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## LINGUISTIC PROFILE TEST (LPT) IN NEPALI LANGUAGE

### Aims & Objective:

To construct the Linguistic Profile Test (LPT) in Nepali and to standardize the test.

### Material & Methods :

LPT in Nepali language has 3 major sections-Phonology, Syntax and Semantics to assess the subject's ability to distinguish between basic features of the phonological system, ability to pronounce the different phonemes, to understand the grammatical complexities and knowledge regarding the meaning or concept associated with words. Total number of 40 healthy normal adults from different regions of nepal were included for the study during July 2006 to March 2007 in speech and hearing unit of TU Teaching Hospital, Kathmandu, Nepal. The subject's responses were scored and tabulated.

### Results :

The mean and S.D. on all the three sections of test were calculated. The data were also analysed based on sex and native & non-native speaker of language. Data analysis revealed total mean score ranged from 281.50 to 296.00 with the mean value of 288.98 and S.D. 3.82

### Conclusion :

Overall findings indicated that there is no need of separate normative data for native and non-native speaker of Nepali. LPT in Nepali can be very useful tool in identifying language disorders and their area of deficits as well as post therapy progress and residual problem evaluation.

**Keywords:** LPT, Phonology, Syntax, Semantics

### INTRODUCTION :

Linguistics may be defined as the description of language of the earth, and about the ways in which human beings use their language to communicate with each other. Language involves a system of symbols that conveys meanings. The ways in which sounds combine to form words and words combine to form sentences are determined by a system of rules. In the construction of words, such rules specify which sounds can combine with one another and which sounds cannot be combined. For example, in English, a word cannot consist of only consonants but must also include a vowel, etc. Based on definition of language, it is possible to identify 3 major components of language content, form and use. The content of language is the linguistic representation of what persons know about the objects. Form can be described in terms of phonology, morphology, and syntax. Thus, the integration of content/form/use makes up language competence. Children learn language as they use language. What is to be expected with chronological age; we discuss here about language tests. A test is basically a tool available for objective measurements and aids the clinician in arriving at an accurate diagnosis and in successful rehabilitation of the clients. Some tests are designed especially to test language and its acquisition in pre-schoolers and some tests are to test language and its disorders in school going children. Some tests are administered only for the adult population and then there are tests which are efficient in testing all the age groups. The description available from an appropriate combination of tests, reveal the child's abilities and disabilities within his language system. Tests also help in seeking the aspects of language code and its processing that might be disturbed after brain injury, to account for the patterns of language in terms of what is lost. Nepal is a small country with enormous number of languages being spoken. It is not possible to have a common test for all the languages, and that indicates the need for tests to be made in different languages. Nepali is National language of Nepal in which there is no standardized test for assessing language in children and adults with norms. So attempt has been made to develop and standardize the LPT in Nepali language. This test will be useful in identifying the children and adults with language deficits and also the area of deficits.

The objective of this study was to construct the Linguistic Profile Test in Nepali and standardize the test.

### MATERIAL & METHODS :

The subjects for this study were healthy normal adults speakers of Nepali language with no physical or sensory disabilities from different

regions of Nepal. The total number of subjects were 40 in the age range of 20 to 39 years with one male and one female subjects in each age were included for the study during July 2006 to March 2007 in speech and hearing unit of TU Teaching Hospital, Kathmandu, Nepal. All the subjects were under graduate level/ post-graduate level student. Among the total subjects, 20 subjects were native speakers of Nepali; Nepali as mother tongue and 20 subjects were non-native speakers of Nepali; Nepali as a second language. The non-native speakers were presumed to be equally competent in Nepali language, as from pre-school/school age they formally learn Nepali compulsorily. The construction of the test in Nepali language was based on Hindi version of LPT (Karanth, 1986) in consultation with Nepali linguists. This test had 3 major sections (1) Phonology (2) Syntax (3) Semantics.

#### Section-I (Phonology) -

Designed in order to elicit all the basic features in the phonological system of Nepali Language. It contains two sub-sections. Section I-A tested subject's ability to distinguish between basic features of the phonological system in his/her reception. Covering all the features in the phonemic system of Nepali language, possible number of minimal pairs was developed based on familiarity and pictureability. The subjects were asked to point out to two pictures out of a set of four, on hearing the minimal pairs. The features covered were grouped under following categories - a)Vowels and b)Consonant. Section I-B tested subject's ability to pronounce the different phonemes of Nepali language in different word position and combinations by asking the subjects to repeat words after the interviewer. If the subject was unable to repeat the words, the picture cards were presented to him or her and were asked to name the object pictured. Section I-B was further divided into 3 sub-sections – Section I-B (i) consisted of number of words containing target phonemes either in the initial, medial or final position and subjects were asked to repeat the words after the tester. Section I-B (ii) sampled the subject's performance with consonantal clusters. Section I-B (iii) consisted of free reading passage covering the entire range of phonemes in Nepali. The subjects were initially asked to repeat this passage after the examiner. Later he/she was asked to read on his/her own.

**Section II -** dealt with syntax to check the subject's ability to understand the grammatical complexities of heard speech. If the subject was unable to understand the verbal command or statement, his ability to follow it in print/graphically was checked. There were 11 sub-sections in the syntax section: a) Morphophonemic structures, b) Plural forms, c) Tenses, d) PNG marker, e) Case markers, f) Transitives, Intransitives and Causatives, g) Sentence types, h) Predicates, i)

Conjunctions, Quantities and Comparatives, j) Conditional causes and k) Participial constructions. The item was first presented verbally and the subject was asked to respond either verbally or through gestures. If the subject was unable to follow verbal instructions, the instruction and the test items were given in the written form. The subjects were asked to judge whether the given sentences are grammatically correct or wrong.

**Section III** - dealt with semantics to check whether the subject knew the meaning or concept associated with words and the relationship between words, and ability to express this knowledge in speech. Instruction was given verbally and/or graphically. The subject was expected to respond verbally, graphically or through pointing to particular object or the correct response word among alternatives. This section was further subdivided into 2 major sub-sections - (a) Semantic discrimination (b) Semantic expression. In Section III A (Semantic discrimination): discrimination of colors, furniture and body parts were tested. The subjects were asked to point the color, furniture, or body parts named. In Section III B (Semantic Expression): expression ability was tested under these tasks: Naming, Lexical category, Synonymy, Homonymy, Polar questions, Semantic anomaly, Paradigmatic relations, Syntagmatic relations, Semantic contiguity, Semantic similarity and Discourse – Conversation, Description of picture and Narration. The instruction for each task was given differently based upon the type of expressive ability being tested. Example items were repeated whenever required. Whenever subject chose wrong illustration or gave an incorrect verbal response, response was noted down. However prior to proceeding to the next item, investigator explained why it was 'wrong' and gave expected response. Subject's response for each item administered was recorded on the individual response score sheets. A stimulus word was pronounced more than once by the examiner, either upon request, or as per requirement. The subject was asked to study all alternatives carefully before making a choice. The total score of the each section separately such as Phonology, Syntax and Semantic section was 100. For all categories except Plural forms under Part-II Syntax, and Lexical items and Paradigmatic relations under Part -III semantics, the following scoring procedures is adopted. Response on each item was given a full assigned score for the correct response, ½ of the assigned score for a correct response which is not mentioned in the list of expected response and 0 for wrong or no response. In case of Lexical category if the subject responds with all the five names, a score of '1' is given. If the subject responds with two or more but less than five names, then a score of '½' is given. For no response/incorrect response or a single name response a score of '0' is given. Paradigmatic Relations - A score of '1' is given for identification of all the 4 pictures belonging to the specified group. Identification of less than 4 pictures is scored as '0'. Plural Forms: if the subject identifies plural form correctly, the score of '1' is given. A score of '0' is given for any other response. The subject's responses were scored and tabulated. The mean and standard deviation of LPT scores for each age group under each section was computed. These scores are tentative normative scores and are only of a suggestive nature considering the limited sample size.

### RESULTS :

Scores are calculated for (i) Phonology, Syntax, and Semantics, (ii) Total Cumulative score, (iii) Sex wise values (Male/ Female), (iv) Speaker wise value (Native speaker/Non-native speaker). The data obtained was subjected to the Mean and Standard deviation (S.D.) statistical analysis. The Mean and S.D. on all the 3 sections of test was calculated and details are given in Table 1.

Tab.1: Mean & S.D. of LPT Scores

	Min.	Max.	Mean	S.D.
Phonology	93.25	100.00	97.72	1.75
Syntax	85.00	98.50	93.01	2.87
Semantics	92.50	100.00	98.23	1.98
Total Score	281.50	296.00	288.98	3.82

**Note :** Max. score for each section is 100 and total score is 300

Among all the 3 sections of Nepali LPT, the range was maximum and Mean value was least for Syntax section compared to other two sections. The range and Mean for phonology and semantics were almost similar. The general pattern noticed was, highest total score in semantics followed by phonology and then syntax respectively. The mean value of semantics section was highest. The mean and S.D. separately for males and females are given in Table No.2.

	Phonology		Syntax		Semantics		Total scores	
	Male	Female	Male	Female	Male	Female	Male	Female
Min. score	93.25	94.00	86.00	85.00	92.50	93.00	282.25	281.50
Max. score	100.00	100.00	98.50	97.50	100.00	100.00	294.00	296.00
Mean	97.87	97.57	93.36	92.66	98.87	97.60	290.11	287.84
S.D.	1.83	1.71	2.70	3.07	1.77	2.01	3.38	3.96

The values given in Table No.2 reveal that the mean for male in all the 3 sections of LPT and the combined mean value calculated for both male and female (as mentioned in Table No.1) are almost same. Even though mean value for female in all the sections of test was slightly less than the combined mean value calculated for both sex (as mentioned in Table No.1), the difference was minimal. The separate Mean and S.D. value of all the 3 sections of LPT for native speaker (NS) and non-native speakers (NNS) are given in Table No.3.

Tab.3 : Mean and S.D. value of LPT sections for native and non-native speaker.

	Phonology		Syntax		Semantics		Total scores	
	NS	NNS	NS	NNS	NS	NNS	NS	NNS
Min. score	94.00	93.25	90.00	85.00	94.00	92.50	284.50	281.50
Max. score	100.00	100.00	98.50	96.50	100.00	100.00	296.00	294.00
Mean	97.77	97.67	94.06	91.97	98.35	98.12	290.18	287.77
S.D.	1.55	1.98	2.28	3.08	1.92	2.07	3.24	4.05

The values given in Table No.3 reveal that, even though the mean value of native and non-native speakers of Nepali in phonology and semantic sections were almost same, the mean value for non-native speaker in syntax section was slightly poorer than native speaker for the same. The overall total score of test for NNS was also slightly less than NS.

### DISCUSSION :

The findings in the present study were similar to the findings of earlier studies by Suchitra & Karanth (1990), Monika, S. (1995), Asha, M.M. (1997), who observed that the mean score in phonology section was higher than syntax. However the subjects of present study scored highest mean value in semantics section compared to phonology and syntax. The mean of syntax score and total test score for non-native speaker indicate a minimal difference in language abilities in comparison to native speaker. As there is no test in regional languages of Nepal (mother tongue of non-native speaker of Nepali subjects) this Nepali version of LPT can be used to evaluate non-native speaker too until separate language tests in subject's mother tongue is available.

### CONCLUSION :

Overall findings indicate no need of separate normative data for native and non-native speaker of Nepali. LPT in Nepali can be very useful tool in identifying language disorders and their area of deficits as well as post therapy progress and residual problem evaluation.

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