

Diagnostic Tests in English for Primary School Children

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Abstract

In the present study, an attempt has been made to construct and validate diagnostic tools to identify the learning difficulties in English of Primary school children, with respect to reading, writing and spelling difficulties. Though there are many tests to identify students with learning difficulties in English in the Western world, there are no diagnostic tests available in the Indian context to identify the learning difficulties of primary school children in English. Hence, the three diagnostic tests-RDDT, WDDT, and SDDT have been constructed, validated and administered to the primary school children of Tamilnadu to identify the learning difficulties in English .

Key words:

Introduction

In the present study, an attempt has been made to construct and validate diagnostic tools to identify the learning difficulties in English of Primary school children, with respect to reading, writing and spelling difficulties. Though there are many tests to identify students with learning difficulties in English in the Western world -like Illinois Test of Psycholinguistic Abilities(Kirk, McCarthy, and Kirth, 1968), Test of Language e Diagnostic Revised(Gray and Robinson), 1967), Wood Cock Reading Mastery Tests(1973), Test of Written Language (Hammill and Larsen, 1983), The Written Expression Test(Johnson,1988), and the Brigance Diagnostic Inventory of Essential Skills(Brigance, 1979). These tests, being developed in foreign context , pose problems to Indian students, whose society, culture and needs are totally different. And, as there are no diagnostic tests in the Indian context to identify the students with reading, writing and spelling difficulties in English, the researcher developed the following diagnostic for conducting the present study.

- 1. Reading Difficulties Diagnostic Test (RDDT)**
- 2. Writing Difficulties Diagnostic Test (WDDT)**
- 3. Spelling Difficulties Diagnostic Test (WDDT)**

Construction of Reading Difficulties Diagnostic Test (RDDT)

As Thorndike puts, *reading is reasoning*. It is a process, a dynamic, action filled way of responding to printed symbols, and not a product or a school subject. It is rightfully classed as the most important of the three Rs because as a process, it is used by all students in all phases of a school curriculum (Russel, G.Stauffer 1975). As such, reading activity is an important aspect in the shaping of a student. Having a difficulty in this aspect naturally hinders the growth of a student. Hence, this reading difficulties diagnostic test is aimed to assess specific reading difficulties of the students. In order to develop the test, the researcher referred the available literature and studies on reading difficulties. These studies have helped to understand the perpetual implications and procedures to diagnose reading difficulties. Snowling (1985) finds that reading activity proceeds in three stages. They are:

1. The logographic stage, in which words are identified by distinguishing visual features;
2. The alphabetic stage, at which letter sound system awareness (phonemic awareness) is mastered;
3. The orthographic stage, which is based on visual analysis that is free from the influence of sound.

Based on these, Sivagami (2000) developed Reading Diagnostic Test to identify reading difficulties in learning disabled children. Considering certain aspects of the test, Kusuma Harinath (2007) developed a reading difficulties diagnostic test to identify students with reading difficulties. The researcher has developed Reading Difficulties Diagnostic Test, suitable to identify the reading difficulties of primary school children in English. The RDDT is framed based on the following components -

Components of Reading Difficulties Diagnostic Test

1	Letter Identification	Visual Auditory Perception
2	Word Attack	Auditory Visual Association
3	Analogues	Auditory Sequence
4	Sound Identification	Auditory Discrimination
5	Word Recognition	Visual Motor Difficulties
6	Oral Reading	Auditory Visual Difficulties
7	Rhyming Words	Visual Verbal Association
8	Comprehension	Perceptual Sensory Reception
9	Segregate The Sounds	Auditory Segmentation
10	Cloze Test	Perceptual Sensory Information

RDDT is designed to gain first hand information of the learners' status in different reading aspects of English like-Phonic knowledge, visual discrimination and perceptual abilities.

Construction of Writing Difficulties Diagnostic Test (WDDT)

Writing skill is an essential and important aspect in the learning activity. Luria (1980) states that writing is the development of a precise skill, is a functional development of various parts of the brain. He refers to the kinetic action of hand writing, as an end product of the functional integration of hand, the sensory and motor parts of the brain controlling movements, the eye and visual cortex, the language areas and the association areas of thinking part, the frontal cortex. In spite of the fact that handwriting needs all these senses, writing is mainly based on motor skills like fine motor skill, gross motor skill, laterality and directionality. Thus, the writing difficulties diagnostic covers the following components:

Components of Writing Difficulties Diagnostic Test

1	Letter Formation	Visual Motor Perception
2	Letter Slope	Visual Motor Co-ordination
3	Letter Size	Revisualization Difficulty
4	Letter Space	Visual Motor Discrimination
5	Word Space	Visual Formation Disorders
6	Letter Word Alignment	Visual Memory Motor Perception
7	Reversals	Visual Sensory Discrimination
8	Letter Joining	Spatial Planning Difficulties

Construction of Spelling Difficulties Diagnostic Test (SDDT)

Spelling is a fundamental base for the acquisition of language skills, particularly, English. A letter replaced in a word changes the entire meaning. Hence a diagnostic test is developed to identify the difficulties of the children is using proper spellings. The extent and pattern of difficulties in spelling can well be identified with diagnostic dictation at the suitable level of the students. Spelling errors are different in nature. Phonetic errors have some visual resemblance to the correct spelling, but sound different when read. Visual errors sound correct but look wrong. Insertion and omission of errors are where an extra letter is added or deleted to a word. Sequential errors stem out due to confusion. English spelling pattern and convention cause errors in spelling. Rule based errors figure out due to lack of knowledge in spelling rules. Errors due to handwriting or repeated omission of letters are motor errors. With this background, the diagnostic test on spelling difficulties in English is developed. The test is developed with the following components of spelling difficulties:

Components of Spelling Difficulties Diagnostic Test

1	Circling the Correct Spelling	Visual Verbal Association
2	Word Recognition	Visual Discrimination
3	Plurals and Syllabication	Visual Memory Motor Co-ordination

4	Track the Words	Visual Sequence
5	Prefix and Suffix to the roots	Perceptual Discrimination
6	Spell and match the words	Auditory Perception
7	Finding words by Clues	Visual Perception
8	Dictation based on the spelling rules	Auditory Visual Memory

All the developed tests have been given to the teachers who have special training English Language Teaching, with a request to review the test items and their suitability to identify the students with reading, writing and spelling difficulties. Based on their opinion, certain test items have been revised, and certain items have incorporated or deleted. Thus, the developed diagnostic test consists of 50 questions. Each question carries one mark. The correct answer is given 1 mark and wrong answer is given a zero.

Pilot Study

Pilot study helps to assess whether the test items are suitable to the subjects it aimed. It also gives an insight into the acceptability of the test items to all the subjects it is concerned with. The researcher has made a pilot study on a few students, with reading, writing and spelling difficulties. The students selected for pilot study are based on teacher's observations, academic achievement of students, particularly in English, and Bhatia's Intelligence Test scores. The purpose of the study is to find out the problems in collecting the data, the practical suitability of reading, writing, and spelling diagnostic difficulty tests to the students. It also helps to find out the reliability of the tests.

Reliability of the Reading, Writing, and Spelling Difficulties Diagnostic Tests

Reliability is one of the important characteristics of any test. It is the consistency of scores obtained from one set of measures to another. Statistically, reliability is also defined as the self - correlation of the test. Reliability of a test can be measured in different ways.

In this study, the reliability of the diagnostic tests is established by Split-half method. To find out the reliability of the Reading, Writing, and Spelling difficulties Diagnostic tests, the **Language in India** www.languageinindia.com ISSN 1930-2940 16:6 June 2016
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diagnostic tests are administered to the students with Reading, Writing, and Spelling difficulties. 50 students with Reading, Writing, and Spelling difficulties based on teachers observations, their achievement (less than 35%) in English, (Quarterly and Half yearly Examinations), and Bhatia's Intelligence test scores, have been selected. The Reading, Writing, and Spelling Diagnostic tests are administered on these students to find out the reliability of the tests used. As already mentioned, the Split-half method is used to establish the reliability of each test. In this method, the whole test is divided into two equivalent halves by pooling the odd numbered and even numbered item scores. The correlation between these two sets of test scores have been established by using Karl Pearson's formula-

$$r = \frac{N \sum xy - \sum x \times \sum y}{\sqrt{\left[N \sum x^2 - (\sum x)^2 \right] \left[N \sum y^2 - (\sum y)^2 \right]}}$$

From this, by using Spearman-Brown formula, the reliability of the whole test is established.

Spearman- Brown formula is

$$r_{11} = \frac{2r^{\frac{1}{2}} \times \frac{1}{11}}{1 + r^{\frac{1}{2}} \times \frac{1}{11}}$$

Thus, the obtained r-values of Reading(0.67), Writing(0.86), and Spelling(0.78) difficulties diagnostic tests are high indicating the reliability of the diagnostic tests, uses in the study.

Validity of the Reading, Writing, and Spelling Difficulties Diagnostic Tests

Validity is an important characteristic of a scientific instrument. The validity of a test depends upon the fidelity with which it measures what it purports to measure. Among the many types of validity, the present study makes use of systematic examination of the Content Validity, Face Validity and Intrinsic Validity.

Content Validity

Content Validity involves essentially the systematic examination of the test content to determine whether it covers a representative sample of the behavior domain to be measured. The content validity of the Reading, Writing and Spelling difficulties diagnostic tests are examined by a team of experts who have a good theoretical and practical background in the field of learning difficulties. This team consists of four Professors working in the Department of Education, One Professor from an autonomous college, specialized in special Education, and five well experienced teachers of English, selected from different schools of Cuddalore district. Taking their opinions into account, the content and quality of the items are improved. Thus, the Reading, Writing, and Spelling difficulties diagnostic tests used in the study possess content validity.

Face Validity

Face Validity claims what the test appears to measure superficially. Thus, it refers the way the diagnostic tests appear to the examinees, the teachers and educationists. If the test content is not within the reach of examinees it loses its validity, thereby weakening the motivation. The team of experts opines that the Reading, Writing, and Spelling difficulties diagnostic tests developed for the investigation has face validity.

Intrinsic Validity

Intrinsic validity is estimated by how the obtained scores measure the tests true score components. Square root of the reliability value of the Reading, Writing, and Spelling difficulties diagnostic tests is nothing but its intrinsic validity. Thus, the intrinsic validity of the diagnostic tests are high-Reading difficulty(0.82), Writing Difficulty-(0.93)and Spelling difficulty (0.88), indicating the suitability of the tests used in the study.

Conclusion

The three diagnostic tests constructed and validated for the assessment of Reading, Spelling, and Writing difficulties will certainly be of great use in the identification of learning difficulties in English of primary school children.

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References

Language in India www.languageinindia.com ISSN 1930-2940 16:6 June 2016
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Harinath, Kusuma, P. (2010) Learning Disabilities in English. Discovery Publishing House: New Delhi.

Hartley, S. (1995) The Proportion of Children with Communication Disorders Presenting to C D A in Eastern Uganda and Implications of this In Service Delivery in Less Developed Countries. Cairo: Egypt. ET-11341.

Sivagami, M. (2000) Effectiveness of Certain Instructional Strategies to Overcome the Learning Disabilities in English at Primary Stage. Alagappa University: Karaikudi.

Swanson, H.L., Harris, K.R. & Graham, S. (2003). Handbook of Learning Disabilities. New York: Guilford Press.

Pathak (1984). A Study of Disabled Children in Normal Schools. In M.B. Buch (ed.) Fourth Survey of Research in Education. NCERT: New Delhi.

Ramaa, S. (1992) Handbook on Learning Disabilities. NCERT: New Delhi.

Colophon:

The project on which the present report is based was funded by Indian Council for Social Science Research. However, the responsibility for the facts stated, or opinions expressed and conclusions reached are entirely that of the Project Director and not of the Indian Council for Social Science Research.

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