



IDENTIFICATION OF FAMILIAR WORDS FOR HINDI SOUNDS

Linguistics

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ABSTRACT

The Speech Language Pathologists and language experts need material to collect the speech sample which they can evaluate and analyze for normalcy. For older children the speech sample can be collected even in spontaneous speech or by reading of standardized text, but this cannot be done for younger children who cannot read sentences and words. For these children standardized set of word list is required so that their phonology can be checked for normalcy and intelligibility. This word list must not only be structured for presence of each sound at all positions but also these words should be familiar to the younger age group (present in their vocabulary) as the need to identify a picture for it and name it. Such structured material is still limited in Hindi Language. The present study aims the development of word list in Hindi Language and check the familiarity of the word list. The word list prepared was shown to 10 teachers of preschool (Nursery to Upper Kindergarten). The words were rated on a three point rating scale and the results were analyzed using descriptive statistics. Those words found more than 75% familiarity may be used with younger children for speech sample collection. The words with familiarity between 50 to 75% can be used with younger children along with few semantic and phonetic cues.

KEYWORDS

familiarity, speech sample, word list

INTRODUCTION

Eliciting a speech sample is the most basic requirement for any professional dealing with language, like the Speech Language Pathologist, Linguist or Psychologist. For studying language or observing the language of a child, we need to make the child speak in that language and the speech sample should be of quantity and nature that could of use for the purpose. To study the phonology of a child we need to record the expressions containing each sound (vowel and consonant) of Hindi language in words with varying environment. For example, when we want to record the sound /k/, we will need one sample containing /k/ as the initial sound, one having /k/ as medial sound in the word, and one having k as the medial sound of final syllable or final sound in a word.

Such a structured assessment of a child's language is very difficult with spontaneous speech where one might not get a sound in all possible environments and positions. Therefore words specially prepared for such a purpose are required. Such words can be instrumental for eliciting of Hindi language sample as well as a corpus of such words will be beneficial for speech therapy of children with articulation problems. As these words are to be used with small children they must be familiar to the children between the age group of 3 yrs to 8 years. Familiarity is important as very young children are not able to read the word and need to be shown picture and then asked to identify it. If the child is not familiar with the word and that word is not present in his/her vocabulary, he/she may not identify it; therefore the natural way of production will not be recorded. Thus the words to be used with children of this age group should be familiar to them. Considering the importance of familiarity a study was needed to check the familiarity of the developed word list to be used with children of age 3 years to 8 years.

Aim

The Aim of the Study was the development of word list in Hindi Language and check the familiarity of the word list.

METHOD

The word list for Hindi language in different environments, for 13 vowels and 37 consonants in different possible vowel and consonant contexts was prepared (Annexure 1 and 2). The words were prepared from the Hindi text books used in ICSE and CBSE board books for LKG to 3rd standard. Words were selected with target sound in initial position, with target sound in medial position as well as target sound in final position. For each sound and in each position, minimum of 1 and maximum of 3 words were selected. The words selected were Simple, Meaningful and picturable. Those words were not selected in which one phoneme was repeated in two positions, referred to a very local phenomenon/ event/ object and words of religious significance (other than Hindu religion) as will be used with native standard Hindi Speakers.

The selected words were given to 10 preschool teachers who were native hindi speakers for familiarity check. The judges (Preschool teachers) were asked to rate the list of words for familiarity (presence in the vocabulary of typically developing preschool children) on a 3 point rating scale which was as follows:

- 1 – 75% to 100% familiar
- 2 – 50% to 75% familiar
- 3 – <50% familiar

RESULT

The ratings of 10 judges were calculated for the frequency distribution. More than 60% of the teachers rated the words /rəsoiḡər/, /ainə/, /məkəi/ as less than 50% familiar and /suər/, /əḡ/, /ɪḡəli/, /ɪmərɪti/, /ikʰ/, /inəm/, /un/, /ɪrkʃə/, /erəvəḡ/, /vɪr/, /ɪmərɪti/, /ikʰ/, /inəm/, /un/, /ɪrkʃə/, /erəvəḡ/, /vɪr/ are less than 75% familiar. All the words except /sɪŋḡəson/ were found having more than 50% familiarity for rating of familiarity of words having the sound - /k/, /kʰ/, /g/, /gʰ/ at different positions in a word (i.e., initial, medial and final), irrespective of the vowel environment. All the respondents reported /kʰuḡḡə/, /kʰəḡəvəḡ/, /əkʰ/, /gəḡ/, /əḡḡə/ to be more than 75% familiar.

The familiarity of words having the sound - /c/, /cʰ/, /j/, /jʰ/ at different positions in a words (i.e., initial, medial and final), irrespective of the vowel environment was compared and all the words were found to be more than 50% familiar except /məḡḡəḡə/, /oḡḡə/ (<50% familiarity). /məḡḡəḡə/, /pəḡḡəḡə/, /boḡḡ/, /səḡḡḡḡ/, /kəḡḡḡḡ/, /licɪ/ has >50% but <75% familiarity. All the respondents reported more than 75% familiarity for /məḡḡəli/ and /jʰuḡə/. The familiarity of words having the sounds - /t/, /tʰ/, /n/ and /ŋ/ at different positions in a word (i.e., initial, medial and final), irrespective of the vowel environment was more than 50% for all the words except /tʰəppə, beḡḡək, gəḡḡ, bəḡḡ, vḡḡə. The words /tʰelə/, /tʰəḡḡə/, /məḡḡəri/, /lɪtʰi/, /gəḡḡḡḡ. /prəḡḡəm/, /sonər/, /senɪk/, /sɪndur/, /jʰəḡḡə/, /cen/, were reported to be more than 50% but less than 75% familiar. All the respondents reported more than 75% familiarity for /təpi/ and /nək/.

The familiarity of words having the sounds /d/, /dʰ/ and their allophonic variants /ɽ/, /ɽʰ/ - at different positions in a word (i.e., medial and final), irrespective of the vowel environment more than 50% for all words except /təḡḡəḡə/, /kʰəḡḡəḡə/, /dʰəl/ (<50% familiarity). The words /gəḡḡə/, /loməḡḡi/, /kʰuḡḡḡḡi/, /dʰəḡḡəkən/, /kəḡḡḡi/ were more than 50% but less than 75% familiar. The words /dʰəḡḡə/ and /kəḡḡḡi/ had a 100% familiarity. The familiarity of words having the sounds /t/, /tʰ/, /d/, /dʰ/ at different positions in a words (i.e., initial, medial and final), irrespective of the vowel environment was found more than 50% for all words except /tʰəḡḡə/, /həḡḡḡḡḡḡi/. All respondent reported /dʰuḡḡ/ to be more than 75% familiar.

The familiarity of words having the sounds /p/, /f/, /b/, /bʰ/, /m/ at

different positions in a words (i.e., initial, medial and final), irrespective of the vowel environment was more than 50% for all words except /kʰɔrpi/, /sup/, /inam/, /godgam/. The words /sɪpahi/, /fɔʒi/, /mʊŋgfəli/, /dʌfəli/, /səfɛd/, /gʊfə/, /durbʰɑʃ/, /əbʰuʒəŋ/, /əbʰɪnɛtʌ/, /gobʰi/, /moci/, /badgam/, /inam/ were reported 50 % to 75% familiarity. The words /pəni/, /bəndər/, /bɪlli/, /kɪrəb/ had more than 75% familiarity.

The the familiarity of words having the sounds /j/, /r/, /l/, /v/, /s/, /ʃ/, /ʒ/, /ʒr/, /h/, /kʃ/, /tʃ/, /gʃ/ at different positions in a words (i.e., initial, medial and final), irrespective of the vowel environment was compared. The words /jog/, /jak/, /sɪjər/, /rumal/, /ʃəriʃ/, /vəʒən/, /pəvət/ were found having familiarity less than 50%. All the

respondents reported more than 75% familiarity for /gaj/, /pər/, /gɪlās/, /bal/, /dʌrɔʒɑ/. The words /sədjəntʌ/, /sədqənən/, /bʰəgʒəfri/ were found having less than 50% familiarity. The words /gʰosəʌ/, /kɪsən/, /bās/, /ʃəŋkʰə/, /ʃəhəʌ/, /kʊʃti/, /nɑʃpəti/, /səʃkəŋ/, /ɪndʌdʰnʊs/, /bʰəʒəŋ/, /frəmɪk/, /frəddʰəlu/, /frɛʃtə/, /pəɪfrəm/ were reported to have familiarity of 50% to 75%. The words /kʃəʃ/, /nəkʃə/, /tɪkəŋ/, /tɪnɛtʌ/, /pəʃəkər/, /gɪʌ/, /gɪʌp/ were found having less than 50% familiarity. The words /həns/, /kəhəni/, /tʃəməhəl/, /sɪŋh/, /gehū/, /kʃəɪrɪʃ/, /kʃəməʌ/, /rəkʃəs/, /kəkʃə/, /vɪkʃə/, /tɪʃəkər/, /kʃəʃpəʃ/, /mɪʃtɪri/, /mənʃri/, /gʃəni/, /vɪgʃən/, /əgʃəni/, /vɪgʃəpən/, /jəgʒə/, /ərogʒə/, /prəʃgʒə/ had the familiarity between 50% to 75%. Table 1 below shows all the words included in the study and the words with <50% familiarity are shown in bold.

Table 1: IPA symbols used and Word list

akshara	IPA	Initial			Medial					
अ	ə	ənər	əmɾud	əlməri	suər					
आ	ɑ	ɑm	ɑlu	ɑg				Kɑɑ	kɑcɑɑ	
इ	ɪ	ɪməli	ɪdʌli	ɪməti						
ई	i	ikʰ	it	inɑm	rəsoigʰər	ɑina		məkəi	cəʃɑi	mɪʃʰɑi
उ	ʊ	ʊllu								
ऊ	u	un	ũt							
ऋ	ri	riʃi	riʃə							
ए	e	edʒi	ek	erɑvət						
ऐ	ɛ	enək								
ओ	o	okʰli								
औ	ɔ	ɔrət	ɔjər							
अं	ŋ	əŋgʊr	əŋgʊʃi							
अँ	akʰ									kʊɑ
क	k	kʊʃɑ	kɑn	kela	təkɪjɑ	bəkəri	məkəri	nək	ləki	cɑku
ख	kʰ	kʰɪrɑ	kʰərgɔf	kʰəjʊr	nəkʰun	əkʰbər	məkʰən	rəkʰi	bəʃəkʰ	pəŋkʰɑ
ग	g	gɑj	gəmlɑ	gɑjər	bɛgən	əŋgʊʃi	əŋgʊr	pəʃəŋg	jəg	ɑg
घ	gʰ	gʰər	gʰəri	gʰoʃɑ	sɪŋgʰəsən	dʌkəʰər	dʊrgʰəʃənɑ			bəgʰ
च	c	cudʒi	cɑku	cɑj	kʰɪcəri	kəcəhri	kəcɔʃi	mɪrɛɑ	lici	kɛɾci
छ	ç	çɑʃɑ	çənni	çɪpkəli	məçəli	kəçʰvɑ	məççər	müçʰ	püçʰ	məgərməçç
ज	ʒ	ʒʊʃɑ	ʒəlebi	ʒeb	ɪʒjən	gɑjər	pɪʒjəʃɑ	kɑju	mojɑ	
झ	ʒʰ	ʒʰɑdʊ	ʒʰɪdɑ	ʒʰula	məjʒʰəʌ	pəjʒʰər	mʊʒʰəjɑ	bəjʒʰ	səjʒʰ	oʒʰɑ
ट	t	tɔpi	tɪkɑ	təkəri	gʰʊʃənɑ	cəʃɑi	bəʃən	roʃi	bɑʃi	gʰənʃi
ठ	tʰ	tʰela	tʰəŋdɑ	tʰəppɑ	mɪʃʰɑi	məʃʰəri	bɛʃʰək	gɑʃʰ	lɑʃʰi	hō
ड	d	dəməru	dɑl	dəbbɑ	kʰəŋdʰəʰər	nɪdər	təndʰv	əŋdɑ	bʰɪŋdɪ	lə u
ढ	dʰ	dʰəkəkən	dʰolək	dʰal	medʰək	gəddʰɑ	budʰdʰɑ			
ण	ɳ				gəŋɳ	gəŋɳt	prə m	ɪŋɑ	r ə	bɳ
त	t	tɑlɑ	tərbʊj	t ə r u	bet əf	bət əl	bərt ən	k et	s t	dət
थ	tʰ	tʰərməs	tʰali	tʰɑnɑ	həʃʰəkəʌdʒi	həʃʰəʃɑ	pət t ə r	h t	rət	h t i
द	d	dɑl	dəvɑt	d n	bəndər	mənd r	əd ərək	gend	nəd i	əmɾud
ध	dʰ	dʰənʊʃ	dʰəgɑ	d obʰi	bəndʰəgobʰi	ən d er	n d rəd ən	gəd	kəŋd	d ud
न	n	nək	nəv	nəl	sənɪk	sɪndʊr	son r	cen	s b n	ərn
प	p	pəni	pəɪjɑ	pəʃəŋg	vəpəhər	sɪpahi	opə i	kʰɔrpi	sup	s ʃ
फ	f	ful	fəl	fuk	mʊŋgfəli	əʃəli	səfəd	g f	sof	bəʃf
ब	b	bəs	bənd ə r	b lli	s b n	kəbut ə r	ək b r	g l bi	nimbu	k t b
भ	bʰ	bʰəlu	b n i	b ə r	durb	b u ə	əb net	c b i	gob i	ib
म	m	m l	mor	muli	əlm ri	kəməl	əm ə r	inam	godgam	b d m
य	j	jəg	jak	jog	p jəl	pj	sɪjər	bəg j	c j	t ək j
र	r	r ni	r kʰi	rumal	k rsi	pərd	əriʃɑ	təl r	mə ə r	p r
ल	l	ləhs n	lə u	l ki	g l s	t l j	g l b	t l	lu	b l
व	v	vəst r	əkil	vəʒən	d ə r	pərvət	c ə l	hə	n	g
स	s	surə	sənt ə r	seb	b ʃ ri	g əsəl	k s n	b ʃ	b ʃ	g s
श	ʃ	əŋk	er	əhəd	cə m	mə in	n p t i	b r	r k	t
ष	ʃ	ə ko	ədjəntʃə	ədqənən	əd	k p ə	b ə	d ən	ko	nd rəd n
ह	h	h t	h t i	həns	kəhəni	gɪləhəri	məhəl	s ŋh	gehū	cuh
क्ष	kʃ	kʃəʃt	k ə m	k ə j	kʃək	rəkʃəs	əkʃər	kək	r k ə	nəkʃɑ
त्र	tr	t r ul	tɪkəŋ	tɪnɛtʃə	pəʃəkər	cɪʃəkər	kʃəʃpəʃ	çɑʃʰə	mənʃri	pəʃʰə
ज्ञ	gʒ	gʒəni	gʒəʃ	gʒəʃ	gʒ n	əgʒəni	vɪgʒəpən	ərogʒə	jəgʒə	prəʃgʒə
श्र	ʃr	ʃrəddʰəlu	ʃrəmɪk	r ə	rəm	vɪʃrəm	pəɪʃrəm	mɪʃri		bʰəgʒəfri
ड	ɽ				kʰɪʃəkɪ	cɪʃɪjɑ	bʰɛɪjɑ	pɛɪ	ʃʰəru	kʊʃhəri
ढ	ɽʰ				bəʃʰəi	kəʃʰəi	oʃʰəni	kəʃʰi	dʌʃʰi	sɪʃʰi

DISCUSSION

As observed in the above diagrams, the words with less than 50% familiarity (presence in their vocabulary) cannot be used with children for the purpose of speech sample elicitation, speech evaluation, language evaluation, speech correction and stimulation etc. Thus the words having familiarity <50% should not be used for these purposes. While all the words having more than 50% familiarity can be used while those with more than 75% familiarity should be the preferred. The consonants which were rated less than 50% familiarity might be observed to be more familiar with the older children (8yrs and above) but would be difficult to identify for the younger , preschool or upto 3rd standard children. Words even with familiarity less than 50% might be used for therapeutic purposes with all age groups where they need not identify but repeat after the clinician. Younger children need pictures for eliciting the word in speech and therefore cannot use those words which are not picturable. It can also be seen that certain consonants do not occur in all positions within a word, for example in hindi language /ŋ/, /dʰ/, /rʰ/ do not occur in initial position in any word.

CONCLUSION

The present study provides an insight into the familiarity of corpus or words with hindi sounds at different positions in words. Those words found more than 75% familiarity may be used with younger children for speech sample collection. The words with familiarity between 50 to 75% can be used with younger children along with few semantic and phonetic cues. The words with familiarity less than 5% can only be used with an instruction to “repeat after me” or “read and say” material if the child is hearing normally and has normal vision respectively. The result of this study will guide the use of words and will provide words which would be of utility in speech and language assessment and therapeutics for Speech Language Pathologists. This word list can be used by Linguists to collect the vocabulary of different languages which may be used for analyzing the sound system of that language.

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