Summary
Reading ability or proficiency can be improved through teaching and practice. Children face a handicap in academics where the medium of instruction is not the native language and phonological and vocabulary deficits contribute to difficulties in reading. In India, English has the status of second language and is the medium of instruction in a large number of schools where the native language of the children is an Indian language. It is the official language in a number of states and higher education places a major emphasis on English as English texts and textbooks are used extensively. This makes the ability to read and learn from English texts an essential academic skill. In this age of globalization, people who do not speak a second or a foreign language are at a serious disadvantage in the job market and sometimes even in their private sphere of life. It is therefore of great relevance that learners are also provided with equal and appropriate opportunities to learn a second or foreign language. Research in the area of reading indicates that phonological awareness is the basic unit of reading. Phonological recoding in lexical access and in working memory, play a significant role in learning to read. Speed of processing has been found to be an important factor in reading skill measures of phonological awareness. The lexical fluency of words has also been found to have an effect during the early phase in the recognition process. Reading difficulties appear to be strongly linked with impaired phonological processing and Vocabulary can aid children in making phonological distinctions within a language. Further, word recognition and phonological processing successfully discriminated between average and poor readers. Defects in phonological awareness/ segregation, decoding or word recognition skills, vocabulary and syntax (correlates of structural level) processes results in reading disability.

Thus, in view of the importance of second language learning i.e. English, in India, especially when the medium instruction and examination is the second language, the following problem was formulated for the present study, where English is considering as a second language and Hindi as first Language.

**Problem:** “Identification of structural correlates of second language reading proficiency in middle school children”
The objectives of the present investigation were to study the role of correlates of reading in assessment of reading proficiency in L2, to assess the role of structural factors (letter and word) to L2 reading proficiency and to study the mediating role of L1 in L2 processing.

Eight hypotheses were framed where it was hypothesized that indices of reading, spelling, writing and creativity would be significantly higher in good L2 readers in comparison to poor L2 readers and would differentiate between poor and good L2 readers. Letter/Word span of good L2 readers, speed of processing at grapheme unit (alphabet) level/semantic unit (word) level and Transfer effects of L1 mediation would be significantly greater in comparison to poor L2 readers. Structural correlates of L2 would differentiate between good and poor readers.

In order to achieve the objectives of the present investigation two group design experiments was used. In Phase I, in order to study the role of correlates of reading in assessment of reading proficiency in L2, DST-S (screening test for reading in English) was administered on 217 children of Hindi medium schools. Phase II addressed the role of structural factors (letter and word) to L2 reading proficiency along with the mediating role of L1 in L2 processing where five tasks (Letter Span task, Word Span task, Letter Cancellation task, Bilingual Hindi-English interference task, and Lexical Decision task) constructed by the investigator were administered to the 100 children identified in Phase I.

A purposive sample of 217 children (VII and VIII grade) was selected from Hindi medium schools of Rohtak district. Selection criteria of the children were the marks obtained in their preceding exams (SA-I) i.e., 60% and above marks in Hindi and less than 60 % in English. Good readers in English (obtaining above 60% marks in English) were excluded from the sample. DST-S was applied on 217 children and 50 poor and 50 good readers were identified on the basis of their Screening diagnosis and to study the role of correlates of reading proficiency in L2 in Phase-I.

In Phase-II, five tasks were designed by the investigator. The Letter/Word span task was used to assess memory span in L2. The letter cancellation task assessed deficits in grapheme identification. The lexical decision task assessed priming effects of lexical fluency among good and poor readers while the Bilingual Hindi-English interference assessed between language proficiency and between language transfer in L2.
Discriminant analysis was conducted on the data of Phase I to identify the indices of reading, spelling, writing and creativity which could predict second language reading proficiency. Significant predictor variables which emerged in the present analysis were Phonemic segmentation, Two minute spelling, Backward digit span, Verbal fluency and Non verbal reasoning. The obtained discriminate function revealed a significant association with the grouping variable i.e., reading proficiency and it accounted for 65% of between group variability. The most significant predictor was Non verbal reasoning. Another variable associated with cognitive processing i.e., working memory (Backward digit span) was also found to predict reading proficiency. Three structural correlates i.e., phonemic segregation, grapheme identification and vocabulary (Two minute spelling, Phonemic segmentation and Verbal fluency) emerged as significant indices of L2 reading. The discriminant function was found to classify 90% of the cases correctly. Thus, the present results verified the hypotheses which predicted that indices of reading, spelling, writing and creativity would be significantly higher in good L2 readers in comparison to poor L2 readers and indices of language and creativity in L2 would differentiate between poor and good L2 readers.

Analysis of the data of Phase II revealed two significant predictor i.e. Word span and Between language transfer in L1 and L2. The obtained discriminate function revealed a significant association with the grouping variable i.e., reading proficiency and it accounted for 37% of between group variability. The most significant predictor was between language transfers. Another variable associated with L2 reading proficiency was word span which was also found to predict reading proficiency. The discriminant function was found to classify 82% of the cases correctly. Thus, the present results verified the proposed hypotheses.

The study indicated that the reading process is influenced by both general intelligence as well as specific reading related factors in which working memory plays an important role. Phonological segmentation is useful only at the initial stage of reading and reader should be encouraged to give away this effortful process as well as possible in L2 reading. Increasing the second language vocabulary [by verbal interaction in L2] facilitates the reading process in L2. Phoneme awareness and association with grapheme by using L1 as a mediator would facilitate L2 reading. LI mediation can be used as predictor of reading proficiency not deficits. Basically,
L2 reading requires conscious effort and the L1 skills cannot be automatically transfer to L2.

Thus, the present study shows that structural correlates along with general efficacy of cognitive processing (general intelligence and working memory capacity) play an important role in learning to read, especially in the second language. Further, it is implied that students would learn to read more proficiently if emphasis is placed upon strengthening of the structural correlates i.e., phonemes, graphemes and vocabulary, along with mediating influence of first language.