ISSN: 2278-4012, Volume:2, Issue:3, JULY 2013

NAME AGREEMENT NORMS FOR A SET OF 260 PICTURES IN TAMIL

Wasim Ahmed[1] [MASLP] Lecturer,
Lokeshwari Lakshmanan[2]
III BSc (Speech and Hearing),
Priyanka.T.K[3]
III BSc (Speech and Hearing)

Abstract: *Studies of memory and cognitive process have long relied on pictorial stimuli, typically simple, abstract line drawings. There has been a considerable rise in the number of studies using standardized picture sets with the norms for a multitude of variables known to affect the picture processing. Usage of such picture sets makes the studies comparable across centers and languages. The availability of a large corpus of standardized pictures in any language would be a strong asset to researchers and in the absence of such a picture stimuli corpus in Tamil language; a strong necessity to develop a standardized picture set was identified. For this purpose, the overwhelmingly used Snodgrass and Vanderwart (1980) picture set was selected, which would be standardized based on the major variables affecting the picture naming performance in Tamil. This paper presents the first phase of the standardization process. Results of this study provided a positive indication that these pictures can be utilized to fulfill various experimental needs pertaining to Tamil speaking population, though standardization based upon rest of the variables namely image agreement, visual complexity, concept familiarity and age of acquisition are necessary and will facilitate the experimenters to select pictures efficiently to suit their needs.*
Key Words: *Standardized Picture Set, Tamil, Name agreement, Line Drawings.*

Introduction

The utility of picture naming is beyond dispute, yet, it has become evident to us that cross linguistic comparisons using this technique are limited by the absence of comparable naming norms across the languages. As there are many different ways to depict an object in a picture, each one can elicit a different response. Also, the degree to which each picture possesses the characteristics that affect the process under investigation is unknown (Snodgrass and Vanderwart 1980). To be able to compare studies that used picture naming, it is important to have norms of the pictorial stimuli that are used in these studies. A few of the widely used picture sets for which norms have been provided are Snodgrass and Vanderwart 260 picture set (1980), Peabody Picture Vocabulary Test - Revised (Dunn & Dunn, 1981).

The most frequently used picture set in norming studies is the one developed by Snodgrass and Vanderwart (1980). These authors standardized 260 pictures on following variables: name agreement, image agreement, familiarity, age of acquisition (AoA) and visual complexity. These variables are known to have very high theoretical importance in studies of

ISSN: 2278-4012, Volume:2, Issue:3, JULY 2013

picture naming. Each of these variables are postulated to play a critical role at individual stages of processing involved in the picture naming task. Visual complexity and image agreement have an influence at the visual recognition system. Similarly, imageability at the level of semantic system, the age of acquisition and word frequency act at the lexical system and the name agreement has an effect between the semantic and lexical systems Alario, Ferrand, Laganaro, New, Frauenfelder, and Segui (2004).

Name agreement refers to the degree to which participants agree on the name of the picture. Name agreement is measured by assessing the number of different names given to a particular picture across participants. Pictures that elicit many different names have lower name agreement than do those that elicit a single name. Name agreement is also a robust predictor of naming difficulty. Pictures with a single dominant response are named more quickly and accurately than those with multiple responses (Barry, Morrison, and Ellis, 1997; Lachman, Shaffer, & Hennrikus, 1974; Paivio, Clark, Digdon, & Bons, 1989; Snodgrass & Yuditsky, 1996; Vitkovitch & Tyrrell, 1995). More importantly, name agreement affects naming latencies independently of the effects of correlated attributes such as word frequency and rated age of acquisition (Lachman et al., 1974; Vitkovitch & Tyrrell, 1995).

There exists overwhelming evidence in the literature to show the extent to which these pictures have been utilized in various languages with an appreciable impact factor. Ever since the days of Cattell (1886), picture naming has been a widely used technique in various domains of psychological research. It has been used to investigate a number of components of language production such as lexical access and phonological encoding (e.g., Levelt, Schriefers,Vorberg, Meyer, Pechmann, & Havinga, 1991; Santiago, MacKay, Palma, & Rho, 2000; Starreveld, 2000). Picture naming has also been used in fMRI studies (e.g., Hernandez, Martinez, & Kohnert, 2000; Rutten, Ramsey, van Rijen, & van Veelen, 2002; Spitzer et al., 1998; Damasio, Grabowski, Tranel, Ponto, Hichwa, & Damasio, et al., 2001; Hernandez, Dapretto, Mazziotta, & Bookheimer, 2001), event-related brain potentials or ERP studies (Schmitt, Münte, & Kutas, 2000; van Turennout, Hagoort, & Brown, 1997, 1998, 1999; Wicha, Bates, Moreno, & Kutas, 2000; Hauk, Rockstroh, & Eulitz, 2001; Schiller, Bles, & Jansma, 2003; Schmitt, Schiltz, Zaake, Kutas, & Munte, 2001) and studies of bilingualism (e.g., Costa, Miozzo, & Caramazza, 1999; Francis & Sáenz, 2007; Gollan, Montoya, Notestine, & Morris, 2005).

Need for the study

Taking these factors into account and in the absence of such a picture stimuli corpus in Tamil language, a strong necessity to develop a standardized picture set was identified. For this purpose, the overwhelmingly used Snodgrass and Vanderwart (1980) picture set was selected, which would be standardized based on the major variables affecting the picture naming performance in Tamil. This paper presents the first phase of the standardization process.

Aim of the Study

ISSN: 2278-4012, Volume:2, Issue:3, JULY 2013

To standardize a set of pictures based on the name agreement variable for Tamil speaking adults

Method

A total of 60 subjects within the age range of 16-70 years participated in the study. All were native Tamil speakers belonging to Chennai city and approximately equal number of males and females served in task. Stimuli consisted of 260 pictures, developed by Snodgrass and Vanderwart (1980). Subjects were given a questionnaire containing not more than 12 drawings in each page and were instructed to write the names within the space provided. They were instructed to identify each picture with the first name that came to their mind which may consist of more than one word. Specific instructions, designed to elucidate the sources of naming failures, were also given. Subjects were instructed to respond (✗) if the picture was of an object unknown to them i.e., don't know object [DKO]. If the object was known but the name was unknown, they were to respond (✓) i.e., don't know name [DKN]. And, finally, if they knew the name but it was momentarily irretrievable, they were to respond (O) i.e., tip-of-the-tongue [TOT]. The collected data was suitably tabulated and was subjected to descriptive statistical treatment along with information statistic 'H' and with percentage agreement scores for each picture. The three categories of naming failures DKO (don't know object), DKN (don't know name) and TOT (tip-of-the tongue) were eliminated when computing H but not when computing percentage agreement scores.

Results and Discussion

The name agreement was computed using the liberal criteria suggested by Snodgrass and Yuditsky (1996). For the name agreement task, both H value and the percentage agreement scores were calculated. However, more importance was given to H statistics because it captures greater information than just percentage agreement scores (Snodgrass & Vanderwart, 1980). For example, consider two pictures having equal percentage agreement scores – say 60% - for their respective dominant names and suppose they have varying numbers of non-dominant names, i.e., the first one has four alternative names and the second has only one, then, the second concept will have a lower H value, indicating a higher name agreement (which is the actual case) compared to the first concept, even when both have equal percentage agreement scores.

While calculating H values, the three categories of naming failures (don't know object – DKO, don't know name – DKN, & tip-of-the-tongue – TOT) were eliminated. But, while calculating the percentage agreement scores, these naming failures were also included. Hence, a picture with H value of 0.0 can have percentage agreement score less than 100 because the picture may have produced naming failures in some participants. Therefore, while selecting pictures, it is wise to consider both the H value as well as the percentage agreement to select the best suitable pictures as per the demands of the designed study.

ISSN: 2278-4012, Volume:2, Issue:3, JULY 2013

If a picture elicited the same name from every subject, then the concept of that picture will have an H value of 0.0, indicating a perfect name agreement. A picture of a concept that elicited exactly two different names with equal frequency would have an H value of 1.00. Therefore, in simple terms, increasing H value indicates decreasing name agreement (Snodgrass & Vanderwart, 1980; Pompeia, Miranda & Bueno 2001).

The normative data has been provided in the appendix which maintains the same order as originally given by Snodgrass and Vanderwart (1980) and even the serial numbers provided by the authors have been kept unaltered for cross reference. The appendix consists of the actual response in Tamil script and the corresponding International Phonetic Alphabet (IPA) transcripts for each picture along with two measures of name agreement: the information statistic H and the percentage name agreement (i.e., the percentage of subjects giving the most common name). The IPA transcripts were done using the link http://software.nhm.in developed by new horizon media Pvt Ltd. Chennai.

Table 1: Summary statistics for name agreement [H]:

		H
Mean		**0.17**
Median		**0.15**
SD		**0.12**
Skewness		**0.10**
Range		**0.37**
Minimum		**0.00**
Maximum		**0.37**
Percentiles	**25th**	**0.06**
	75th	**0.29**

As it is evident from table 1 the distribution of H values had a low mean (0.17) and was positively skewed (0.10), indicating that concepts have a high name agreement overall. Out of the 260 pictures, 200 concepts had high name agreement indicating that these pictures can be utilized for clinical and research purposes concerning Tamil speaking adult population between

ISSN: 2278-4012, Volume:2, Issue:3, JULY 2013

the age range of 16-70 years. Among these 200 pictures some also had a dominant alternate name and hence it is suggested that either of them can be considered as a correct response. The concepts were grouped based on the percentile scores for H values. All the pictures which had H value less than the 75th percentile (0.29) were accepted as having high name agreement. Lower name agreement was observed for 60 of the concepts where each of the concepts had H value greater than the 75th percentile and low percentage scores. Most of these concepts received misnomers which were further classified as:

(a) Ambiguous names: 9(Artichoke misinterpreted as |pū| which means flower), 10 (Ashtray as |aṭuppu| which refers to gas stand), 11 (asparagus as |kampu| that is jowar), 117(Harp as |kēṭ| means gate), 230(thimble as |ṭamḷar| meaning tumbler), 194(saltshaker as |pāṭṭil| meaning bottle), 219(stove as |tuvaikkumentiram| meaning washing machine).

(b) Pictures named with common local substitute: 1 (accordion was named as |hārmōn̲iyam| that is harmonium), 33 (bow as |rippan̲| meaning ribbon), 79 (dresser as |ṭivi ṭepiḷ| that is TV table), 137 (lettuce as |ilaik kōcu| refers to cabbage), 142 (lobster as |tEl| meaning scorpion), 144 (mitten as |pāksiṅ kiḷavus| that is boxing gloves), 152 (nail file as |katti| reffering to knife), 166 (pear as |curaikkāy| meaning pear), 258(wine glass as |kōppai| that is cup), 259 (wrench as |spēn̲ar| which refers to spanner), 127 (kettle as |ṭīṭjak| means tea jug), 29(blouse as |caṭṭai| which is shirt), 99 (French horn as |ṭrampeṭ| that is trumpet), 125 (jacket as |kōrṭ| refers to court), 189 (roller skate as |uruḷumceruppu| which means skating shoe), 229 (tennis racket as |rākkeṭ maṭṭai| means racket bat), 247 (vest as |kōrṭ| which refers to court), 67 (couch as |cōpā| refers to sofa), 101 (frying pan as |tavā| meaning tava).

(c) For five of the pictures it was decided to accept two dominant names, as both names were synonymous and referred exactly to the same concept. In these pictures either of the dominant names can be accepted as a correct response. These pictures were: 10 (|addupu| which means gas stand), 11 (|kampu| refers to jowar), 31 (|pūṭs| means boots), 51 (|kīrai| that is spinach|), 79 (|ṭivi ṭepiḷ| refers tv table).

(d) For two pictures categorical name (51 celery as |kīrai| that is spinach) and (163 peach as |pal̲am| means fruit) Even though the participants had to provide the names for the concepts in Tamil, a few concepts received the English version of the concept as the dominant responses, for example pictures 31 (boot), 32 (bottle), 38 (brush), and 47 (car). These were accepted as the dominant responses as they were consistently provided by majority of the participants.

Conclusions

Results of this study provided a positive indication that these pictures can be utilized to fulfill various experimental needs pertaining to Tamil speaking adult population, though standardization based upon rest of the variables namely image agreement, visual complexity,

ISSN: 2278-4012, Volume:2, Issue:3, JULY 2013

concept familiarity and age of acquisition are necessary and will facilitate the experimenters to select pictures efficiently to suit their needs. Furthermore, it is advised to the experimenters who desire to use this picture set to avoid the list of pictures that have a greater potential to generate ambiguous responses as they may hamper the experimental results. Also, it may be noted that care must be taken while selecting the pictures which have lower name agreement scores.

References

Alario, F. X., Ferrand, L., Laganaro, M., New, B., Frauenfelder, U. H., & Segui, J. (2004). Predictors of picture naming speed. *Behavior Research Methods, Instruments, & Computers*, *36*(1), 140-155.

Barry, C., Morrison, C. M., & Ellis, A.W. (1997). Naming the Snodgrass and Vanderwart pictures: Effects of age of acquisition, frequency, and name agreement. *Quarterly Journal of Experimental Psychology*, *50*A, 560-585.

Cattell, J. M. (1886). The time it takes to see and name objects. *Mind*, *11*, 63–65.

Costa, A., Miozzo, M., & Caramazza, A. (1999). Lexical selection in bilinguals: Do words in bilingual's lexicon compete for selection? *Journal of Memory and Language*, *41*, 381–391.

Damasio, H., Grabowski, T. J., Tranel, D., Ponto, L. L. B., Hichwa, R. D., & Damasio, A. R. (2001). Neural correlates of naming actions and of naming spatial relations. *NeuroImage*, *13*, 1053-1064.

Dunn, L. M., & Dunn, L. M. (1981). Peabody picture vocabulary test revised. Circle Pines, MN: American Guidance Service.

Francis, W. S., & Sáenz, S. P. (2007). Repetition priming endurance in picture naming and translation: Contributions of component processes. *Memory & Cognition*, *35*(3), 481-493.

Gollan, T. H., Montoya, R. I., Notestine, C. F., Morris, S. K. (2005). Bilingualism affects picture naming but not picture classification. *Memory & Cognition*, *33*(7), 1220-1234.

Hauk, O., Rockstroh, B., & Eulitz, C. (2001). Grapheme monitoring in picture naming: An electrophysiological study of language production. *Brain Topography*, *14*, 3–13.

Hernandez, A. E., Dapretto, M., Mazziotta, J., & Bookheimer, S. (2001). Language switching and language representation in Spanish–English bilinguals: An fMRI study. *NeuroImage*, *14*, 510-520.

Hernandez, A. E., Martinez, A., & Kohnert, K. (2000). In search of the language switch: An fMRI study of picture naming in Spanish-English bilinguals. *Brain and Language*, *73*, 421–431.

Kaplan, E., Goodglass, H., & Weintraub, S. (1983). *The Boston NamingTest*. Philadelphia: Lea and Febiger.

Lachman, R., Shaffer, J. P., & Hennrikus, D. (1974). Language and cognition: Effects of stimulus codability, name-word frequency, and age of acquisition on lexical reaction time. *Journal of Verbal Learning & Verbal Behavior*, *13*, 613-625.

Levelt, W. J. M., Schriefers, H., Vorberg, D., Meyer, A. S., Pechmann, T., & Havinga, J. (1991). The time course of lexical access in speech production: A study of picture naming. *Psychological Review*, *98*, 122–142.

Paivio, A., Clark, J. M., Digdon, N., & Bons, T. (1989). Referential processing: Reciprocity and correlates of naming and imaging. *Memory & Cognition*, *17*, 163-174.

Pompéia, S., Miranda, M. C., & Bueno, O. F. A. (2001). A set of 400 pictures standardized for Portuguese Norms for name agreement, familiarity, and visual complexity for children and adults. *Arq Neuropsiquitar*, *59*(2-B), 330-337.

Rutten, G. J. M., Ramsey, N. F., van Rijen, P. C., & van Veelen, C. W. M. (2002). Reproducibility of fMRI-determined language lateralization in individual subjects. *Brain and Language*, *80*, 421–437.

Santiago, J., MacKay, D. G., Palma, A., & Rho, C. (2000). Sequential activation processes in producing words and syllables: Evidence from picture naming. *Language and Cognitive Processes, 15*, 1–44.

Schiller, N. O., Bles, M., & Jansma, B. M. (2003). Tracking the time course of phonological encoding in speech production: An event-related brain potential study. *Cognitive Brain Research, 17*, 819–831.

Schmitt, B. M., Münte, T. F., & Kutas, M. (2000). Electrophysiological estimates of the time course of semantic and phonological encoding during picture naming. *Psychophysiology, 3*, 473-484.

Schmitt, B. M., Schiltz, K., Zaake, W., Kutas, M., & Münte, F. (2001). An electrophysiological analysis of the time course of conceptual and syntactic encoding during tacit picture naming. *Journal of Cognitive Neuroscience, 13*, 510–522.

Snodgrass, J. G., & Vanderwart, M. (1980). A standardized set of 260 pictures: Norms for name agreement, familiarity and visual complexity. *Journal of Experimental Psychology: Human Learning & Memory, 6*, 174-215.

Snodgrass, J.G.,&Yuditsky, T. (1996).Naming times for the Snodgrass and Vanderwartpictures.*Behavior Research Methods, Instruments, & Computers, 28*, 516-536.

Spitzer, M., Kirschka, U., Guckel, F., Belleman, M. E., Kammer, T., Seyyedi, S., et al. (1998). Functional magnetic resonance imaging of category-specific cortical activation: Evidence for semantic maps. *Cognitive Brain Research, 6*, 309–319.

Starreveld, P. A. (2000). On the interpretation of onsets of auditory context effects in word production. *Journal of Memory and Language, 42*, 497–525.

van Turennout, M., Hagoort, P., & Brown, C. (1997). Electrophysiological evidence on the time course of semantic and phonological processes in speech production. *Journal of Experimental Psychology: Learning, Memory, & Cognition, 23*, 787-806.

van Turennout, M., Hagoort, P., & Brown, C. (1998). Brain activity during speaking: From syntax to phonology in 40 milliseconds. *Science, 280*, 572-574.

van Turennout, M., Hagoort, P., & Brown, C. (1999). The time course of grammatical and phonological processing during speaking: Evidence from event-related brain potentials. *Journal of Psycholinguistic Research, 28*, 649-676.

Vitkovitch, M., & Tyrrell, L. (1995). Sources of disagreement in object naming. *Quarterly Journal of Experimental Psychology, 48*A, 822-848.

Wicha, N. Y. Y., Bates, E., Moreno, E., & Kutas, M. (2000). Grammatical gender modulates semantic integration of a picture in a Spanish sentence. *Psychophysiology, 37* (Suppl. 1). S104.

ISSN: 2278-4012, Volume:2, Issue:3, JULY 2013

Appendix

ic no	Actual name	Tamil Responses	IPA transcript	H	Percentage
1	Accordion	ஹார்மோனியம்	|hārmōn̲iyam|	0.36	26.6
2	Airplane	விமானம்	|vimān̲am|	0.03	96.6
3	Alligator	முதலை	|Mutalai|	0.06	93.3
4	Anchor	நங்கூரம்	|naṅkūram|	0.24	63.3
5	Ant	எறும்பு	|eṟumpu|	0.02	96.6
6	Apple	ஆப்பிள்	|āppiḷ|	0.02	98.3
7	Arm	கை	|Kai|	0	100
8	Arrow	அம்பு	|Ampu|	0.14	76.6
9	Artichoke	பூ	|Pū|	0.37	30
10	Ash tray	அடுப்பு	|aṭuppu|	0.29	13.3
11	Asparagus	கம்பு	|Kampu|	0.24	10
12	Axe	கோடாரி	|kōṭāri|	0.07	90
13	Baby carriage	குழந்தை தள்ளு வண்டி	|kuḻantai taḷḷu|vaṇṭi|	0.33	53.3
14	Ball	பந்து	|Pantu|	0	100
15	Balloon	பலூன்	|palūn̲|	0.12	86.6
16	Banana	வாழைப்பழம்	|vāḻaippaḻam|	0	100
17	Barn	வீடு	|vīṭu|	0.19	73.3
18	Barrel	பீப்பாய்	|Pīppāy|	0.25	55
19	Baseball bat	மட்டை	|maṭṭai|	0.32	50
20	Basket	கூடை	|Ūṭai|	0.06	91.6
21	Bear	கரடி	|karaṭi|	0	100
22	Bed	கட்டில்	|kaṭṭil|	0.11	88.3
23	Bee	தேனி	|tēn̲i|	0.14	83.3
24	Beetle	கரப்பான்பூச்சி	|karappān̲pūcci|	0.15	68.3
25	Bell	மணி	|maṇi|	0	100
26	Belt	பெல்ட்	|pelṭ|	0.19	78.3
27	Bicycle	மிதிவண்டி	|mitivaṇṭi|	0.06	93.3
28	Bird	குருவி	|Kuruvi|	0.11	88.3
29	Blouse	சட்டை	|caṭṭai|	0.06	93.3
30	Book	புத்தகம்	|Puttakam|	0	100
31	Boot	பூட்ஸ்	|pūṭs|	0.35	58.3
32	Bottle	பாட்டில்	|pāṭṭil|	0.26	66.6
33	Bow	ரிப்பன்	|rippan̲|	0.35	23.3

ISSN: 2278-4012, Volume:2, Issue:3, JULY 2013

34	Bowl	கிண்ணம்	|kiṇṇam|	0.13	80
35	Box	பெட்டி	|peṭṭi|	0.08	86.6
36	Bread	ரொட்டி	|roṭṭi|	0.24	71.6
37	Broom	துடப்பம்	|tuṭappam|	0.32	50
38	Brush	பிரஸ்	|Piras|	0.35	36
39	Bus	பேருந்து	|pe:runtu|	0	100
40	Butterfly	வண்ணத்துப் பூச்சி	|vaṇṇattup pūcci|	0	100
41	Button	பட்டன்	|paṭṭaṉ|	0.31	58.3
42	Cake	கேக்	|Kēk|	0.25	70
43	Camel	ஒட்டகம்	|oṭṭakam|	0	100
44	Candle	மெழுகுவர்த்தி	|meḻukuvartti|	0.08	91.6
45	Cannon	பீரங்கி	|pīraṅki|	0.25	63.3
46	Cap	தொப்பி	|Toppi|	0.16	78.3
47	Car	கார்	|Kār|	0.15	50
48	Carrot	கேரட்	|kēraṭ|	0.23	55
49	Cat	பூனை	|pūṉai|	0	100
50	Caterpillar	புழு	|puḻu|	0.25	55
51	Celery	கொத்தமல்லி	|Kottamalli|	0.31	8.3
52	Chain	சங்கிலி	|caṅkili|	0.15	83.3
53	Chair	நாற்காலி	|nāṟkāli|	0.11	88.3
54	Cherry	செர்ரி	|Cerri|	0.37	31.6
55	Chicken	கோழி	|kōḻi|	0	100
56	Chisel	உலி	|Uli|	0.36	28.3
57	Church	தேவாலயம்	|Tēvālayam|	0.24	66.6
58	Cigar	சுருட்டு	|curuṭṭu|	0.26	60
59	Cigarette	சிகெரட்	|cikeraṭ|	0.25	66.6
60	Clock	கடிகாரம்	|kaṭikāram|	0	100
61	Clothespin	கிளிப்	|kiḷip|	0.29	61.6
62	Cloud	மேகம்	|Mēkam|	0.15	83.3
63	Clown	கோமாளி	|kōmāḷi|	0.11	61.6
64	Coat	கோர்ட்	|kōrṭ|	0.29	41.6
65	Comb	சீப்பு	|Cīppu|	0.03	88.3
66	Corn	சோளம்	|cōḷam|	0.08	91.6
67	Couch	சோபா	|Cōpā|	0.23	73.3
68	Cow	மாடு	|māṭu|	0	100
69	Crown	கிரிடம்	|kiriṭam|	0.18	78.3

ISSN: 2278-4012, Volume:2, Issue:3, JULY 2013

70	Cup	கோப்பை	|Kōppai|	0.2	75
71	Deer	மான்	|māṉ|	0.03	96.6
72	Desk	மேஜை	|Mējai|	0.12	86.6
73	Dog	நாய்	|Nāy|	0	100
74	Doll	பொம்மை	|Pommai|	0.08	78.3
75	Donkey	கழுதை	|kaḻutai|	0.02	80
76	Door	கதவு	|Katavu|	0.02	95
77	Doorknob	கைப்பிடி	|kaippiṭi|	0.28	63.3
78	Dress	கவுன்	|kavuṉ|	0.23	66.6
79	Dresser	டிவி டெபிள்	|ṭivi ṭepiḷ|	0.34	16.6
80	Drum	மேளம்	|mēḷam|	0.37	40
81	Duck	வாத்து	|Vatu|	0	100
82	Eagle	கழுகு	|kaḻuku|	0.11	86.6
83	Ear	காது	|Kātu|	0	100
84	Elephant	யானை	|yāṉai|	0	100
85	Envelope	கடிதம்	|kaṭitam|	0.18	80
86	Eye	கண்	|kaṇ|	0	100
87	Fence	வேலி	|ve:li|	0.28	63.3
88	Finger	விரல்	|Viral|	0	100
89	Fish	மீன்	|mīṉ|	0	100
90	Flag	கொடி	|koṭi|	0.06	93.3
91	Flower	பூ	|Pū|	0	100
92	Flute	புல்லாங்குழல்	|pullāṅkuḻal|	0.36	30
93	Fly	ஈ	|Ī|	0.08	90
94	Foot	கல்	|Kal|	0.02	90
95	Football	பந்து	|Pantu|	0.35	50
96	Football helmet	தலைக்கவசம்	|Talaikkavacam|	0.27	66.6
97	Fork	முல் கரண்டி	|mul karaṇṭi|	0.26	65
98	Fox	நரி	|Nari|	0.05	91.6
99	French horn	ட்ரம்பெட்	|ṭrampeṭ|	0.36	40
100	Frog	தவளை	|tavaḷai|	0	100
101	Frying pan	தவா	|tavā|	0.36	40
102	Garbage can	குப்பைத் தொட்டி	|kuppait toṭṭi|	0.08	56.6
103	Giraffe	ஒட்டகச்சிவிங்கி	|oṭṭakacciviṅki|	0.15	83.3
104	Glass	கண்ணாடி டம்ளர்	|kaṇṇāṭi ṭamḷar|	0.17	81.6
105	Glasses	மூக்குக் கண்ணாடி	|mūkkuk kaṇṇāṭi|	0.05	95

ISSN: 2278-4012, Volume:2, Issue:3, JULY 2013

106	Glove	கையுரை	|kaiyurai	0.26	66.6
107	Goat	ஆடு	|āṭu|	0.11	88.3
108	Gorilla	மனிதகுரங்கு	|maṉitakuraṅku|	0.18	80
109	Grapes	திராட்சை	|tirāṭcai|	0.07	90
110	Grasshopper	வெட்டுக்கிளி	|veṭṭukkiḷi|	0.16	70
111	Guitar	கிட்டார்	|kiṭṭār|	0.2	76.6
112	Gun	துப்பாக்கி	|tuppākki|	0.08	91.6
113	Hair	முடி	|muṭi|	0.13	83.3
114	Hammer	சுத்தி	|cutti|	0.17	81.6
115	Hand	கை	|kai|	0.12	86.6
116	Hanger	ஹேங்கர்	|hēṅkar|	0.27	66.6
117	Harp	கேட்	|kēṭ|	0.33	18.3
118	Hat	தொப்பி	|toppi|	0.18	80
119	Heart	ஹார்ட்டின்	|hārṭṭiṉ|	0.06	93.3
120	Helicopter	ஹெலிகப்டர்	|helikapṭar|	0.33	51.6
121	Horse	குதுரை	|kuturai|	0	100
122	House	வீடு	|vīṭu|	0.06	93.3
123	Iron box	இஸ்திரிப்பெட்டி	|istirippeṭṭi|	0.15	83.3
124	Ironing board	ஈஸ்திரிமேஜை	|īstirimējai|	0.36	33.3
125	Jacket	சர்ட்	|carṭ|	0.35	38.3
126	Kangaroo	கங்காரு	|kaṅkāru|	0.15	83.3
127	Kettle	டீஜக்	|ṭījak|	0.37	35
128	Key	சாவி	|cāvi|	0	100
129	Kite	காத்தாடி	|kāttāṭi|	0	100
130	Knife	கத்தி	|katti|	0.25	68.3
131	Ladder	ஏணி	|ēṇi|	0.08	91.6
132	Lamp	இரவு விளக்கு	|iravu viḷakku|	0.2	76.6
133	Leaf	இலை	|ilia|	0.03	96.6
134	Leg	முன்னங்கால்	|muṉṉaṅkāl|	0.02	95
135	Lemon	எலுமிச்சைபழம்	|elumiccaipaḻam|	0.24	63.3
136	Leopard	சிறுத்தை	|ciṟuttai|	0.12	78.3
137	Lettuce	இலைக் கோசு	|ilaik kōcu|	0.28	41.6
138	Light bulb	பல்ப்	|palp|	0.27	66.6
139	Light switch	சுவிச்	|cuvic|	0.33	51.6
140	Lion	சிங்கம்	|ciṅkam|	0	100
141	Lips	வாய்	|vāy|	0	100

ISSN: 2278-4012, Volume:2, Issue:3, JULY 2013

142	Lobster	தேல்	|tEl|	0.31	50
143	Lock	பூட்டு	|pūṭṭu|	0.03	96.6
144	Mitten	பாக்ஸிங் கிளவுஸ்	|pāksiṅ kiḷavus|	0.37	28.3
145	Monkey	குரங்கு	|kuraṅku|	0	100
146	Moon	நிலா	|nilā|	0.05	85
147	Motor cycle	மோட்டார் சைக்கிள்	|mōṭṭār caikkiḷ|	0.15	83.3
148	Mountain	மலை	|malai|	0	100
149	Mouse	எலி	|èḶ|	0	100
150	Mushroom	நாய்க்குடை	|nāykkuṭai|	0.15	83.3
151	Nail	ஆணி	|āṇi|	0.08	88.3
152	Nail file	கத்தி	|katti|	0.08	91.6
153	Necklace	முத்துமாலை	|muttumālai|	0.17	78.3
154	Needle	ஊசி	|ūci|	0.08	91.6
155	Nose	மூக்கு	|mūkku|	0.03	96.6
156	Nut	திருகு	|tiruku|	0.28	58.3
157	Onion	வெங்காயம்	|veṅkāyam|	0.02	95
158	Orange	கமலாப்பழம்	|kamalāppaḻam|	0.32	55
159	Ostrich	நெருப்புக் கோழி	|neruppuk kōḻi|	0.18	75
160	Owl	ஆந்தை	|āntai|	0.06	93.3
161	Paint brush	வண்ணம்திட்டும்கோல்	|vaṇṇamtiṭṭumkōl|	0.32	55
162	Pants	கால்சட்டை	|kālcaṭṭai|	0.23	73.3
163	Peach	பழம்	|paḻam|	0.34	18.3
164	Peacock	மயில்	|mayil|	0.02	95
165	Peanut	வேர்கடலை	|vērkaṭalai|	0.09	90
166	Pear	சுரைக்காய்	|curaikkāy|	0.37	28.3
167	Pen	பேனா	|pēṉā|	0	100
168	Pencil	பென்சில்	|peṉcil|	0.08	91.6
169	Penguin	பென்குயின்	|peṉkuyiṉ|	0.31	60
170	Pepper	கொடைமிளகாய்	|koṭaimiḷakāy|	0.2	76.6
171	Piano	பியானோ	|piyāṉō|	0.36	36
172	Pig	பண்ணி	|paṇṇi|	0.12	86.6
173	Pineapple	அன்னாசிப்பழம்	|aṉṉācippaḻam|	0.05	95
174	Pipe	புகைபிடிக்குதல்	|pukaipiṭikkutal|	0.36	46.6
175	Pitcher	ஜார்	|jār|	0.28	41.6
176	Pliers	கோடாவேலி	|kōṭāvēli|	0.31	56.6
177	Plug	பலகு	|palaku|	0.32	56.6

ISSN: 2278-4012, Volume:2, Issue:3, JULY 2013

178	Pocket book	கைபை	|kaipai|	0.08	91.6
179	Pot	பல்குண்டான்	|palkuṇṭāṉ|	0.36	33.3
180	Potato	உருளைக்கிழங்கு	|uruḷaikkiḻaṅku|	0.2	76.6
181	Pumpkin	பூசனிக்காய்	|pūcaṉikkāy|	0.09	90
182	Rabbit	முயல்	|muyal|	0.02	98.3
183	Raccoon	பூனுகுப்பூனை	|pūṉukuppūṉai|	0.31	60
184	Record player	கிராமபோன்	|kirāmapōṉ|	0.36	23.3
185	Refrigerator	குளிர்சாதனப்பெட்டி	|kuḷircātaṉappeṭṭi|	0.08	91.6
186	Rhinoceros	காண்டாமிருகம்	|kāṇṭāmirukam|	0.18	80
187	Ring	மோதிரம்	|mōtiram|	0.06	93.3
188	Rocking chair	ஆடும்நாற்காலி	|āṭumnāṟkāli|	0.18	76.6
189	Roller skate	உருளும்செருப்பு	|uruḷumceruppu|	0.37	28.3
190	Rolling pin	உருளை	|uruḷai|	0.37	30
191	Rooster	சேவல்	|cēval|	0.08	91.6
192	Ruler	அளவுகோல்	|aḷavukōl|	0.09	90
193	Sailboat	பாய்மரக்கப்பல்	|pāymarakkappal|	0.15	83.3
194	Salt shaker	பாட்டில்	|pāṭṭil|	0.36	30
195	Sandwich	சான்விச்	|cāṉvic|	0.37	36
196	Saw	ரமபம்	|ramapam|	0.18	80
197	Scissors	கத்திரிக்கோல்	|kattirikkōl|	0.09	91.6
198	Screw	திருகாணி	|tirukāṇi|	0.22	70
199	Screw driver	திருப்புளி	|tiruppuḷi|	0.31	60
200	Sea horse	கடல்குதிரை	|kaṭalkutirai|	0.3	61.6
201	Seal	கடல்நாய்	|kaṭalnāy|	0.36	40
202	Sheep	செம்மறிஆடு	|cemmaṟiāṭu|	0.18	80
203	Shirt	சாட்டை	|cāṭṭai|	0.26	66.6
204	Shoe	சூ	|cū|	0.27	65
205	Skirt	பாவாடை	|pāvāṭai|	0.28	63.3
206	Skunk	அணில்	|aṇil|	0.15	83.3
207	Sled	சில்டு	|cilṭu|	0.27	41.6
208	Snail	நத்தை	|nattai|	0.06	93.3
209	Snake	பாம்பு	|pāmpu|	0	100
210	Snow man	பனிப்பொம்மை	|paṉippommai|	0.31	60
211	Socks	கால்உரை	|kālurai|	0.36	33.3
212	Spider	சிலந்தி	|cilanti|	0.19	76.6
213	Spinning wheel	ராட்டினம்	|rāṭṭiṉam|	0.23	73.3

ISSN: 2278-4012, Volume:2, Issue:3, JULY 2013

214	Spool of thread	நூலுருண்டை	|nūluruṇṭai|	0.34	53.3
215	Spoon	ஸ்பூன்	|spūṉ|	0.19	66.6
216	Squirrel	அணில்	|aṇil|	0.09	90
217	Star	நட்சத்திரம்	|naṭcattiram|	0.08	91.6
218	Stool	ஸ்டூல்	|sṭūl|	0.32	43.3
219	Stove	துவைக்கும்எந்திரம்	|tuvaikkumentiram|	0.3	61.6
220	Strawberry	ஸ்ட்ராபெரி	|sṭrāperi|	0.2	76.6
221	Suitcase	சூட்கேஸ்	|cūṭkēs|	0.22	60
222	Sun	சூரியன்	|cūriyaṉ|	0	100
223	Swan	அண்ணம்	|aṇṇam|	0.14	85
224	Sweater	சுவட்டர்	|cuvaṭṭar|	0.31	50
225	Swing	ஊஞ்சல்	|ūñcal|	0.18	80
226	Table	டெபிள்	|ṭepiḷ|	0.15	83.3
227	Telephone	தொலைபேசி	|tolaipēci|	0.12	86.6
228	Television	தொலைக்காட்சி	|tolaikkāṭci|	0.03	96
229	Tennis racket	ராக்கெட் மட்டை	|rākkeṭ maṭṭai|	0.26	65
230	Thimble	டம்ளர்	|ṭamḷar|	0.29	13.3
231	Thumb	கட்டைவிரல்	|kaṭṭaiviral|	0.02	96
232	Tie	டை	|ṭai|	0.27	66.6
233	Tiger	புலி	|puli|	0.03	93.3
234	Toaster	பிரட்டொஸ்டர்	|piraṭṭosṭar|	0.36	33.3
235	Toe	நகம்	|nakam|	0.21	58.3
236	Tomato	தக்காளி	|takkāḷi|	0.09	90
237	Tooth brush	பல்விளக்கும்பிரஸ்	|palviḷakkumpiras|	0.12	86.6
238	Top	பம்பரம்	|pamparam|	0.15	83.3
239	Traffic light	சிக்னல்	|cikṉal|	0.22	75
240	Train	புகைவண்டி	|pukaivaṇṭi|	0.06	93.3
241	Tree	மரம்	|maram|	0	100
242	Truck	லாரி	|lāri|	0.14	76.6
243	Trumpet	ட்ரம்பெட்	|ṭrampeṭ|	0.35	50
244	Turtle	ஆமை	|āmai|	0.12	86.6
245	Umbrella	குடை	|kuṭai|	0	60
246	Vase	பூச்செட்டி	|pūcceṭṭi|	0.32	51.6
247	Vest	கோர்ட்	|kōrṭ|	0.34	18.3
248	Violin	வயலின்	|vayaliṉ|	0.25	60
249	Wagon	தள்ளுவண்டி	|taḷḷuvaṇṭi|	0.3	43.3

ISSN: 2278-4012, Volume:2, Issue:3, JULY 2013

250	Watch	கைக்கடிகாரம்	|kaikkaṭikāram|	0.11	91.6
251	Water can	தண்ணீர்ஜாடி	|taṇṇīrjāṭi|	0.34	53.3
252	Watermelon	தர்பூசணி	|tarpūcaṇi|	0.02	98.3
253	Well	கிணறு	|kiṇaṟu|	0.02	98.3
254	Wheel	சக்கரம்	|cakkaram|	0	100
255	Whistle	விசில்	|vicil|	0.06	93.3
256	Wind mil	கற்றாளை	|kaṟṟāḷai|	0.34	53.3
257	Window	ஜன்னல்	|jaṉṉal|	0.29	61.6
258	Wine glass	கோப்பை	|kōppai|	0.36	25
259	Wrench	ஸ்பேனர்	|spēṉar|	0.31	58.3
260	Zebra	வரிக்குதிரை	|varikkutirai|	0	100