

TEST OF WRITING FOR CHILDREN IN HINDI (TOWCH)

Reg. No. M. 9205

**A dissertation submitted as part fulfilment for the degree of M.Sc.
(Speech and Hearing) to the University of Mysore**

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*Dedicated to
Dearest Mummy, Papa & Jyots
The three kindling spirits in my life
Who made me what I am
And who are proud even of
My smallest achievements.*



CERTIFICATE

This is to certify that the dissertation entitled "TEST OF WRITING FOR CHILDREN IN HINDI - TOWCH" is a bonafide work, done in part fulfilment for the Degree of Master of Science (Speech and Hearing), of the student with Reg. No. M9205.

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This is to certify that the dissertation entitled "TEST OF WRITING FOR CHILDREN IN HINDI - TOWCH " has been prepared under my supervision and guidance.



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DECLARATION

I hereby declare that this dissertation entitled "TEST OF WRITING FOR CHILDREN IN HINDI -TOWCH" is the result of my own study under the guidance of Dr.Pratibha Karanth, H.O.D., Department of Speech Pathology, All India Institute of Speech and Hearing, Mysore, and has not been submitted earlier at any University for any other diploma or degree.

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The Good Teacher Explains:

The superior Teacher demonstrates but,

The GREAT TEACHER INSPIRES.

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INTRODUCTION

INTRODUCTION

More than by any other attribute, physical or psychological, man is characterised by his use of language. Yet he is not born with verbal facility; but enters the world with potential for its acquisition. Every human infant is confronted with the unique task of learning the language of his culture. A wide interest has developed in language. So its is being studied by various disciplines. Educators, psychologists, neurologists, speech pathologists, specialists in linguistics, language pathologist, anthropologists and communication theorists especially are devoting attention to this unique human attribute. Sapir (1921, cited in Myklebust, H.R,1971) and Whorf (1956, cited in Myklebust,H.R.;1971) continued that language not only is a means of communication but also influences the individuals manner of perceiving, categorizing and abstracting. Vygotsky (1962, cited in Myklebust, H.R.; 1971) and Brown (1958, cited in Myklebust,H.R,1971) stress that interrelations among the language systems: spoken, read and written. Because language is broad and inclusive, it must be separated into its primary component if it to be measured effficaciously.

In the western countries, there are many tests to evaluate the speaking and reading skills. They also have few tests to evaluate the writing skills. In India there are tests for evaluating the speaking and reading skills but there are no tests to evaluate the writing skills.

This study has therefore attempted to develop a test in Hindi to evaluate the writing skills.

REVIEW OF LITERATURE

REVIEW OF LITERATURE

SPEAKING READING AND WRITING- Their relationship.

According to Leischner (1969, cited in Tanaka, Yamadori and Murata, 1987) report that writing is a highly complex function combining linguistic, acoustic, praxic, space, constructional, visual and motor components. Hand writing is a has if writing skill and an essential tool in a child's response repertoire, There is a considerable body of knowledge on the development of oral communication skills in children. In contrast there has been little work on the development of their writing skills as opined by Haslett (1983 cited in Verrall,1989). To understand the full extent and complexity of language acquisition, Perara (1986, cited in Verrall 1989) suggested that it is necessary to be aware of the development of literate language and the relationship which exists between the skills of speaking and writing, reading and writing.

In reviewing oral language acquisition and its implication for written language learning, Wardhaugh (cited in Verrall, 1989) claims that both forms of language learning centre around meaning and are not merely matters of repetition, imitation or expansion. Both involve complex interactions of structure and meaning and the search for language patterns. According to Akinnaso (cited in Verrall, 1989) talking and writing are different processes which have different outcomes so it cannot be assumed that written language is learned merely by applying knowledge of oral language. Perara (cited in Verrall, 1989) suggests that five major differences distinguish oral and written language.

These are-

- a) Physical differences (eg. Writing is permanent whereas speech is fleeting)
- b) Situational difference eg. speech is usually delivered through face to face contact whereas a writer may never see the reader.
- c) Functional difference eg. speech serves to establish, negotiate and maintain human relationships whereas writing is usually used to record and store and retrieve information.
- d) Formal differences eg. speech is supported by stress, intonation and gesture whereas writing is punctuated for meaning.
- e) Organizational differences (eg. Spoken sentences are usually shorter than written ones and contain less information).

According to Danielewicz (1984, cited in Verrall 1989) spoken and written language narrative skills are often dichotomized as two separate forms of language because of these differences. Danielewicz claims that in reality a simple dichotomy between oral and written language does not exist. She has found that a more accurate approach to examining the differences between spoken and written language is to imagine a continuum with orality or spontaneous speech at one end and literacy or expository prose at the other. Within the mid range of the continuum some oral forms are more like writing and some written forms are more like speech. The linguistic outcomes along the continuum

are dependent upon peoples goals, message content and available linguistic structure. The relationship between speaking and writing changes as a person develops as a language user. Kroll (cited in Verrall 1989; P.04) "There has been little research into various dimentions of this changing relationship". Hildyard and Hidi (1985, cited in Verrall 1989) designed a study to determine the nature and extent of quantitative and qualitative differences in the oral and written narratives of children in grades 3 and 5. Narratives were compared on several general measures.

- a) Quantitative measure
- b) Cohesion (each narrative was rated on a 5 point scale for evidence of cohesion)
- c) Story structure and
- d) Story quality (Semantic structure) within each grade, Semantic and cohesive differences emerge but the oral narratives were significantly longer than the written ones. Wells (1985, cited in Verall 1989) studied the relationship between spoken and written text longitudinally. Children were monitored from age of 15 months until the last year of primary school. When the children were 10 years of age, they were asked to carry out oral and written narrative tasks. The narratives, were analysed in terms of :

- a) Substance (i.e. handwriting, spelling, and punctuation)
- b) Form (i.e. Vocabulary)
- c) Content (ideation and effective stance)
- d) Rhetorical goals (Overall purpose and awareness of the

reader). Children of the same age varied in their ability to give their oral and written narratives. Less successful communicators displayed skills (in content and rhetorical goals) in the oral mode which were not present in the written mode. However even their oral skills were limited. Like all other children, the more successful children generated more text in the oral mode than in the written mode. They were also able to choose appropriate content. However the sense of a well constructed overall plan was weaker in their oral texts.

Haslett(1983, cited in Verrall 1989) considered 6 and 9 year old children's strategies for maintaining cohesion in their oral and written narratives. Oral stories were found to contain more varied cohesive referential ties than written stories. With increasing age, children used significantly more personal ties and significantly fewer demonstratives. Also, stories became more varied with more complex types of cohesive referential ties being used with increasing age. Kroll (1981 cited in Verrall, 1989) developed a model of how the relationship between speaking and writing changes in the course of development. The model proposes phases of development. The first phase involves preparation for writing where children learn the mechanics of writing. The second phase involves consolidation of oral and written language skills. Children's written language is heavily dependent on their spoken language skills. The third phase involves differentiation of oral and written language, writing begins to diverge from speech and take on its own functions, syntactic systematic integration of speaking and writing were the two modes

are appropriately differentiated but they also from an integrated system. This phase is probably only ever attained by a minority of adult writers. This was reported by Perara (1986, cited in Verrall 1989)

Writing is a complex process linking language, thought and motor skills. When writing a story, a child must keep a single idea in mind and present this in an appropriate syntactic and semantic form, as well as remember and produce letters and words correctly. Clearly there is a close association between reading and writing, although children may not use the same strategies for each as reported by Bryon and Bradley (1979, cited in Onthred, 1989).

Early writing is more closely linked to early spelling than to early reading. When children begin to spell, they use a simple decoding strategy based on Sound-to-symbol correspondence, whereas early readers rely on a visual approach to word recognition; using context clues where possible. Marsh, Friedman, Welch and Desberg (1980, cited in Onthred 1989) investigated and report that at a later stage, most children seem to learn to alternate between the two strategies. However, this may not happen for children who have difficulty in learning to read,. Barron (1985, cited in Onthred 1989) suggests that "good readers"are characterized by heavy reliance on visual information in reading and phonological information in spelling.

He does not learn to write and then learn to read., The written form assumes that the 'read' form, has been achieved.

pronunciation for the approximate match to be made. For example, in the sentence "The cowboy ran the horse into the street", the word 'ran' may, if not recognized correctly by sight or context, be pronounced /ren/ initially but if the reader has correctly interpreted "the cowboy" (and speaks English) he will probably recognize that this is not the correct form and try another pronunciation. Observations of children during oral reading show exactly this process at work, Without the ability to approximate sound from spelling, the child would be dependent upon other readers for substantially his word identifications and consequently would develop this ability quite slowly.

Reliance on letter-sound generalizations in word recognition decreases as word identification ability increases, and the competent reader probably makes little use of them in normal reading. Nevertheless, the ability to apply letter-sound generalizations continues to develop at least through grade eight as opined by Calfee, Venezky and Chapman (1969, cited in Golinkoff, 1978). Whether this is due to a continual reliance upon sounding out words or is a result of increasingly more efficient memory organization and retrieval is not known. But because the use of letter-sound generalizations seems to depend heavily upon examples stored in memory, organisation and retrieval probably account for a significant part of this development.

Calfee, Venezky and Chapman 1969; Venezky, Chapman and Calfee 1972; Venezky and Johnson 1973; Perfetti and Mogaboam 1975 report that the development of letter-sound generalizations has been studied over the past five years through the analysis of

pronunciations of synthetic words constructed to obtain specific spelling patterns. Results from these studies are primarily descriptive, either of age or reading ability differences or of relationships between decoding ability and other reading abilities (eg. Comprehension). Some of the results, however are suggestive of how information is processed during decoding and of the effects of instruction upon this process.

Good and Poor readers at the second grade level differed little in their ability to decode invariant consonants (e.g. b, d, I and m) at the beginning of words, However, for the same consonants in mechanical and final position, the poorer readers showed a dramatic drop in percentage of correct responses while the letter readers showed only a slight reduction. The initial position scores for the poorer readers indicate that neither the concept of attaching sounds to specific letters nor the particular letter-sound correspondences involved in the study were major sources of difficulty. What was troublesome was the processing of information beyond the first letter of a word. One hypothesis is that all the letters are processed, at least through recognition, but in generating a pronunciation only the sound correspondences for the initial letters are consistently applied for correspondences for some of the remaining letters might be applied, especially for vowels, but generating a "word" that sounds English might be sufficient to satisfy the poorer reader.

An alternative hypothesis is that some of the letters after the initial ones are not processed properly, that is, they are

incorrectly recognized, but correspondences are applied for all of the resulting identifications.

The complexity of a correspondence, computed from the number and type of graphic, morphemic and phonological feature that need to be considered for proper application is not a good prediction of how quickly a correspondence is acquired. Single letter vowel spellings in monosyllabic words, for example can be either short or long depending upon whether the word ends with a consonant or with a final 'e'. To generalize this rule, a child must observe not only the letter that follows the vowel but also the letter after that. For initial 'c' on the other hand, the child need check only the following letter. If it is 'e' 'i' or 'y', the 'c' is soft as in 'cent', 'city', and 'cycle'. Otherwise it is hard as in 'Chip', 'coat', 'crumb' and 'cute'.

The initial 'C'; patterns have only one exception among the words that grade schoolers might see-'cello' and this word is rare in the primary grades. The long-short patterns, on the other hand, have numerous common exceptions (eg. cold, axe, pint, won, wash and one), yet the percentage of correct responses to the long-short patterns at the fourth grade level was more than twice that of 'c' before 'e' 'i' or 'y'.

Both the long-short distinction and 'c' before 'i' or 'y' pattern are taught in one way or another in most reading programmes prior to the fourth grade. Words for both long and short patterns are numerous and are often minimally contrastive eg. (mat-mate, rip-ripe). Words with 'c; before 'e' or *y' on the

other hand, are rare before fourth grade and represent probably less than 10% of all the initial 'c' words introduced. What constitutes a sufficient number of examples to induce a generalization has not been explored extensively for any language pattern. Yet clearly it should be a major concern for instruction.

As the child encounters more and more examples for soft initial *c', he begins to acquire the appropriate response for this pattern; however, both eighth graders and college students did not exceed 70% correct response. The responses to a related pattern, that of *g' before 'e' 'i' or 'y', also demonstrated an exemplar affect, but here the effect was one of the complete non-generalization. For stimulus words in which initial *g' should, in theory, be soft, fewer than 25% of the responses at any grade level (2,4,6 and 8) were correct, almost all of the incorrect responses being hard /g/.

What might be responsible for this lack of generalization are both the numbers of high frequency words that are exceptions to the so-called rule (eg:- get, geese, gear, gift, girl and give) and the lack of efficient rule observing exemplars. Encountering other rule observing words in the reading beyond the primary or elementary levels does not seem to have much effect on the generalization of this pattern, because only the more frequently occurring English words have an effect upon the generalization processes.

Hill (1936, cited in Colinkoff, 1978) established that the main effect of reading instruction was to focus the learners'

attention on the beginning of the word. Hill also found that even in the earliest stages of learning, word configuration is not a salient cue for recognition. Gates and Boeker, 1923; Marchbanks and Levin, 1965; Willams, Blumberg, and Willams, 1970; Leshie 1975, (cited in Golinkoff 1978) supported Hill's findings, especially regarding the saliency of the first letters of a word.

A second and potentially more important line of recent research has been in the development of awareness of orthographic structure. Much of this work derives from E.J. Gibson's studies of recognition of pronounceable and unpronounceable nonsense words, but the general conclusion from several different studies is that atleast by the third year of reading instruction, children can demonstrate an awareness of orthographic regularity *as reported by Rosinski and Wheeler, 1972; Golinkoff 1974 (cited in Golinkoff 1978). This result is especially important when viewed in relation to two other research trends. One of these trends is represented by word recognition studies that use adult subjects, and especially those studies that attempt to isolate processing stages. Massaro 1975; and Gibson and Levin 1975 (cited in Golinkoff 1978) suggested that Orthographic structure seems to be a major variable in the recognition process, particularly for explaining why a letter can be identified more rapidly in a word than in isolation. The picture that is emerging of the word recognition process gives a central role to knowledge of orthographic structure in the erarlier stages.

The second trend is represented by developmental studies of visual information processing, but especially those by Haith

(cited in Golinkoff 1978) and his students on the role of short-term visual memory in the processing of geometric forms. The results suggests that the visual processing capabilities are already developed by the time the child encounters the reading task. But what must develop is an ability to store briefly the stimuli in reading, that is, words and word components, until recognition and integration takes place. Reading words constructed from an alphabet (as opposed to syllabary) involves the recognition that the letters on the page can be deciphered by first analysing the sounds of which they are composed, and then blending these sounds together. This is due the segmentation and synthesis of phenemic units that compose spoken words is no easy task. This is due to 2 factors-first, segmentation and synthesis require children to become aware of the abstract units of which their speech is composed. The second factor as researched by Liberman et al (1967, cited in Golonkoff 1978) has shown that there is often no acoustic criterion for deciding where one phonemic ends in a word and another begins. Thus, consciously separating the sounds of a word is a difficult and artificial task.

Reading a new one syllable word requires first, that the word be broken (analysed, segmented) into its component phonemics and second, that the resulting units be recombined (blended or synthesized). Phonemic awareness skills-both analysis and synthesis-have been shown in a number of studies to be predictive of early and extended reading achievement.

ACQUISITION AND STAGES IN ACQUISITION OF WRITING IN CHILDREN

The development of written language is less controversial than that of the spoken. Investigations have shown that the development of writing does not repeat the developmental history of speaking. For written language to develop normally there must be integrity of sensory processes, particularly in regard to auditory, visual, and motor functioning because each of these is involved in acquisition and use of the written word. Scinto (1986) opined that-for the acquisition of written language, following levels should be distinguished:-

1) The acquisition of and control over the praxic, psycho motor and motor organization of the actual production of the inventory of graphic forms as reported by de.Ajuriaguerra and Auzias (1975 cited in Scinto 1986).

2) The acquisition of the translation rules (for both writing and reading) to allow trans coding between acoustic and graphic forms of language and the gradual differentiation of acoustic and graphic forms as reported by Chao 1961; Ellis 1982; Haas,1970; Henderson, 1982; McIntosh 1961 (cited in Scinto 1986).

3) The acquisition of the structural and functional rules of written discourse organisation that allow for a degree of communicative competence in using written language.

Levels 1 and 2 are necessary preconditions atleast in normal development for the acquisition of level 3. Level 1 relates particularly to motor development, what Vygotsky has termed the

mechanics of writing. This area is largely ignored, assuming that under normal conditions there is sufficient neural maturation to allow for such development. Since it is at the level of structural and functional rules for discourse production that the written norm emerges as a separate line of development. Level 3 is given important, since the primary concern is to explicate the unique development of the written norms and its contribution in the general scheme of cognitive development.

Writing is a developmental task, that is the child learns to write in a series of inter related stages, each stage being the pre-requisite for the next.

Luria (1978, cited in Scinto 1986) in his study of the use of writing by preschool children entitled "The Development of Writing in the Child" identified 4 stages in the child's developing insights into the nature of visible sign-symbols. The basic protocol used to elicit information on the child's understanding of writing is a recall task in which children are read and asked to recall these sentences a number of sentences after presentation. Based on this Luria and his associates identified the following stages:-

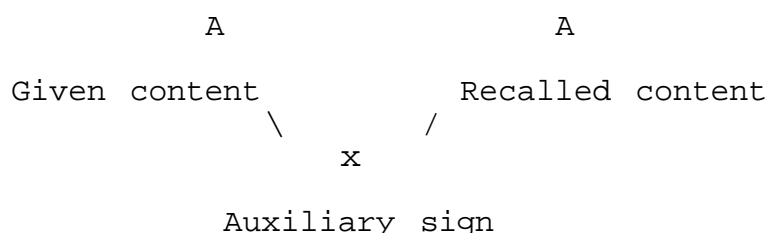
- 1) Un-differentiated-non instrumental
- 2) Un-differentiated ostensive sign use
- 3) Un-differentiated to differentiated transformation of sign-stimulus to sign symbols.
- 4) Pictographic use of sign.

A child in stage one produces a set of un-differentiated scrawls, arranged in some seeming order on the paper. The child does not refer to these marks in the recall task and they produce no increase in the amount of material recalled. This stage is termed un-differentiated because the marks produced by the subject are similar for each instance of production, no matter what the material presented to the child for recall. This stage is further termed non instrumental since the child shows no awareness of the functional use to which visible signs may be put. Luria notes two aspects of this stage-the child is unaware of the function of the graphic marks. By this Luria means that the child is unaware of the functional significance of the marks. Luria speculates that is as if the child were aware that writing is some kind of motor activity that adults engage in that is productive of visible marks on paper but that there is only an imitation of certain external factors of the act of writing. The child produces the visible marks (in light of their un-differentiated nature, it would be inappropriate to label them signs of any kind) but does not grasp their relation to either the task at hand or the connection with the idea evoked by the sentence to be written, it was yet instrumental or functionally related to the content of what was to be written.

The 2nd stage is in many respect similar to this first undifferentiated, preinstrumental stage in that the marks produced are not externally distinguishable one from the other yet there is a subtle shift in awareness on the part of the child as to their relation to the sentences in the recall task. Luria

concludes the emergence of this ostentive use of undifferentiated marks the first form of writing in which the functional relation of the marks as an instrumental means is grasped. But Luria does not consider this use of undifferentiated marks as a sign in the symbolic sense nor as an instrumental sign in the fullest sense.

The true symbolic or instrumental use of a visible mark is characterised in



Where a content 'A' is encoded in a visible sign 'x' which on a later occasion serves to recall the content 'A' in an immediate sense.

With the next 2 stages in this process of development, the child begins to move towards the use of differentiated marks and an awareness of the functional relation of the mark to a given context. In the 3rd stage there is a double transformation:- first-surface differentiation of the mark as a true instrumental sign-symbol. Luria and his co-workers speculate that this transformation is evoked by the need to attend to several factors in noting down the stimulus material. Those factors are quantity, rhythm and contrast.

The final stage elicited by Luria in his study of the pre-history of writing is more truly pictographic. Luria suggests, the child calls on his capacities for drawing to further and more

fully differentiate his visible sign use in writing specific contents.

Friedland (1990) report that children begin to communicate visually through their drawings. Initially they draw single objects and progress to drawing scenes where something is happening and a story is being told. Azuriaguerra and Auzias (1975, cited in Friedland, 1990) opined that because motor control of arm and hand is required, writing is not generally taught until the child is around six years of age. Sheridan (1978, cited in Friedland, 1990) reports that the child will have begun to develop some dominance by age two or three, referring one hand to the other in many activities. By three years of age, the child can hold a pencil, draw figures and copy some shapes. By about age six, arm, shoulder and wrist movements will become controlled and able to be fixed, allowing the fine prehensive movements needed for control of pen or pencil by the fingers of the non dominant hand. Lenneberg and Lenneberg (1975, cited in Friedland, 1990) said that rhythm and speed also will become integrated into the pattern of movements. Luria (1980, cited in Friedland 1990) expressed that as the child learns first to copy letters and later to write to dictation, direction and orientation of the letters on the page will often be confused as they were at earlier stages in the development of writing for the species. Eventually, and with sufficient practice, the motor skill of writing progresses from a point where the separate strokes of each letter are consciously produced to the more automatic writing of whole words and phrases.

From about the age of 4, the child in Western Society will be involved in the formal education system. He/she will be taught the alphabet and helped to develop the semantic knowledge base required to deal with the words that will soon be read and written. Within the first few years of primary school, writing will be taught alongside of reading. The types of words that are learned first are generally those with particular meaning to the child and include the written naming of concrete objects, action words and some emotion words.

As an expressive form of language, writing will be used throughout the school year to a considerable degree. Beyond that time, and depending on vocation, writing will probably not be a heavily used skill. Many children and adults may not attain the proficiency in written language.

DISORDER OF WRITING IN ADULTS AND CHILDREN

The disorders of written language have received only minor attention on the part of psychology and special education, although diagnostically this verbal deficiency has been both recognised and stressed by neurology for almost a century.

A lack of writing language deficiencies may be caused by at least four types of disturbances:- Peripheral nervous system impairments such as hearing loss and partial sightedness; central nervous system involvements, resulting in neurogenic learning disabilities; emotional disturbances causing an imposition on learning and cultural deprivation, that is lack of opportunity for proper training.

Disorders of writing not only effects the legibility and speed of writing but also effects the meaning and systax. Disorders like paralytic disturbances and ataxia are influential principally in regard to speed and legibility of writing. Dysgraphia and agraphia can also be seen. Agraphia is the total inability to write, dygraphia is the partial inability to write due to dysfunction in the brain. The individual cannot relate the mental images of the word and the motor systems for writing. Some individuals are unable to produce the word in written form. This could be due to distrubances in audiory processing. Writing errors are also seen in aphasics and dyslexics. Children having articulatory disorders/defects, mental retardation also show disorders of writing. Psychogenic disturbances like emotional disturbance, cultural deprivation and inadequate teaching affects the written language.

Based on the writing disorders, many authors have proposed models to explain the normal writing process.

MODEL OF WRITING

Writing involves different processing modes and these can be differentially impaired in neuro logical patients.

Elhis and Margolin (1984 cited in Black, Behrmann, Dass and Hacker, 1989) proposed the information processing model wherein the writing process is divided into the pre-graphemic and post graphemic components, impairment of which accord approximately with linguistic and nonlinguistic forms of agraphia. The pregra-

phemic stage is responsible for generating an abstract representation of the word, called the abstract spelling code, since information about its psycial characteristics and ultimate concrete realization is not yet specified. The post graphemic stage

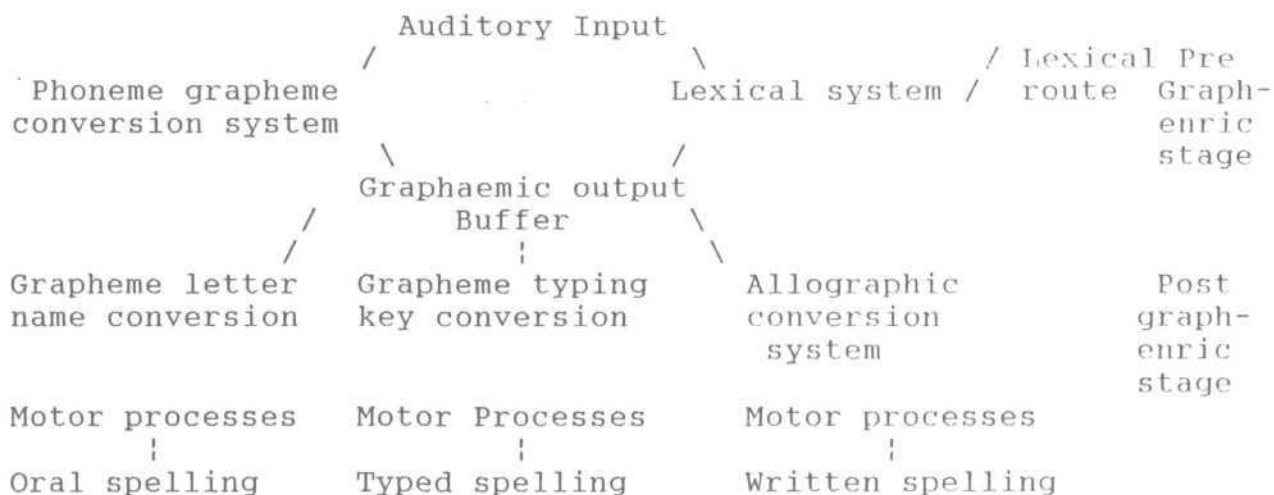


Figure 1:- Schematic representation of spelling systems.

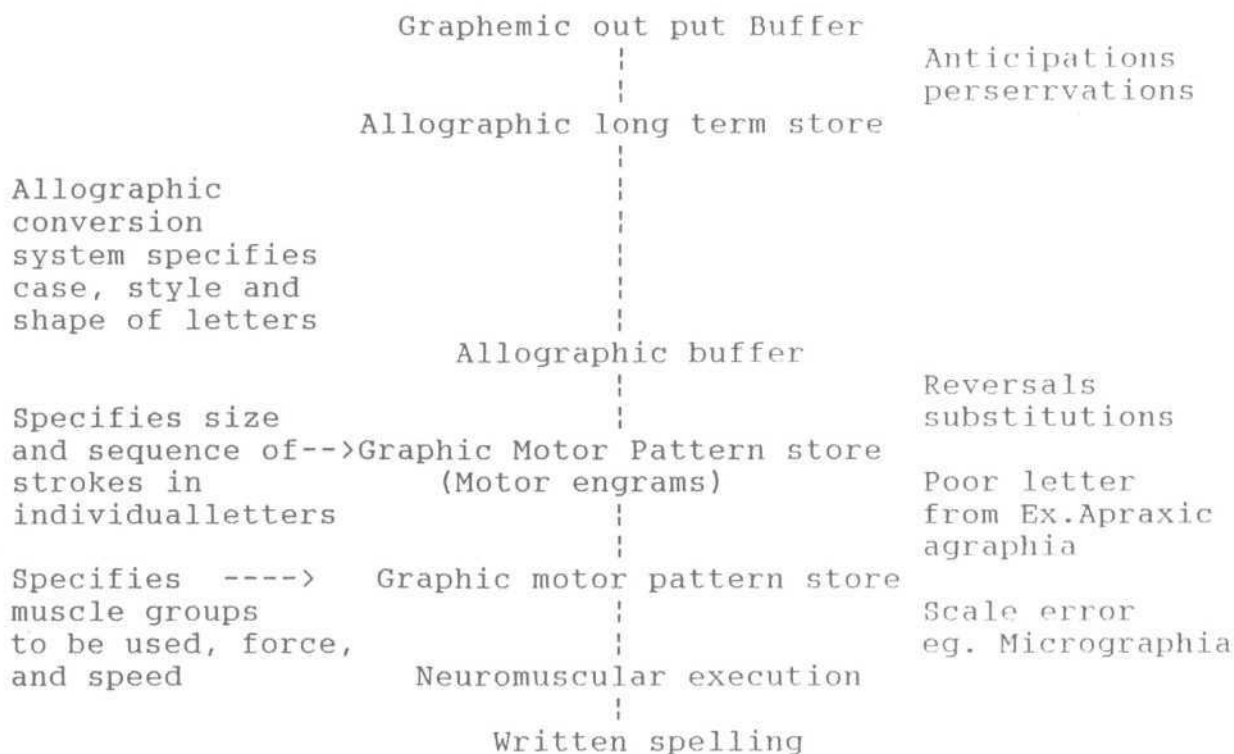


Fig 2: Schematic representation of the post-graphic written

spelling route.

converts the abstract code into the motoric output, either through oral, typed or written spelling. This model includes a buffer for retaining graphemic information as guides to output process. The so called "graphemic buffer" holds the ordered sequence of abstract letter, identifies necessary information for guiding the serial output of letters(whether oral, written or typed) on all kinds of spelling tasks. Since the buffer receives information from the lexicon which stores the spelling of words and from a non lexical mechanism for spelling, which maps phonological units smaller than the word onto graphemes. It is used when both words and non words are spelled. Distinctive patterns of breakdown arise from impairment to this functional writing system and a rich typology of agraphic disorders has been proposed by Hatfield and Patterson 1984; Margolin 1984; Margolin and Wing 1983 (cited in Black Behrmann, Bass and Hacker 1989).

Authors like Rothi and Heilman (1981, cited in Roeltgen and Heilman, 1983) Nolan and Caramazza (1983, cited in Frieinman and Alexandar,1989) have proposed their models while explaining some of the adult patients.

Frith (1980) cited in Shallice 1981) argues childrens' spelling normally involves three stages-first a correct analysis of speech sounds into phonemes and secondly, the conversion of phonemes into graphemes and thirdly, the selection of conventionally correct graphemes out of all the phonotically plausible ones. Studies have shown that children with developmental agra-

phia may make errors that can be frequently classified as phonologically in-correct or phonologically correct. Border (1973, cited in Roeltgen and Tuckero, 1988) has termed the children who produces phonologically incorrect errors as dysphonetic and the children who produce phonologically correct errors as dyseidetic. Less commonly children have been classified on the basis of their spelling of real words and non-classified on the basis of their spelling of real words and non-words rather than on the basis of error patterns.(cited by Roetgen and Tucker 1988) Frith (1980) described 2 groups of children 11-13 years old who were poor sepllers-one group made errors that were phonologically correct and did well in spelling non-words while the other group made errors that were not phonologically correct and had difficulty spelling non-words. In addition, Frith notes that the first group was also distinguishable from the second group by their reading ability, the first group read well while the second one did not.Seymour and Porpodas (1980, cited in Roeltgen and Tucker 1988) study has described children who had trouble spelling non words, resembling the behaviour of patients with acquired phonological argraphia. Also described were children who had more trouble spelling irregular than regular words and made errors that were phonologically correct, resembling the patterns of patients with acquired lexical agraphia as studied by Barron (1980, cited in Roetgen and Tucker 1988).

Comparison of the results of the studies of adults with acquired agraphia and the children with developmental agraphia suggests that children with dysphonetic spelling difficulties may

be comparable to adults with phonological agraphia and children with dyseidetic spelling difficulties may be comparable to adults with lexical agraphia.

ASSESSMENT

Numerous attempts have been made to develop accurate and comprehensive means of assessing written language skills in children. The majority of these techniques have been designed by education researchers for use by teachers in the classroom. The majority of research has been conducted on primary children where age related differences in the levels of written language proficiency are readily found. Less emphasis has been given to beginning writers(pre-school and grade I)

Creative writing and handwriting are important in understanding the development of writing skills. In 1965, Myklebust developed Picture Story Language Test (PSLT) for quantifying one's facility with the written word and to furnish a developmental scale for children which in turn be useful in the study of adults.

This test consists of a picture about which a story is written. It is comprised of 3 scales-one devised to measure length (productivity scale), another to measure correctness(syntax scale) and third to measure content or meaning (Abstract-concrete scale).

Productivity is the amount of language expressed under a given circumstance, or, it is that aspect commonly referred to as

length. In PSLT, productivity aspect has been ascertained by the number of words (total words) , the number of sentences (Total sentences) and the number of words per sentence (words per sentence).

The syntax scale mainly evaluates the extent to which verbal expressions are used correctly. This correctness is measured in terms of the accuracy of word usage, of word endings and of punctuation.

The abstract concrete scale was devised to study the effectiveness with which the ideas are conveyed.

Written responses are required many times every day. For most children their motor response quickly becomes automatic, the penmanship legible and the appearance of the work neat. Mastery of the formation and spacing of letters frees attention for focus on composition, spelling and grammar, However many children with learning disability struggle to master handwriting skills. Directionally in letter formation presents a significant challenge, and copying or tracing letters may be over demanding of co-ordination abilities with the result that penmanship may be illegible and the rate of writing very slow. Otto, Mcmenemy and Smith (1973, cited in Towle, 1973) reports that such difficulties in handwriting may evolve from poor motor skills, unstable and erratic temporamant, faulty visual perception of letters and words inadequate visual memory and difficulty with sound symbol relationships. Poorly arranged learning conditions also may contribute to writing difficulties. Since writing prevades the

curriculum it is essential that teachers diagnose and remediate handwriting deficits at the earliest possible time or present problems via instruction that is initially individualized to learner needs. Towle in 1978 gave a diagnostic assessment for handwriting. Before conducting a diagnostic assessment of handwriting it is necessary to identify skills requisite to handwriting through the process of task analysis skills in handwriting.

PREREQUISITES

Scribble draw using lines, curves, hold pencil correctly directionality in writing.

SKILLS

- 1) Copy straight lines -/-/+x
- 2) Copy curved lines
- 3) Copy letters from near point model
- 4) Write letters from near point model
- 5) Copy letters from far point model
- 6) Copy letters from far point memory.
- 7) Copy letters sequenced in words in near point model.
- 8) Copy letters sequenced in words in far point model.
- 9) Copy sentences presented consecutively from near point model
- 10) Copy sentences presented consecutively from far point model.

Having identified the essential skills, the teacher may consider factors involved in assessment of these skills. In assessing handwriting abilities both legibility and fluency should be considered.

Gillingham and Stillman (1970, cited in Towle 1970) recom-

mended that assessment begin with determination of handedness. Right or left handedness helps determine the correct position of the paper and correct body posture. The most comfortable slant of writing for the student should also be determined so that confusion does not result during remediation. A diagnostic screening should identify children for whom a more detailed assessment is advisable. Standards of legibility and a criterion for fluency (legibility and speed) should be established. An informal skill inventory should allow the teacher to determine not only what the child cannot do but also what he can. Available tools should be in hand for assessing sub-skills as necessary, for eg. If a student's performance on writing the alphabet from memory was very poor, the subtest shown would be administered until a functional level of performance was identified. In those cases where students can write letters from memory there are advanced writing skills that require complex eye-hand-coordination. Copying letters in sequential order (in words) from one paper to another and point copying as necessary for classroom performance should be informally assessed.

Weiner in 1980 developed an individualized assessment instrument that facilitates the identification of specific writing problems. The Diagnostic evaluation of writing skills (DEWS) which is divided into the following categories; graphic, orthographic, phonologic, syntactic, semantic and self monitoring.

GRAPHIC(VISUAL FEATURES)

- 1) Excessive pencil pressure marks
- 2) Letter formation ambiguities erasures.
- 3) Capital and lower case letter mixture.
- 4) Size or spacing irregularities.
- 5) Off-line writing.
- 6) Margin slant or crowding.

ORTHOGRAPHIC(SPELLING)

- 7) Sequencing of letters (reverse order) or three consonant clusters.
- 8) Doubling final consonant.
- 9) 'ed' endings with sound of d or t.
- 10) Prefix or suffix generalizations
- 11) 'i.e.' becomes 'ei' after 'c' and with sound of 'a'
- 12) 'Y' becomes 'i' except before 'ing'
- 13) 'c' or 'g' followed by 'e' 'i' or 'y'
- 14) 'Ch' 'K' and 'sh' 'sh=si', or 'y'
- 15) 'ph' and 'gh'=f
- 16) Silent letters in special spellings
- 17) Schwa, sounds; related words
- 18) Word division by syllable.

PHONOLOGIC (SOUND COMPONENTS)

- 19) Nonphonetic spelling (bizzare)
- 20) Strictly phonetic spelling
- 21) Letter or syllable omissions
- 22) Words run together.

SYNTACTIC (GRAMMATICAL)

- 23) Subject and predicate agreement.
- 24) Tense, plural, possessive- endings.
- 25) Word Order; Omissions.
- 26) Incomplete sentences (fragments)
- 27) Run-on sentences
- 28) Punctuation; indentation of paragraphs
- 29) Variety in sentence structure
- 30) co-ordination (and/but)
- 31) Amount of information per sentence.
- 32) Amount of information per sentence.

SEMANTIC (MEANING)

- 33) Flexible vocabulary, connotative-denotative.
- 34) Coherence, focus and tense shifts.
- 35) Logical sequencing
- 36) Transitions
- 37) Distinction between major and minor points
- 38) Inferential thinking, cause effect.
- 39) Idiomatic and figurative language.

SELF-MONITORING SKILLS

- 40) Self correction: spellings and punctuations.
- 41) Improvement through revision.

Baker in 1983 investigated the writing skills of children from grade 5 to 10 in an attempt to produce some of much needed

information and normative data on this. Thus for neglected population, Baker used DEWS(WEINER,1980) alongwith other tests like the Thornalic Assessment of written Expansion (TAW), Newman and Milton (1981) and PSLT (Myklebust 1965). The results suggests that some areas of written language such as syntax and spelling are consolidated in the early years while others coatin-ue to develop throughout adolescence.

The review of literature shows that there are have not been any norms developed for writing skills in Indian languages. Normative data on the development of children's writing and the relationship which exists between the skills of speaking and writing provides professionals such as speech pathologists and teachers with a framework for the normal course of development of these skills. This knowledge is essential if professionals are to assess childrens' skill in each mode and plan appropriate intervention. This study aims at developing a norm for writing skills for children.

METHODOLOGY

METHODOLOGY

AIM:- The present study aimed at evaluating patterns in the acquisition of writing in Hindi in Primary school children.

TEST MATERIAL

The test material was prepared from the Hindi text book prescribed by the Bihari State Board for 4-9 years age group children. The items for the test material were randomly selected and were then arranged in the order of simple to complex ones. The pre-writing skills were omitted in this study on the account that the subjects evaluated were school going children and it is assumed that they have attained the pre-writing skills.

The material developed have been seven sections:-

Section I-Alphabets

Section II-Simple to Complex syllables.

Section III-Words

Section IV-Non-Words

Section V-Sentences

Section VI-Question and answers

Section VII-Text

The above mentioned sections were considered for the test material because the written language acquisition follows the same pattern.

Section I:- Alphabets:-

This section includes 2 sub-sections. Sub-section A deals with copying of alphabets and Sub-section B deals with dictation of alphabets.

Each sub-section has 5 sets with 5 items in each set.

For copying of alphabets, the subjects were instructed that the item to copy are given and they could copy it in the same way in the space given under each item. For dictation, the stimulus was dictated and the children were asked to write in the space given.

Section II:-Simple to Complex Syllables.

This section consists of Sub-section A which deals with copying of simple to complex syllables and sub-section B which deals with dictation of simple to complex syllables. Each sub-section has 5 sets with 6 items in each set.

The syllables were arranged in the order of complexity across sets and within the set.

Section III:- Words.

Copying of words and writing to words for dictation are the tasks included in the sub-section A & B. A total of 30 items comprises each sub-section with 6 items in each of the 5 sets in the order of complexity. The first words being the easiest one. For ex. and the last item being the most difficult one for example.

Section IV:- Non-Words.

The non-words were included in the test material in order to determine if the subjects had any specific difficulties in writing a non-words as compared to a word. This section again dealt with copying and dictation of non-words, in which the items were arranged in the order of difficulty. Each sub-section has 5 sets with 6 items in each set.

Section V:- Sentences Section.

This section had three sub-sections:-

- Sub-section A- copying sentences
- Sub-section B- Dictation and Sentences
- Sub-section C- Sentence completion.

All the three sub-sections had 5 items each. For copying and dictation of sentences, the items were arranged in the order of complexity. The complexity was in terms of the length of the sentence, the first item being the shortest one and as the item progress, the number of words in the sentence increases.

The Sub-section C that is the sentence completion section had 5 items. In each item multiple chioce responses were given. The child was instructed to choose and write the correct response for a meaningful sentence. The words selected for multiple choice were semantically related. For Ex.

Sugar is_____

(Sour, Sweet, bitter, salty).

This sub-section had been included in the test material because

an attempt was made to study the ability of the subjects reading comprehension, ability to discriminate the semantically related words and the ability to write. The interaction of the three aspects that is the reading comprehension, discrimination of semantically related words and writing skills was taken into consideration.

Section VI:- Questions and Answers.

This section consists of a story-'Jungle Ka Raja'. This story has been selected because it is one of the commonest stories and most of the children would have been exposed to the picturised version of the same story. The child was instructed to read the story to himself and answer the questions in full sentences. The child could refer back to the story whenever needed.

Section VII:- Text.

This section has 2 sub-sections.

Sub-section A-picture Description: Here a picture card has been adapted from the Western Aphasia Battery (Kerterz 1980). This picture has been selected because the picture is un-ambiguous and is hence easier to comprehend. The approach was to use a picture about which a few sentences had to be written. The picture card was given to the child and instructions were given that he should describe the picture. The description could be given in sentences. A time boundary of 15 minutes was specified in which the child could write as many sentences (simple or complex) he could.

Sub-section B-Spontaneous writing: Here the subject was given the topic "Mera Parivar". This topic has been selected because it is relatively easy and the children are familiar with the context of the topic. The subjects were instructed to write about it within a stipulated time of 15 minutes.

Pilot Study:-

A Pilot study was conducted by taking one child from each age group with children ranging in age from 4-9 years. After the Pilot Study, the required modifications were made for the instructions and the items found imitable were selected and finalised.

Subjects:-

Children within the age range of 4-9 years, whose mother tongue was Hindi and were enrolled in a school with Hindi as a compulsory subject. A total of 50, with 10 per age group were tested. All the subjects had no known organic or sensory deficits. The subjects were selected by Systematic sampling.

Scoring:-

The responses were recorded as correct, in-correct, partially correct or No response.

A correct response is one which is the expected response for that particular item.

An in-correct response is the wrong response.

A partially correct response is the one wherein the response is acceptable but not totally correct for Ex. if the child writes/sfuti/for/sfu:rti/, its considered as a partially correct response.

Scoring for section I, II Mas done in the following manner:-

Correct Response-1

Partially correct-1/2

Incorrect or No response-0

For sentence copying, dictation and sentence completion sub-sections of Section V, a score of 4 points was allotted for each item. Since sentence is quantitatively larger in dimension in order to account for its quantitative differences, a score of 4 points was attributed for each item.

For question and Answer section, scoring was based on a scale which included content,

i) Syntactic accuracy,

(ii) And number of words used,

(iii) For each item, if content and Syntactic accuracy is present, then, a score of 2 points each was given. The number of words were calculated and a score of 0.5 each was given for each word.

The Text section was also scored using the same scale as for question answer section except that a complexity rating scale was included. A complexity rating scale was used to account for the complexity of the sentences being used. The scale used was as

RESULTS & DISCUSSION

RESULTS AND DISCUSSION

The aim of the study was to evaluate the patterns in the acquisition of writing in Hindi in the primary school children.

The subjects were tested and the mean scores across age groups for different tasks has been given in Table 1.

TABLE 1: Means across Age groups for different tasks

| AGE -> | | Group I | Group II | Group III | Group IV | Group VI |
|---------------|------------|---------|----------|-----------|----------|----------|
| TASKS | Max. score | 4-5 Yrs | 5-6 Yrs | 6-7 Yrs | 7-8 Yrs | 8-9 Yrs |
| SECTION - I | | | | | | |
| A | 25 | 24.9 | 24.85 | 24.65 | 24.85 | 25.0 |
| B | 25 | 19.3 | 21.2 | 19.75 | 20.25 | 21.45 |
| SECTION - II | | | | | | |
| A | 30 | 28.6 | 28.95 | 29.2 | 29.2 | 29.9 |
| B | 30 | 11.65 | 14.4 | 16.5 | 21.6 | 22.1 |
| SECTION - III | | | | | | |
| A | 30 | 27.1 | 27.95 | 27.1 | 28.25 | 28.65 |
| B | 30 | 12.0 | 16.95 | 19.05 | 21.45 | 24.0 |
| SECTION - IV | | | | | | |
| A | 30 | 27.0 | 28.4 | 28.05 | 28.75 | 29.35 |
| B | 30 | 8.1 | 13.15 | 14.0 | 15.75 | 24.0 |
| SECTION - V | | | | | | |
| A | 20 | 15.0 | 17.57 | 19.05 | 19.95 | 19.95 |
| B | 20 | 7.02 | 12.12 | 13.17 | 15.27 | 16.25 |
| C | 20 | 1.2 | 6.6 | 9.3 | 18.37 | 19.25 |

| SECTION - VI | | | | | | |
|---------------|-----|--------|--------|--------|--------|--------|
| A | 10 | 0 | 0.2 | 1.85 | 5.9 | 7.8 |
| B | 10 | 0 | 0.2 | 1.85 | 5.7 | 7.7 |
| C | 32 | 0 | 0.25 | 4.57 | 13.85 | 22.9 |
| SECTION - VII | | | | | | |
| A (i) | 20 | 0 | 0 | 1.3 | 11.9 | 12.85 |
| (ii) | 20 | 0 | 0 | 1.3 | 11.4 | 12.73 |
| (iii) | 5 | 0 | 0 | 0.1 | 3.2 | 3.2 |
| (iv) | 30 | 1.67 | 2.85 | 4.0 | 15.5 | 16.85 |
| B (i) | 10 | 0 | 0 | 0 | 5.6 | 9.4 |
| (ii) | 10 | 0 | 0 | 0 | 5.6 | 8.05 |
| (iii) | 5 | 0 | 0 | 0 | 2.0 | 2.5 |
| (iv) | 20 | 0 | 0 | 0 | 7.8 | 14.15 |
| TOTAL | 462 | 183.54 | 215.59 | 234.79 | 332.14 | 378.03 |

From Table 1, we can conclude that - For copying there is not any significant difference across age groups (1-5, 5-6, 6-7, 7-8 and 8-9 years) for section I, II, III & IV. This indicates that the copying task of alphabets, simple to complex syllables, words and nonwords has already been attained by the children of first grade that is by 4-5 years. Hence, copying task for section I, II, III and IV can be eliminated for subsequent testing. The copying task can be included for testing the preschool child's writing skills.

There is an increase in scores across age for the copying task of section V and by 8-9 years yes, they attain this task completely.

For dictation as a whole there is an increase in score as the age increases for all sections except section I indicating that this skill is being increasingly mastered in the early school years.

For sentence completion subsection, there is a significant increase in the score as age increases. The scores indicates that this skill starts developing at 4-5 years and is almost completely attained by 8-9 years.

The results for Question-Answer section can be divided into 3 parts based on content, syntactic accuracy and number of words. All the three aspects increase with age. For younger age groups (4-5 & 5-6 years) the scores are very poor indicating that the skill of answering to questions based on self reading of the story has not yet developed at this age.

The Test section results can also be described based on the content, syntactic accuracy, syntactic complexity and number of words. As for Question-Answer section, here also with an increase in age, there is an increase in score indicating that the skill develops with age and schooling. For age groups (4-5, 5-6 & 6-7 years), the scores are very poor. The picture description task starts developing from 6-7 years. These groups (4-5, 5-6 and 6-7 years) describe the picture using only words. The spontaneous writing task being a relatively complex task develops only at the age of 7-8 years. Both the tasks have scope for developing beyond 8-9 years, the upper age limit of this study.

As may be seen in Table 1, with the exception of copying tasks, the scores in all after writing tasks increase with age in the subject population of this study. As to copying with the exception of section V B, all others copying tasks including those of alphabets, simple to complex syllables, words and non words has been attained by the children of first grade. This may be attributed to the early training in writing that Indian children receive in the pre-schooling years (LKG & UKG). Hence these items may be appropriate for assessment for the pre-school children's writing skills, rather than that of school going child.

The raw scores were subjected to ANOVA, T-test and Newman-Kuel's comparison report and significance at 95% was determined. The results for the above tests are presented in a tabular form below:

TABLE 2: Related Measures ANOVA

| Source | F - Ratio |
|-----------------------|-----------|
| Across Age Groups [A] | 23.96 |
| Across Sections [B] | 53.44 |
| [AB] | 0.0005 |

Table 2 indicates that there is a significant difference across age groups and also across sections.

TABLE 3: Newman Knel's Comparison Report

| Source | Mean | A B C D F |
|--------------|-------|-----------|
| A (4-5 Yrs) | 8.34 | . . . S S |
| B (5-6 Yrs) | 9.80 | . . . S S |
| C (6-7 Yrs) | 0.67 | . . . S S |
| D (7-8 Yrs) | 15.09 | |
| E (8-9 Yrs) | 18.12 | S S S S . |

Table 3 indicates that on comparing across age groups, the 4-5, 5-6 and 6-7 years donot differ significantly from each other but they significantly differ from 7-8 and 8-9 years age group. Similarly 7-8 years differ significantly from 8-9 years.

TABLE 4: Newman Knel's Comparison Report

| Source | Mean | F G H I J K |
|--------|--------|-------------|
| F | 10.62 | S S |
| G | 11.02 | S S |
| H | 14.56 | S S |
| I | 19.76 | S S |
| J | 82.54 | S S S S . S |
| K | 134.43 | S S S S S . |

- F - Sentence completion
- G - Spontaneous writing
- H - Question answer
- I - Picture description
- J - Dictation section
- K - Copying section

Table 4 presents the comparison across sections. The results indicated that F, G, H and I sections donot differ significantly from each other but they differ significantly from J and K. J and K significantly differ from each other. From thin results, we can imply that since sentence completion (F), Spontaneous writing, Question-Answer (H) and Picture description (I) do not differ significantly from each other, we can use one of these sections as a screening test that is by administering one of these sections, we can predict the child's status regarding the acquisitions of writinng skills.

From table 2,3 & 4, we can say that the differences of significances were minimized because of the ease of copying task. As stated before, the copying task is already attained by 4-5 years,

the lower age limit of this study, hence these copying scores mask the significance of other subsections. In order to avoid this masking effect, T - test was done by eliminating the copying subsections across the tasks. The results are given in Table 5 and 6.

TABLE 5: Seven scores for sections I - V across the age groups after elimination of copying subsection

| Comparison between Age Groups | Task I | Task II | Task III | Task IV | Task V |
|-------------------------------|--------|---------|----------|---------|--------|
| 4-5 vs 5-6 | 1.54 | 1.86 | 2.33 * | 2.39 * | 2.25 * |
| 6-7 | 0.28 | 2.41 * | 2.93 * | 2.69 * | 2.57 * |
| 7-8 | 0.74 | 4.45 * | 4.48 * | 3.30 * | 4.29 * |
| 8-9 | 1.73 | 6.25 * | 6.62 * | 4.80 * | 4.98 * |
| 5-6 vs 6-7 | 1.20 | 1.13 | 0.91 | 0.36 | 0.46 |
| 7-8 | 1.25 | 3.43 * | 2.25 * | 1.06 | 1.80 |
| 8-9 | 0.36 | 5.21 * | 4.20 * | 1.65 | 2.47 * |
| 6-7 vs 7-8 | 0.40 | 2.06 * | 1.04 | 0.69 | 1.10 |
| 8-9 | 1.40 | 2.83 * | 2.44 * | 1.13 | 1.67 |
| 7-8 vs 8-9 | 1.55 | 0.22 | 1.53 | 0.21 | 0.83 |

* - Significant at 95%.

TABLE 6: T-scores across age Groups for section VI & VIII

| Comparison between Age Groups | TASK VI | | | TASK VII | | | | | | | | |
|-------------------------------|---------|---------|---------|----------|--------|--------|--------|--------|---------|---------|--------|---------|
| | A | B | C | A | B | C | D | A | B | C | D | |
| 4-5 vs | 5-6 | 1 | 1 | 1 | - | - | - | 1.68 | - | - | - | - |
| | 6-7 | 1 | 1 | 1 | - | - | - | 1.11 | - | - | - | - |
| | 7-8 | 7.08 * | 7.35 * | 4.61 * | 9.51 * | 8.83 * | 5.08 * | 5.38 * | 5.46 * | 5.51 * | 4.47 * | 5.44 * |
| | 8-9 | 16.43 * | 16.29 * | 10.67 * | 9.08 * | 8.87 * | 7.23 * | 8.07 * | 12.31 * | 13.77 * | 5.0 * | 10.56 * |
| 5-6 vs | 6-7 | 1.72 | 1.71 | 1.61 | 1 | 1 | 1 | 0.79 | 0 | 0 | 0 | 0 |
| | 7-8 | 6.65 * | 6.86 * | 4.41 * | 9.51 * | 8.83 * | 5.08 * | 4.86 * | 5.46 * | 5.51 * | 4.47 * | 5.44 * |
| | 8-9 | 14.77 * | 14.61 * | 10.48 * | 9.08 * | 8.87 * | 7.23 * | 7.29 * | 12.31 * | 13.77 * | 5.0 * | 10.56 * |
| 6-7 vs | 7-8 | 3.23 * | 3.15 * | 2.31 * | 5.87 * | 5.51 * | 4.86 * | 4.18 * | 5.46 * | 5.51 * | 4.47 * | 5.44 * |
| | 8-9 | 5.70 * | 5.54 * | 5.36 * | 6.01 * | 5.89 * | 6.83 * | 6.06 * | 12.31 * | 13.77 * | 5.0 * | 10.56 * |
| 7-8 vs | 8-9 | 2.03 * | 2.20 * | 2.45 | 0.50 | 0.67 | 0 | 0.44 | 2.97 * | 2.09 * | 0.74 * | 3.23 * |

'-' Indicates error while processing in the computer
 '*' Significant at 95%.

Table 5 & 6 indicates that as the complexity of the task increases, significance of difference across age groups also increases. Task I being the most easiest task, was performed equally well across all the ages. Task II and III are able to discriminate significantly the age groups i.e. since the task becomes comparatively complex, the younger age performed poorly whereas the older age groups performed significantly well. Similar were the results for Task IV and V. But for Task VI and VII, since they were very complex, there was a significant difference across all age groups including both younger and older age groups considered for this study. These tasks can be used to discriminate the more older age groups (i.e. beyond 9 years).

From the above mentioned results, we can conclude that all the writing tasks evaluated here other than copying are developing across the age range of 4-9 years and the age of acquisition for different tasks vary. Hence it can be used as a tool for evaluating the writing skills.

SUMMARY & CONCLUSION

SUMMARY AND CONCLUSION

The present study aimed at evaluating the patterns in the acquisition of writing in the primary school children. The test material prepared was given to the subjects ranging in age from 4-9 years, who were going to the schools where Hindi was a compulsory subject and whose mother tongue was Hindi. A range of writing skills were evaluated in these children., The results indicate that all the writing tasks other than copying are developing with age and the age of acquisitions for different tasks vary.

Limitations of the study

1) The sample size is small.

The recommendations for further studies -

1) Item analysis should be done.

2) Normative data should be established for the material on a large population.

3) A few children who are known to have difficulties in writing skills should be tested on these material in order to establish its usefulness as a tool for identifying the child with a writing disorder and other such clinical applications.

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APPENDIX

INSTRUCTIONS TO THE SUBJECT

SECTION - I - ALPHABETS

(A) COPYING

अब आपको हम एक कागज देंगे। अब हम देखेंगे कि आप कितना अच्छा से अ, आ... लिख सकते हैं। यहाँ कुछ अक्षर लिखे हुए हैं और उसके नीचे खाली स्थान दिया हुआ है। आपको ऊपर जिस तरह अक्षर लिखा हुआ है, उसी तरह नीचे खाली स्थान में लिखना है। इसमें जितने अक्षर हैं, सभी को आपको लिखना है।

(B) DICTATION

अच्छा! अब हम कुछ अक्षर जोर से बोलेंगे, आपको उन्हें अपने कागज पर लिखना है। अगर आपको समझ में नहीं आइया तो एक ही बार दोहराएँ, इसीलिए ध्यान से सुनो।

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SECTION - II - SIMPLE TO COMPLEX SYLLABLES

(A) COPYING

यहाँ कुछ शब्द लिखे हुए हैं। जिस तरह इसमें लिखा हुआ है, ठीक उसी तरह आपको भी वहाँ दिए हुए स्थान पर लिखना है।

(B) DICTATION

अब हम आपको 'डिक्टेशन' देंगे। ध्यान से सुनो। एक ही बार हम दोहराएँगे। आपको जो आता है, उसे कागज पर लिखिए।



SECTION - III - WORDS

(A) COPYING

अब आपको थोड़ा कठिन शब्द लिखना पड़ेंगे। जो शब्द यहाँ लिखा है, ध्यान से उसे देखो और ठीक उसी तरह नीचे दिए हुए स्थान पर लिखो।

(B) DICTATION

हम आपको अब कुछ शब्द 'डिक्टेशन' के लिए देंगे। सभी देने वाले शब्द थोड़े कठिन हैं। इसलिए ध्यान से सुनो और सोच-समझकर लिखना।

SECTION - IV - NON-WORDS

(A) COPYING

यहाँ कुछ शब्द लिखे हुए हैं। इन शब्दों का कोई मतलब (अर्थ) नहीं है। ध्यान से इन्हें देखो और नीचे दिए गए खाली स्थान पर इन शब्दों को उतारो।

(B) DICTATION

अब हम आपको कुछ शब्द बोलेंगे जिनका कोई मतलब नहीं है। इन शब्दों को ध्यान से सुनो और लिखो।

SECTION - V - SENTENCES

(A) COPYING यहाँ कुछ वाक्य लिखे हुए हैं। इन्हें ध्यान से देखकर नीचे खाली स्थान पर उतारो।

(B) DICTATION अब आपको थोड़ा मुश्किल काम करना पड़ेगा। हम आपको कुछ वाक्य बोलेंगे। इन्हें ध्यान से सुनकर लिखो। एक ही बार हम दोहराएंगे।

(C) SENTENCE COMPLETION

यहाँ कुछ वाक्य लिखे हुए हैं। हर वाक्य के नीचे चार शब्द दिए हुए हैं। वाक्य पढ़िए और नीचे दिए शब्दों में से सही शब्द चुनकर वाक्य पूर्ति कीजिए।

SECTION - VI

QUESTION ANSWER

कहानी आप सब को अच्छा लगता है न! आपकी सम्मति आपको कहानी सुनाई होगी न? यहाँ एक कहानी लिखा हुआ है। इस कहानी का नाम है 'जंगल का राजा'। आपने यह कहानी सुना है? अब आप इसे ध्यान से पढ़ें। कहानी के आधार पर प्रश्न दिए गए हैं। कहानी पढ़कर प्रश्नों के उत्तर

लिखिए ।

SECTION - VII - TEXT

(A) PICTURE DESCRIPTION

अब हम आपको एक चित्र दिखाएंगे । इसे ध्यान से देखिए । इस चित्र में भी नज़र आता है उसे अपने शब्दों में पढ़ें किन्ट के अन्दर जितना हो सकता है उतना लिखो ।

(B) SPONTANEOUS WRITING

आपको हिन्दी या अंग्रेज़ी परीक्षा में निबन्ध दिया जाता है न ? आज हम आपको एक विषय देंगे । इस विषय का नाम है "हमारा परिवार" । इसके बारे में आप जो कुछ लिख सकते हैं , उसे पढ़ें किन्ट में लिखिए ।

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AGE / SEX :-

D.O.B :-

SECTION - I

① COPYING

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(A) COPYING

SECTION - II

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| i | | च | चै | वा | लौ | द्वौ | प्रस्ता |
| ii | | ण | कु | से | सु | मन्ना | नृत्या |
| iii | | ट | डी | लौ | झा | भया | सृत्यु |
| iv | | प | या | हु | था | स्ने | ब्रम्हा |

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SECTION - III

A) COPYING - WORDS

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| i | फल | मेंना | दरजी | बाजार | पुतला | स्वास्थ्य |
| ii | चख | ढील | कधुआ | सहेली | व्यक्ति | ग्राहक |
| iii | जल | बैल | तराजू | गुडिया | जन्म | स्फुर्ति |
| iv | गत | चाकू | कुलकी | तराजू | धुट्टी | सौंदर्य |

SET 1 2 3 4 5 6

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|---|----|------|------|-------|--------|---------|
| v | फस | हाथी | यौवन | फावडा | आरचर्य | समृद्धि |
| | | | | | | |

(B) DICTATION - WORDS

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SECTION - IV(A) COPYING - NON WORDS

| | 1 | 2 | 3 | 4 | 5 | 6 |
|-----|-----|------|-------|--------|-------|----------|
| i | त्फ | नामै | रजीद | राजाब | तलापु | वास्थ्यर |
| ii | खच | लढी | आकुध | हेलीस | मिठ्य | हकगा |
| iii | लज | लबै | राजूत | डिगुया | मन्ज | फुतिरि |
| iv | तग | कुचा | लडुकी | जुतरा | हीधु | दर्यसौ |

SET 1 2 3 4 5 6

| | | | | | |
|----|-----|--------|-------|---------|---------|
| सफ | थीश | वनर्यौ | वडाफा | श्चर्यआ | मृद्दिस |
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(B) SET 1 2 3 4 5 6
DICTATION - NONWORDS

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SECTION - V

SENTENCES (A) COPYING

1. वह अपना घर है ।
2. साथ मिलकर खाना खाओ ।
3. विनोद मित्रों को लेकर आइगा ।
4. मुख्य अध्यापक ने सभी विद्यार्थियों के सामने शंकर की प्रशंसा की।
5. दौड़ता हुआ दौड़ा और चल्ता हुआ आदमी कभी बड़ा नहीं होता ।

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⑧ DICTATION

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© SENTENCE COMPLETION

1. गाय _____ देती है। [पानी, मिट्टी, दूध, चीनी]
2. _____ के दो पंख होते हैं। [जानवर, पक्षी, साँप, मछली]
3. फूलों से _____ आती है। [खुराबू, बड़बू, पानी, पत्ते]
4. कुत्ते को देखकर राम _____ उठा। [हँस, भौंक, गा, चौंका]
5. _____ फूलों का मौसम है। [गर्मी, बरसात, बसन्त, सर्दी]

सिंह जंगल का राजा है। जंगल में हार्थी जैसे बड़े-बड़े पशु भी पाए जाते हैं, पर सबसे अधिक निडर और साहसी सिंह ही होता है। देखने से ही यह जंगल का राजा लगता है। जब कहा जाता है तो सारा जंगल कौंप उठता है।

सिंह बिल्ली की जाति का सबसे बलवान और बड़ा पशु है। इसके शरीर की बनावट और चाल बिल्ली जैसे ही होती है। बिल्ली की तरह यह भी अंधरे में देख सकता है। इसके पंजे गदवी-दार होते हैं। इसी से जब सिंह चलता है तो आवाज बिलकुल नहीं होती।

सिंह मौस खाता है। यह सूर्य छिपने पर ही शिकार की खोज में निकलता है। दिन में यह जहाँ भी जाता है वहाँ चिड़िया शोर मचाकर इसके आने की सूचना अन्य पशुओं को दे देती है। इसीलिए दिन में यह किसी झाड़ी में सो जाता है और अंधरे होने पर ही शिकार के लिए निकलता है।

सिंह कई देशों में पाए जाते हैं। भारत में ये अधिकतर गुजरात के गिर के जंगलों में पाए जाते हैं।

सिंह वन की शान है। इसलिए इसकी सुरक्षा के लिए कुछ वन निश्चित कर दिए गए हैं। सिंह सचमुच जंगल का राजा है।

Questions :-

- क) जंगल का राजा कौन है ?
- ख) भारत में सिंह कहाँ कहाँ पाया जाता है ?
- ग) गिर वन कहाँ है और किस लिए प्रसिद्ध है ?
- घ) सिंह के चलने से पेड़ों की आवाज़ क्यों नहीं होती है ?
- ङ) सिंह दिन में शिकार क्यों नहीं करता ?

SECTION - VII

(A) PICTURE DESCRIPTION

(B) SPONTANEOUS WRITING

' मेरा परिवार '