is essential because the mean length of the utterance (MLU[1]) depends on the way utterances have been segmented. Researchers have used several techniques for segmentation of narratives. Traditionally, some researchers used pauses and intonation patterns as cues for segmentation (Miller & Chapman, 1981) while others used word groups resembling a sentence as cues for segmentation (Lund & Duchan, 1993; Owens, 1999). Several other studies report the use of 'Communication- Units' for segmentation of the utterances produced during a narration task (Curenton & Justice, 2004; Hughes, McGillivray & Schmidek, 1997; Strong and Shaver, 1991).

[1] MLU is the average number of words/morphemes produced by a speaker per utterance, in a narrative.

Communication units are a segmentation method that allows a clinician to segment the narrative into grammatical units (Crais & Lorch, 1994; Loban 1976). Research has indicated a significant correlation between average C-unit length and age (Craig, Washington & Thompson-Porter, 1998). C-units are grammatical units that are based on clausal structure (i.e., subject-predicate clause). In a clause the subject is usually the noun and it is the topic of the clause (i.e., what the clause is about). The predicate is the verb phrase part of the clause, and it describes the action of the clause (i.e., what is being done). A C-unit consists of either (a) independent clause or (b) independent clause along with its dependent clause(s).

In case the speech sample is segmented into C-units, the number of words per C-unit constitutes the Mean Length of a C-unit (MLCU). Some researchers segment the speech sample into C-units but continue to use the term 'MLU' to refer to the mean length of C-units (Miller et. al, 2006). The calculation of MLU/MLCU depends critically on how utterances are segmented. Segmentation of utterances is a variable between studies that makes direct comparison of results difficult. Once the narrative is segmented into utterances and the transcripts are fed into the computer, the program analyses the narrative on several measures such as total number of utterances, total number of words, Mean Length of Utterance (MLU), number of different words[2] (NDW) and type token ratio[3] (TTR). Several studies in literature have used measures like MLU, NDW and TTR to evaluate the narrative abilities of preschool children (Gazella & Stockman, 2003; Hewitt et. al., 2005; Leadholm & Miller, 1992; Miller et. al, 2006; O'Neill et al., 2004; Schelletter & Parke, 2004).

Several studies on bilingual children have used words to calculate the mean length of utterance (Miller et. al, 2006; Schelletter & Parke, 2004) because the morpheme structure of both the languages was very different. MLU (words) is calculated as the average number of words per utterance in a given narrative. These studies show that MLU (words) and NDW can be used to evaluate oral language in young bilingual children. Besides the difference in the unit of measurement of MLU (morphemes/words), the sample size also varies from one study to the other. Most textbooks conform to Miller and Chapman's (1981) recommendation of 50 utterances. However, 25% of Speech Language Pathologists (SLPs) in the Hux, Morris-Friehe and Sanger (1993) survey and 43% in Loeb, Kinsler and Bookbinder (2000) survey indicate using samples of fewer than 50 utterances. Eisenberg, Fersko and Lundgren (2000), report of clinicians who use less than 25 utterances for calculating MLU.

Other popular measures to evaluate oral language in young children are NDW and TTR, which measure the lexical diversity in narratives. Lexical diversity is a measure of expressive vocabulary size (Klee, 1992; Miller, 1991; Watkins, Kelly, Harbers & Hollis, 1995). Lexical diversity is influenced by the presence of language impairment (Goffman & Leonard, 2000), elicitation procedure (Gazella & Stockman, 2003), and a child's age (Miller, 1991). Several studies suggest that NDW is a better measure of semantic development than TTR (Miller, 1991; Watkins et. al., 1995). Literature also reports that NDW is a reliable measure of lexical development not only in preschoolers but even older children (Owen & Leonard, 2001; Richards & Malvern, 1997).

Story Re-tell Measures in Bilingual Children

Assessments of narratives have been reported frequently in monolingual children and seldom in bilingual children (see Gutierrez-Clellen, 2002). Studies investigating narratives of bilingual children have found them to be less advanced than matched monolingual children on a variety of measures (Shrubshall, 1997). Comparing narratives in both languages of Spanish-English bilinguals, Gutierrez-Clellen (2002) found differences in the recall and comprehension of a story, such that the children showed better performance in the language used in the classroom (L2- English) as opposed to Spanish (L1). Schelletter & Parke (2004) did not find any difference between the English-dominant and the German-dominant groups in terms of MLU and number of word types. The German-dominant group outperformed the English-dominant group in terms of their ability to use synonyms of verbs and in terms of errors. The narrative task employed in the above studies includes narrative re-tells, where the child was given a story model that had to be reproduced, and spontaneous narratives.

Research on bilingual language acquisition in India is still in the infancy stage. Patnaik & Mohanty (1984) reported that bilinguals perform better on cognitive, linguistic and meta-linguistic skills when compared to monolinguals. This view was also supported by Sreedevi & Shyamala (2005) that bilinguals have better narrative abilities when compared to monolinguals.

[2] NDW is the number of different words produced by the speaker in a narrative.

[3] TTR is the ratio of NDW versus the total number of words produced by the speaker in a narrative.

In the absence of any reported literature on story re-tell abilities of preschoolers in the Indian context, the present research aims at studying the development of narrative skills in Kannada-speaking English Language Learners in the age range of 3-6 years. To meet this objective a story re-tell task was employed which was part of the Battery of Emergent Literacy Assessment (BELA), developed for the doctoral research titled 'Development of Emergent Literacy in Kannada-speaking English Language Learners[4]'. In this task the examiner narrated a story using a wordless picture book and asked the subject to re-tell the story with the help of the picture book. The story was narrated in English by the examiner and children were free to use any (or both) language (Kannada/English) to re-tell the story. The narration was audio recorded, transcribed, segmented into C-units and analyzed for comprehension and expression of narratives using SALT software. The narrative measures were compared across groups (PKG, LKG and UKG) and correlated to study the development of story re-tell abilities in preschoolers.

Method

Participants: Thirty children in the age range of 3-6 years with normal hearing, vision and intelligence were selected from Mysore city. All subjects were native Kannada-speakers studying in preschool with English as the medium of instruction. For this study, 'preschool' refers to a school that caters to children enrolled in Pre-Kindergarten (PKG), Lower Kindergarten (LKG) and Upper Kindergarten (UKG). The subjects were divided into three groups (PKG, LKG, and UKG) of ten subjects each, based on their enrolment in the preschool. The participants were screened to rule out disability, if any, using the WHO Disability Screening Checklist (cited in Singhi, Kumar, Malhi & Kumar, 2007).

Groups	No. of Subjects	Mean age in months (age range)
PKG	10	45.60 (39-51)
LKG	10	58.20 (54-66)
UKG	10	66.60 (60-72)

Table 1. Mean Age of subjects

The present study is part of a doctoral research work, which aimed at studying the development of emergent literacy in preschoolers. The subjects for doctoral research were selected from ten preschools in Mysore city, which were evaluated for their literacy environment via a series of surveys. Parents and teachers were asked to respond to questionnaires pertaining to emergent literacy experiences of children at home and in classrooms, and the quality of books available to them in preschools. The results of the surveys indicated that preschoolers in the sample had literacy experiences that were rich in print knowledge, phonological awareness and oral language skills (Khurana & Rao, 2008; Khurana & Rao, in press).

The survey (Khurana & Rao, 2008) provided information regarding the use of English language at home. 54% of parents used Kannada for oral activities like daily conversation and storytelling while 46% parents used English. 66% of parents used English for storybook reading and other reading and writing activities while 34% of parents used Kannada. Thus indicating that majority of parents in the sample preferred Kannada for oral language activities but they used English for literacy related activities like reading and writing. The survey (Khurana & Rao, 2008) also provided information regarding the educational background of parents. Over 70% of parents had an educational qualification which was graduation (or above). Thus indicating that majority of the participants in the sample were from educated families.

Test Material: The story re-tell task used a colourful wordless picture book titled 'Mini and Kitty' that was developed as a part of Battery of Emergent Literacy Assessment (BELA), for the doctoral research. The story depicted a young girl called 'Mini' and her cat named 'Kitty'. The storybook contained eight pages (30cm x 20cm) including the title page and was spiral bound for ease of handling. The story had a simple storyline taking into consideration the concepts of very young bilingual children and it revolved around two characters, a girl and her cat. Since the story was narrated in English (second language), simple sentences were used and words chosen for narration were within the vocabulary of preschoolers. The pictures in the storybook were big in size, colourful and descriptive.

Procedure: The study was carried out in six phases- testing phase, transcription phase, segmentation phase, analysis of narrative measures, analysis using SALT software and the scoring phase.

Testing: The subjects were tested in a quiet room within the preschool premises. Each subject was tested individually in a single sitting that lasted around 15 to 20 minutes per child. The procedure

[4] *Since the children in this study were enrolled in preschools with English as a medium of instruction, they were referred to as 'English Language Learners'.*

used for collecting the narrative sample was identical for all subjects. The examiner presented the child with a wordless picture book titled 'Mini and Kitty'. The picture book provided the children with a map for the story sequence and cues that helped narration. The examiner narrated the story in English and then handed the book to the child and asked him/her to look at the pictures and re-tell the story. During the re-tell the examiner provided neutral prompts like "What do you see in this picture?" or "What happened next?" Children's responses were audio recorded using the Olympus Digital Voice Recorder WS 100.

Transcription: The examiner listened to the audio recording and transcribed each narrative verbatim. The transcriptions were first recorded orthographically using broad transcription. Then the transcriptions were typed on the computer using the SALT (Systematic Analysis of Language Transcripts) conventions. Since the examiner provided neutral consistent prompts to all subjects, only the child's utterances were transcribed.

Segmentation: Preschool children produce very few utterances when compared to older children. Their utterances are characterized by grammatically incorrect or incomplete phrases. In case of children acquiring two languages simultaneously, the size of the narration sample might be even smaller. Craig, Washington & Thompson-Porter (1998) suggest that while segmenting narratives into C-units, even utterances that do not adhere to a clausal structure can still be considered in the analysis if they are responses to a question or a part of dialogue. In the present study, since the examiner prompted the child to describe what is seen in the picture, the child's responses relevant to the narration task (even ones that do not adhere to the clausal structure) were considered for analysis. The orthographically transcribed utterances were segmented into C-units, employing rules for segmentation specified in the SALT software.

Analysis of Narrative Measures: The present study aimed to evaluate the expressive and comprehensive abilities of preschool children via the story re-tell task. The narrative measures employed to evaluate the expressive abilities were NEW (Number of English Words), NKW (Number of Kannada Words), NPN (Number of Pronouns), Total 1[5], MLU (Mean Length of Utterance), NDW (Number of different Words) and TTR (Type Token Ratio). The narrative measure employed to evaluate the comprehension abilities was QAT (Question-Answer task). The total oral language score of the narratives was represented by Total 2[6].

Analysis using SALT software: The segmented transcripts were typed onto the computer using SALT conventions specified in the software. The SALT software was used to analyze the transcripts for NEW, NKW, NPN, MLU, NDW and TTR. SALT software has reference database for English but not for Kannada. Hence, in order to analyze the bilingual language sample containing English and Kannada words, a Kannada word list was prepared containing all the Kannada words used by all the subjects in the sample.

Scoring: A scoring pattern with different weights for English and Kannada was adopted in the larger study for doctoral work in order to study the development of oral language skills in Kannada and English. Since the story narration was in English and children in the sample were acquiring literacy in English, it was assigned a weight higher than Kannada. English was assigned a weight of '3', Kannada was assigned a weight of '2' and Proper Nouns (such as Mini and Kitty), which were used with both languages, were assigned a weight of '1'. The product of the raw scores and the weights provided the weighted score for that measure. For example, if the raw score of NEW (No. of English Words) is 20, the weighted NEW would be 60 (20 x 3) and if the raw score of NKW (No. of Kannada Words) is 8, the weighted NKW would be 16 (8 x 2).

Similarly, the weighted scores were calculated for all the subjects for NEW, NKW and NPN. These weighted scores were then compared across groups (PKG, LKG and UKG) to study the developmental pattern of the two languages separately in the story re-tell task. Narrative measures such as MLU, NDW and TTR were evaluated based on the raw scores. These measures were calculated for both the languages together and the raw score indicated a bilingual score. Since the number of utterances in the sample were limited, a weighted score for these measures was difficult. These scores were compared across groups (PKG, LKG and UKG) to evaluate the development of bilingual narratives in preschool children.

The data was subjected to statistical analysis using SPSS Version 16.0 software. The data was

[5] *Total 1 is the sum of NEW, NKW and NPN. It represents the total expressive score for the story re-tell task*

[6] *Total 2 is the sum of QAT and Total 1. It represents total oral language score, which is the sum of expressive and comprehension score for the story re-tell task.*

analyzed using ANOVA and Correlation statistics, and the narrative measures were compared across groups and correlated to evaluate the development of narratives in preschool children.

Results

The purpose of the present research was to study the development of story re-tell abilities in Kannada-speaking children studying in preschools with English as the medium of instruction. The results of the study are discussed with the objective of:

- Studying the development of narrative measures from Pre-KG through UKG
- Identifying the narrative measures for story re-tell task by examining the correlation amongst the narrative measures under study

Comparison of Narrative Measures across PKG, LKG and UKG

The narrative measures were compared across groups to find out the developmental trend of narrative abilities in preschool children. Table 2 presents the descriptive statistics for the sample of 30 participants. Mean, Standard Deviation (SD) and the 95% confidence interval for mean (lower and upper boundary) were calculated for all the groups (PKG, LKG, UKG). Mean values of narrative measures showed an upward trend from pre-kindergarten to lower and upper kindergarten children. The SD was wide for majority of narrative measures with maximum SD for the lower kindergarten participants.

The data was subjected to One-way ANOVA (Table 3) to compare the narrative measures across the groups (PKG, LKG, and UKG). It was observed that a significant difference existed between NEW (Number of English Words), Total 1 (NEW+NKW+NPN), QAT (Question-Answer Task) and Total 2 (Total 1 + QAT). The F values are presented in Table 3. The F values indicate that narrative measures such as NEW, QAT and Total 2 show a significant difference across the three groups. NKW (Number of Kannada Words) and NPN (Number of Proper Nouns) did not show significant difference across groups. The scores were also analysed using Duncan's Post Hoc test to evaluate the developmental trend for the measures that showed significant difference across groups. The results indicated that although a significant difference was observed from PKG to LKG for narrative measures such as NEW, Total 1, QAT and Total 2, the difference between LKG and UKG was not significant for these measures.

Narrative Measures		Mean	Standard Deviation	95% Confidence Interval for Mean	
				Lower Bound	Upper Bound
Weighted NEW Score	PKG	31.8	20.11	17.41	46.19
	LKG	69.9	49.90	34.19	105.61
	UKG	69.9	35.81	44.28	95.51
Weighted NKW Score	PKG	22.0	13.13	12.61	31.39
	LKG	32.2	33.94	7.92	56.48
	UKG	22.4	16.22	10.80	33.99
Weighted NPN Score	PKG	3.7	4.52	0.46	6.94
	LKG	4.0	4.19	1.00	7.00
	UKG	6.1	4.12	3.15	9.05
Total 1	PKG (NEW+NKW+NPN)	57.5	17.50	44.98	70.02
	LKG	106.1	41.92	76.11	136.09
(Weighted Scores)	UKG	98.4	31.62	75.78	121.02
QAT	PKG	4.3	2.11	2.79	5.81
	LKG	5.6	1.42	4.57	6.62
	UKG	6.6	1.35	5.63	7.56
Total 2	PKG	61.8	16.25	50.18	73.42
(Total 1+ QAT)	LKG	111.7	42.51	81.29	142.11
	UKG	105.0	32.27	81.91	128.09
MLU	PKG	2.07	.84	1.47	2.68
	LKG	3.11	1.36	2.14	4.09
	UKG	2.99	1.06	2.23	3.76
NDW	PKG	19	8.31	13.25	25.16
	LKG	27	10.10	20.07	34.53
	UKG	25	6.92	20.25	30.15
TTR	PKG	.63	.12	.55	.72
	LKG	.63	.07	.58	.68
	UKG	.63	.11	.55	.71

Note. PKG = Pre-Kindergarten, LKG = Lower Kindergarten, UKG = Upper Kindergarten, NEW = Number of English Words, NKW = Number of Kannada Words, NPN = Number of Proper Nouns, QAT = Question Answer Task, MLU = Mean Length of Utterance, NDW = Number of Different Words, TTR = Type Token Ratio

Table 2: Mean and Standard Deviation for the three groups (PKG, LKG and UKG); N=30

Narrative Measures	F value
NEW (No. of English Words)	3.47*
NKW (No. of Kannada Words)	.63
NPN (No. of Proper Nouns)	.93
Total 1 (NEW+NKW+NPN)	6.68**
QAT (Question-Answer Task)	4.79*
Total 2 (TOTAL 1+QAT)	7.07**
MLU (Mean Length of Utterance)	2.62
NDW (No. of Different Words)	2.42
TTR (Type Token Ratio)	.001

Note. NEW = Number of English Words, NKW = Number of Kannada Words, NPN = Number of Proper Nouns, QAT = Question Answer Task, MLU = Mean Length of Utterance, NDW = Number of Different Words, TTR = Type Token Ratio

* Significant at the 0.05 level, ** Significant at the 0.01 level

Table 3: F values at degrees of freedom (2, 27) across PKG, LKG, UKG

Since NEW, NKW and NPN together (Total 1) showed a significant difference across groups, the percentage of these utterances was calculated and plotted on a graph. The X axis represents the groups (PKG, LKG and UKG) and the Y-axis represents the percentage of utterances. The illustration (Figure 1) shows the increase in NEW and the decrease in NKW with advancing grade (PKG to LKG and UKG). NPN did not show a significant difference across groups.

Correlation among the Narrative Measures

In order to identify the narrative measures for story re-tell task, the data was subjected to correlation study. Table 4 presents the bivariate correlations amongst the narrative measures under study. Pearson's correlation coefficient was calculated and the results indicate that the groups (PKG, LKG, UKG) correlate with NEW, Total 1, QAT and Total 2. NEW correlates with the groups, NKW, MLU, NDW, Total 1 and Total 2. NKW correlates with NEW and NDW. NPN correlates with MLU and QAT. Total 1 correlates with the groups, with NEW, MLU, NDW and Total 2. QAT correlates with the groups, NPN, MLU and Total 2. Total 2 correlates with the groups, NEW, Total 1 and QAT. MLU correlates with NEW, NPN, Total 1, QAT and Total 2. NDW correlates with NEW, NKW, Total 1, Total 2 and MLU. TTR shows a negative correlation with almost all variables except NKW, although this correlation is not significant.

Discussion

This research aimed at studying the development of story re-tell abilities in children from Pre-KG through UKG. The study also aimed at identifying the narrative measures for story re-tell task by examining the correlation amongst the narrative measures under study. Kannada-speaking preschoolers acquiring literacy in English were evaluated on the story re-tell tasks. The results show a significant difference across grades (Table 3) from Pre-KG through UKG indicating that story re-tell tasks can be used to study the development of narrative skills in preschool children. This is in consonance with other studies reported in literature (Curenton & Justice, 2004; Gazella & Stockman, 2003; Hewitt, Hammer, Yont & Tomblin, 2005; Leadholm & Miller, 1992; Miller, Heilmann, Nockerts, Iglesias, Fabiano & Francis, 2006; O'Neill, Pearce & Pick, 2004; Schelletter & Parke, 2004).

Variable	1	2	3	4	5	6	7	8	9	10
1. Groups	-									
2. NEW	.392*	-								
3. NKW	.007	-.392*	-							
4. NPN	.233	-.007	-.107	-						
5. Total1	.450*	.864**	.170	.041	-					
6. QAT	.510**	.319	-.116	.544**	.333	-				
7. Total 2	.468**	.865**	.161	.067	.999**	.376*	-			
8. MLU	.325	.379*	.188	.431*	.568**	.675**	.591**	-		
9. NDW	.278	.409*	.463*	.091	.727**	.316	.730**	.658**	-	
10. TTR	-.008	-.261	.288	-.325	-.143	-.262	-.153	-.070	.248	-

Note. NEW = Number of English Words, NKW = Number of Kannada Words, NPN = Number of Proper Nouns, QAT = Question Answer Task, MLU = Mean Length of Utterance, NDW = Number of Different Words, TTR = Type Token Ratio

* Correlation is significant at the 0.05 level (2-tailed), ** Correlation is significant at the 0.01 level (2-tailed)

Table 4: Bivariate Correlations

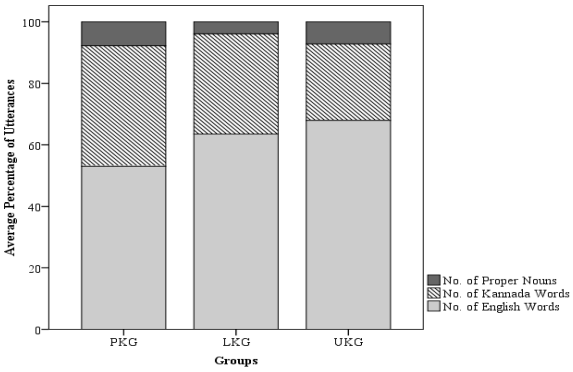

Figure 1: Average percentage of Utterances across groups (PKG, LKG and UKG

The narratives of children in the sample from PKG show dominance of the native language Kannada, which is spoken at home and in their immediate environment. But, a dominance of English in their narratives was evident in those children from LKG and UKG indicating an improvement in their expressive abilities in the English language. The results of the question-answer task show an increase in comprehension abilities across groups indicating an improvement in English comprehension as children move from pre-kindergarten to lower and upper kindergarten. This indicates that oral language abilities of Kannada-speaking English Language Learners show a developmental trend with advancing grade (PKG to LKG and UKG).

The above findings are further supported by the descriptive analysis of the data. The wide range of SD of participants is similar to the results of other studies evaluating story re-tell abilities that have reported a wide range of SD for narrative measures. (Gazella & Stockman, 2003; Hewitt et. al., 2004). The wide SD within groups observed in the present study could be attributed to age differences within subjects in each group leading to wide range of utterances. There are no strict age restrictions for enrolment in preschools in Mysore city; hence children in each group have a wide age range. The maximum age in the LKG group is 66 months, which is the mean of the UKG group. This accounts for higher scores for the LKG group when compared with the UKG group on some narrative measures (Total 1, Total 2, MLU and NDW). Another factor that can explain the wide range in SD is the nature of response in the present study. Since subjects in this study were allowed to re-tell the story in either of the languages under study, the responses varied in their length, complexity as well as choice of language.

Most studies that evaluate the narratives of bilingual children elicit and record the narrative task separately in each language (Gutierrez-Clellen, 2002; Schelletter & Parke, 2004). The children in the above cited studies were instructed by the investigators to use 'one language only' while re-telling the story, which might have inhibited their natural narration ability. In the present study an effort was made to investigate bilingual utterances 'as a whole' instead of narrations in two separate languages. Majority of bilingual children enter preschools with limited knowledge of their second language (English, in this study), which is compensated by an increased use of the native language (Kannada, in this study) in their narratives. As oral language proficiency increases in their second language, their narratives also show a shift from native to second language (which is the language of instruction), which is clearly evident from the results of the present study.

With reference to the developmental trend for each of the narrative measures of story re-tell task, MLU, NDW and TTR did not show a significant developmental trend across groups. This can be attributed to the small number of utterances in the sample. Researchers recommend at least 50 utterances in a sample for measures such as MLU to be reliable (Miller & Chapman, 1981) but some researchers have reported using MLU for samples less than 25 utterances (Gazella & Stockman, 2003). In the studies cited in this article, these measures were evaluated mostly with monolingual subjects and in case of bilingual subjects they were evaluated on narrative samples recorded separately for each language. The results of the present study indicate that narrative measures such as MLU, NDW and TTR are not sensitive to the developmental progression in story re-tells of bilingual children when they are used to analyze bilingual utterances less than 50 in number.

Although the number of utterances elicited by the story re-tell in the present study is less than 50, the sum of measures such as NEW, NKW and NPN (Total 1) showed a significant difference across groups. NKW and NPN did not independently show a significant difference but when they were added to the NEW scores, the sum showed a significant difference between groups. Different weights were assigned to each language for the calculation of these measures and the weighted scores exhibited a significant trend across languages. English was weighted higher than Kannada since the story was narrated by the examiner in English and the subjects were acquiring literacy in English. This indicates that in cases where narratives are bilingual in nature, each language can be analyzed separately and

the weighted scores can be successfully employed to evaluate the developmental progression of languages across groups.

Results of the comprehension abilities were similar to the results of the expressive abilities of preschoolers. QAT (Question-Answer Task), the measure of comprehension ability, showed a significant difference across groups. When QAT was summed-up with expressive narrative measures like NEW, NKW and NPN, to give a total oral language score (Total 2) a significant difference across groups was seen. The responses obtained in the QAT task were bilingual in nature ranging from single words to small phrases to complete sentences. Since it was purely a comprehension task the responses were scored based on the accuracy of the response only. The responses were not scored for their syntax and no weights were assigned for the language used. This indicates that QAT can be successfully employed to record the changes in the comprehension abilities of bilingual preschool children.

Thus, results of the present study indicate that the expressive language score (Total 1), the comprehension score (QAT) and the total oral language score (Total 2), which is the sum of expressive and comprehension scores, show significant differences across groups. This indicates that even though measures such as NKW and NPN are not significant independently, when analysed with other significant measures result in significant differences across groups. Thus, for a bilingual story re-tell task, expression and comprehension measures should be analysed 'as a whole' for studying the development of narrative abilities of preschoolers.

The above premise is supported by the Pearson's correlation statistical analysis. The measures such as Total 1 (NEW+NKW+NPN) and Total 2 (QAT+Tot1) are correlated to each other and also to other measures such as NEW, MLU and NDW. Even though MLU and NDW did not show a developmental trend across groups they correlate significantly with other measures like NEW, QAT, Total 1 and Total 2. This indicates that MLU and NDW are reliable measures to quantify bilingual narratives but not sensitive to language specific developmental trends in bilingual narratives. Results of the present study also show that TTR is not significant across groups. This is in agreement with other studies in literature, which report that TTR is not as reliable as NDW to evaluate the lexical diversity of preschoolers (Miller, 1991; Watkins et. al., 1995).

The present study reveals that story re-tell tasks can be used to assess the development of narrative abilities in bilingual preschool children. This study attempted to evaluate bilingual narrative samples by segmenting them into C-units and analyzing them separately by assigning weights to both languages. The results indicate that the expressive and comprehensive abilities show a developmental trend across groups. English utterances increase while Kannada utterances decrease with increase in grade in preschool children who are Kannada-speaking English Language Learners. The comprehension abilities also increased with increasing grade. Narrative measures that were assigned weights such as NEW, NKW and NPN were sensitive to the developmental trend in bilingual narratives of preschool children. Measures such as MLU, NDW and TTR were not sensitive to changes in narrative abilities in bilingual children.

Studies on bilingual narrative analysis are very few and the ones cited in the present study have evaluated both the languages separately. Children in these studies were either asked to narrate the story in two separate sittings with a gap of one week (Gutierrez-Clellen, 2002) or were asked to narrate half of the story in one language and the other half in the other language, (Schelletter & Parke, 2004) in the same sitting. It is difficult to compare studies on narrative assessment because they differ in several parameters such as (a) native language of subjects (b) language of instruction (c) age of the subjects (d) nature of the narratives -story retelling/story generation (e) sample size- greater than or less than 50 utterances (f) unit of utterance length- morphemes/words (g) segmentation of transcripts (h) computer program used to analyze the transcripts (i) statistical procedures used for analysis and (j) cross-sectional /longitudinal study. Thus, the heterogeneous nature of studies reported in literature makes it difficult to generalize developmental trends in narratives of preschool children.

There are several caveats that must be considered when interpreting the results of this study. First, this study reports the story re-tell abilities of Kannada-speaking English Language Learners studying in preschools. Generalization to children from other language backgrounds studying in higher grades must be made with caution. Second, the emergent literacy experiences of the children in this study indicated rich literacy environments. The results may not generalize to children from environments impoverished in literacy experiences. Third, this is a cross-sectional study and does not provide information about how individual child's narrative skills change over time. The overlap in age groups did not provide a clear developmental trend which

could have been observed if this were to be a longitudinal study.

There are a number of implications of this study for assessment of narratives in bilingual preschool children. In case of language samples less than 50 utterances, alternate measures such as NEW, NKW and NPN should be used. Weighted measures employed in this study can be used for analyzing story re-tells that recorded bilingual narratives. Measures such as MLU, NDW and TTR should be used with caution while evaluating bilingual language samples less than 50 utterances. The results of this study suggest that story re-tell tasks can be used successfully to measure and analyze the expression and comprehension abilities of bilingual preschool children.

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