CHAPTER 2
REVIEW OF RELATED LITERATURE

Reviews of the Related studies help provide background for the research problem as well as allow the investigator familiarize with what is known and what is still to be explored. Apart from establishing theoretical framework, and helping choose the correct methodical path, it bridges the gap in the particular area of research.

The significance of the present study can be derived from the various researches already conducted for effective methods for teaching young children reading in English.

The literature review bolsters the rationale of this research and highlights the unique aspects of this particular topic. The researcher has reviewed studies conducted in India and abroad from sources like libraries, Indian Educational journals, surveys, policies, books, doctoral theses, international dissertations, Shodhganga, etc.

The undertaken study encompasses many areas like the importance of preschool education, the importance of reading skills, the importance of learning Phonological Awareness in kindergarten, the importance of using the tool-DIBELS Next, etc. The availed reviews are classified into the below categories.

2.1 STUDIES RELATED TO PRESCHOOL EDUCATION

Meyer, Wardrop, and Hastings (1990) investigated how kindergarten students learn to study. The study used a heuristic model that took into account entrance ability, home background, instructional methods, home literacy assistance, and measurements of student ability at the end of kindergarten. To measure how children acquire reading ability, researchers employed tests for children, classroom observations, and questionnaires. The children's knowledge of letters when they entered kindergarten had a significant impact on their reading performance, according to the findings.

Suriakanthi and Swaminathan (2000) conducted an exploratory study in Chennai, Tamil Nadu, to better understand the relationship between early childhood education quality and children's learning skills. The study looked at the impact of early childhood education (ECE) and other familial and socioeconomic factors on children's learning abilities, such as language and cognitive skills, perceptual and motor skills, and socio-emotional development. It also attempted to provide a method for assessing children's learning abilities in Tamil Nadu. The study included 193 (4-year-old) children from lower socioeconomic categories

and was done in both rural and urban Chennai. The young students were enrolled in 45 government and non-governmental organization-run centres. The Tamil Nadu Early Childhood Environment Rating Scale, Child Learning Competency Test, and Parent/Teacher Interview Performa were the keytools employed. The findings demonstrated that four family traits - (i) fathers' education, (ii) mothers' education, (iii) fathers' occupation, and (iv) housing quality, had a substantial positive relationship with children's competences. The important aspect in developing children's learning competencies was active learning integrating perceptual and motor skills. Children's learning abilities were aided by high-quality ECE centres. For diverse types of centres, different policy measures were suggested. To increase quality in the centres, the study proposed that the government implement regulation and support measures such as curriculum, teaching methods, and teacher-to-student ratios.

Wylie and Thompson (2003) found that early childhood education continues to contribute to children's skills at the age of ten in a New Zealand sample, with children having higher average scores if they received 3 or more years of ECE in general. The quality of their final ECE centre, especially in terms of teacher-child interaction, continued to have long-term effects on children's performance. The children's last ECE center's socioeconomic blend also had an impact on their competency levels 5 years later.

Di Santo (2006) investigated school readiness, as well as the perspectives of Early Childhood instructors, parents, and preschoolers.Early childhood educators and parents viewed children's emotional maturity as the most crucial aspect for a successful transition to school, according to the findings.The majority of them also considered social skills and physical health and well-being of children to be key determinants in a smooth transition to school.The value of play was highlighted in the data acquired from children.

Sharma (2006) looked at preschool profiles in terms of infrastructure, physical facilities, preschool staff, ECE curriculum, and its impact on motor, linguistic, cognitive, social, and emotional development, as well as school preparedness. The sample consisted of 12 schools, four from each of the three categories: private, aided, and government. The data demonstrate that, while private businesses have stepped forward to help with pre-school education in urban areas, the majority of these institutions are conducted on acommercial basis. Both government and private pre-schools were discovered to be operating out of outdated buildings that lacked play area and indoor activity amenities. They insisted that pre-schools educate their children more academics rather than improve their learning and logical thinking abilities due to theirunderstanding of ECE. As a result, pre-school instruction was limited to rote learning, which did not bode well with the children.

Rajawat (2015) investigated the physical setup and infrastructure of pre-schools in Vadodara, as well as the profiles of the principal and teaching staff, the admission and enrolment procedures for students, teacher selection criteria and training, practices for holistic child development, and the identification of various preschool problems. Recognizing the importance of early childhood development and the lack of research in the field of holistic student development, preschool practices, preschool curriculum, and materials used for various activities carried out for the development of different domains, the researcher decided to investigate these in depth. The sampling instruments included a questionnaire for teachers, an observation plan for the school's physical structure and facilities, and an interview schedule for principals/supervisors. In many ways, the physical facilities offered by the majority of schools were found to be inadequate, according to the survey. The principal's and instructors' profiles were impressive. Fine and gross motor development, language and communication development, and cognitive development were found to be very adequate out of all the activities undertaken for holistic development, whereas an environmental concept, social and emotional development were found to be relatively inadequate. The study also found that the primary focus of the teaching method was on play and art-based activities. The findings indicate that pre-school is shifting away from rote memorization and moving towards play-based learning.

2.1.1 Major Observations

Six relevant studies were accumulated for preschool education. Out of which three studies talked about the importance of the infrastructure and role of school staff for the holistic development of a child, two studies represented the educational model for literacy development and one study measured the relationships between quality of early childhood education and learning competencies of children. A heuristic model which includes instructional processes, home support for literacy development and measures of student ability at the end of kindergarten have been very helpful during the intervention programme to the researcher. The researcher will be able to discuss the instructional processes with the teachers for preschoolers. Similarly, it was also derived from the survey conducted by Rajawat (2015) that pre-school children are able to learn at their best through play way and art-based activities. Sharma (2006) also came to the conclusion, based on the qualitative data of 12 schools (Private and Government) that learning through rote method has been reduced in pre-school education and alternative teacher learning methodologies are found very effective in teaching, especially language. Significant findings found by Di Santo (2006) suggest that children’s emotional maturity is highly important for successful transition to

school. Teachers and parents play the most important role to cultivate social competence and wellbeing of preschoolers.

2.2 STUDIES RELATED TO READING SKILLS

This section has a total of 24 studies which show different types of researchon various aspects of reading skills.

Koppar (1979) studied factors affecting reading comprehension in English language in 555 students of class 11 of nine Gujarati medium schools of Baroda. Random sampling was done to study in depth study of 10 cases. The Silent Reading Comprehension Test in English for S.S.C. pupils by Patel, the Reading Attitude Scale of Patel, Junior Index of Motivation Scale of Frymier, Test Anxiety Scale for children by Nijhawan, the Socio-Economic Status Scale by Mehta and Pre-Adolescent Dependence Scale by Pareek and Rao were employed. Descriptive statistics and product moment correlation were used for data analysis. The findings indicated that reading comprehension was related positively to reading attitude, reading readiness, academic motivation, attitude towards the study of English, classroom teaching quality, educational status of parents, social and economic compulsions.

Bryant, MacLean, Bradley & Crossland (1990) reviewed various forms of phonological awareness (detection of rhyme and alliteration and detection of phonemes) and children's reading. The testing (multiple regression), which included both a measure of rhyme or alliteration identification and a measure of phoneme detection, explained for more than 65 percent of the variance in reading, and in some cases as much as 71 percent. As a result, there appears to be a link between early phonological skills and later reading progress in children.Early rhyming skills via phoneme detection plays a significant role in learning to read. Sensitivity to rhyme helps children group words with common spelling patterns.

Snow (1995) conducted a research study on oral language and early literacy skills in kindergarten and first- grade students regarding school readiness. The inter relationship among the prerequisites for literacy acquisition like print knowledge, culture of literacy, meta-linguistic awareness, and decontextualized oral language skills was investigated in the study with the help of SHELL - a battery of oral language and early literacy tests.

Hempenstall (1997) examined the concept of phonemic awareness in the development of reading capability. The importance of linking readinginstruction with phonemic awareness is researched and also the significance of early detection and intervention.

Levy & Gong (2006) explored the development of children's early understanding of visual and orthographic aspects of print and itsrelation to early reading acquisition. 474 children, from the age 48 to 83 months participated in the programme and completed standardized measuresof phonological awareness and early reading skills and also experimental tasks that drew their understanding of print. From the regression analysis, it can be deduced that 4–5-year-old children begin to understand word constituents and letter orientation (word elements) before they learn to read. This knowledge is related to their letter reading ability. So, it is very important that children closely examine the print and develop an understanding of written language and how they encode words in the English writing system, before they learn how to read words. The various literacy activities children participated focused on print (e. g. using letters, alphabet books, picture dictionaries, printing, read aloud books, learning letter names) related to children's reading achievement. Home literacy activities guided by adults at home play an important role in helping young children focus on print during literacy activities.

Shermila (2006) studied the skills of reading comprehension with regard to Reading the lines in English developed by students of standard 9 in the schools in Tuticorin, India. It was found that their level of attainment in reading comprehension in English was moderate (in reading the lines, reading between the lines, and reading beyond the lines dimensions). A relevant observation was that students with kindergarten education were more competent than students without kindergarten in the area of Reading the lines, especially in guessing the meanings of words and phrases, locating the needed information, sequencing contents, and understanding the context. Other factors like gender, social strata, religion, area-wise, parents' education- income, etcetera also affected reading comprehension.

Cihon (2008) conducted a study for kindergarten children at-risk of reading failure, where the children were administered the See the Sound/Visual Phonics (STS/VP) method. In the program children learned a hand sign for each phoneme in English. DIBELS was conducted pre-and post-intervention to determine the children's progress in acquisition of phonic sounds. The intervention was most effective for children falling behind the regular curriculum, and the participating children were at par with their same age peers.

Burke, et al. (2009) examined the interrelationships and predictiveness of kindergarten early literacy indicators from DIBELS within the context of a path analysis. The results offer a strong support for the predictive validity of DIBELS, since the performance on these measures (phonological awareness, phonetic skills, automaticity) is considered within a developmental model of reading acquisition. The sample consisted of 218 kindergarteners,

and the subtests from DIBELS included Initial Sound Fluency, Phoneme Segmentation Fluency, Letter Naming Fluency, and Nonsense Word Fluency. The outcome measures administered included phonemic decoding efficiency, sight word efficiency, alternate forms of Oral Reading Fluency, and Passage Comprehension subtest from Woodcock Reading Mastery Test-Revised (WRMT-R). It bolsters the validity of DIBELS in prediction of complex reading skills.

Bruce (2010) carried out a quantitative research to establish if there was a significant difference in reading comprehension and reading attitudes of grade four at-risk children, before and after taking part in Guided Reading instruction. The children practiced the strategies their teachers modelled for reading and comprehension during the Guided reading lesson. Their reading levels were checked using STAR Reading which is a computerized assessment of reading levels. The research showed that there were no significant differences after the intervention.

Bufalino and Wang (2010) researched the Reading Recovery interventions for at-risk learners in the first grade. Reading Recovery is a US government program which is a school-based, short-term intervention designed for children aged 5-6, who are the lowest in achieving literacy after a year of school, who cannot read simple books or write their own names. The intervention included intensive one-to-one lesson with a trained Reading recovery literacy teachers for 30 minutes a day for about 20 weeks. Clay's Text Reading level (TRL), a subtask of An Observation Survey of Early Literacy Achievement was used to measure the progress in literacy. The results showed that the vast majority of children enrolled in this program became more efficient and effective readers after the lessons. Children labelled as at-risk at the beginning of the programme

achieved high levels of literacy achievement by the end of the academic year.

Cooke, Kretlow and Helf (2010) conducted a study of young children from two different schools using DIBELS-Dynamic Indicators of Basic Early Literacy Skills to assess at the beginning of the school year. All children received core instruction while readers identified as being at risk for reading failure also received small group instruction. According to the findings, kindergarteners who received supplemental reading instruction throughout the year fared significantly better than those who received only one semester of supplementary phonemic awareness and early decoding abilities. As a result, beginning reading intervention at the start of the kindergarten school year has an advantage in terms of facilitating excellent performance in crucial literacy skills.

Denton (2010) researched supplemental reading intervention employing Response to intervention (RTI) method. This method is used to provide early, systematic assistance to young children who have difficulty learning. Their progress was measured using Texas Primary Reading Inventory and the Woodcock-Johnson III Letter-Word identification subtest. The findings suggest that children who received supplemental reading intervention using theRTI system had much higher outcomes than the children who received typical school instruction on multiple measures of reading.

Green (2010) carried out a comparative study to check the efficacy of SRA Reading Mastery Intervention and Guided Reading for struggling readers. The sample was chosen from second grade children from two schools, on the basis of Measures of Academic progress (MAP) scores in Reading, which included reading tests, testing phonological awareness skills, phonics,concepts of print and vocabulary, word structure and comprehension. The findings suggested the Guided Reading treatment group performed better than the SRA research group.

Leppanen, Niemi&Nurmi (2011) investigated the trajectories of preschool and first grade children's development of reading skills, as well as the cognitive and social antecedents of that development. Also, to examine the antecedents of learning to read namely, phonological awareness, letter knowledge, and listening comprehension 196 children of 5-6year age were tested for their reading ability in their preschool and first grade year. The reading skills measurement in such young children was a challenging task. The Reading Words and Sentences Test, Sentence Comprehension Test, Pre-reading Skills (Phonological Awareness, Letter Knowledge), Listening Comprehension Test, Number Sense Skills Test, Metacognition, cognitive Ability, visual attention subtest and Mothers' questionnaire were used to gather data. The statistical data was analyzed with the simplex modeling to examine whether reading performance would show stability and increasing or decreasing variance across time. The association between the initial level of reading skills and its growth over time were analyzed by latent growth-curve modeling. The results showed that phonological awareness predicted children's reading skills at the beginning of the preschool year. Other cognitive factors, such as letter knowledge, listening comprehension and number sense contributed to the growth of reading skills more.

Vernon-Feagans (2011) applied TRI-Targeted Reading Intervention for Word Attack, Letter-Word Identification, passage Comprehension, and Spelling of Sounds in children.

The program involved one-to-one intervention of the children after the assessment and daily progress tracking. If the child made rapid progress, s/he was moved to a group for fluency,

where the children were asked to re-read for fluency. The PPVT-Peabody Picture Vocabulary Test and WJ-III the Woodcock Johnson Tests of Achievement subtests were used after the intervention for Word Attack, Letter-Word Identification, Passage Comprehension and Spelling of Sound. The findings suggested that TRI significantly improved the basic word reading and comprehension skills in struggling Kindergarten and first grade readers.

Cornthwaite (2012) studied to find an effective method of reading remediation for young readers from two methods; SRA Reading Mastery and Guided Reading groups in the field of reading comprehension, word reading, early reading, pseudo word decoding and basic reading. A quasi-experimental study was carried out where the researcher delivered interventions to both the groups, for half an hour three times per week for twelve weeks.

The result indicated that students in the SRA Reading Mastery had a balanced approach to phonological awareness since it includes phonics instruction. SRA Reading Mastery program began by teaching phonemic awareness and sound- letter correspondence and progressed into word and passage reading. Guided Reading group also showed some growth but not significant gains in pseudo word reading, since it focused on reading fluency and comprehension.

Yeung (2012) investigated the effects of a 12-week long language enriched phonological awareness instruction on young Chinese ESL learners in Hong Kong. In this programme, children received phonological awareness skills embedded in vocabulary learning activities, but no direct instruction of these skills. They were tested on receptive and expressive vocabulary, phonological awareness skills at the syllable, rhyme and phoneme levels, reading and spelling in English before and after the program was carried out. The experimental and control group had 38 children each with the 5.14 mean age. The children received language-enriched phonological awareness instruction which followed a fixed sequence of awareness of sound as a unit of words, syllable segmentation, rhyming, onset and rime discrimination. Initial-final phoneme identity, pictures were used, not print, to promote children's awareness of sound structures in English words. Also, vocabulary words were taught for rhymes.MANCOVA was conducted to examine the oral language proficiency and phonological awareness. The findings suggested that young Chinese leaners could learn phonological awareness skills quickly through brief and direct instruction embedded in rich language activities which were done in a play way and joyful method.

Ruiz (2014) studied the impact of an intervention program for reading, based on play and implicit learning in children with non-specific reading disabilities. The intervention lasted six months on 20 children, between 7 to 9 years old. Pre-and post-tests in the evaluation of

phonological awareness, reading skills and general cognitive functioning showed that there was a significant improvement in reading skills which children could sustain long term.

Karimkhanlooei&Sefiniya (2015) studied the effect of a phonics program on teaching alphabet, reading and writing in English as a second language 40 out of 60 children between the age 3-6 were selected on the basis of Sue Lloyd's interview, who were in the same knowledge level. Two groups of 20-20 were formed into experimental and control group. The experimental group was taught through the phonics method while the control group learned through traditional method of names and sounds of letters. The analysis of results was obtained through standardized tests and showed a significant difference between the achievement of students who learned alphabets, reading and writing through phonics.

Westerveld, Bysterveldt, Gillion (2015) investigated the emergent literacy and language skills of 4year old children during their KG year, prior to school-entry. A total of 92 children were assessed on code-related (letter name knowledge, initial phoneme awareness, emergent name writing) and meaning-related (story comprehension and retelling ability). Regression analysis showed that the teachers need to teach phonological awareness and letter name knowledge in a better way. There is a positive co-relation with literacy-rich environment and children's emergent literacy performance. Parents' reading to their children at an early age, yielded better performance on phonological awareness and name writing.

Clemens, Regan, Widales-Benitez (2016) discussed the factors which have received less attention that influence children's difficulties in reading acquisition, e.g., vocabulary knowledge, behavior regulation, teacher knowledge, school factors and instructional differentiation. The paper suggests that vocabulary knowledge is a hallmark of language acquisition and a primary obstacle for an individual learning in a second language. Behavior regulation, the ability to sustain attention, exhibit social-emotional skills and inhibit inappropriate behaviors, has a direct bearing on the learning outcomes and responsiveness in the classroom. Teacher knowledge, school factors and low SES also are some of the factors which have broad implications for reading development.

Islam & Park (2016) reviewed a few strategies to enhance kindergarten children's reading comprehension for increasing their ability to be good readers and also encourage them to enjoy reading books. Reading comprehension enriches KG children's language skills, which is a critical building block on the road to successful reading and writing. The methods are Read Aloud, thinking Aloud, Dialogic Reading (PEER- Prompt, Evaluate, Extend, and Repeat), Demonstration, reading favorite books and show many picture books. A variety

ofcomprehension strategies are needed since constructing meaning while reading is a demanding intellectual work.

Osei (2016) examined the use of Pre-Reading activities like games, puzzle solving, match making in Reading Skills Achievement in Preschool Education in Ghana. The study explored how pre-reading activities facilitate pre-reading and reading skills using randomized experimental and control groups which adopted pre- and post-of two preschoolers' classes. The experiment threw light on the importance of pre-reading activities as an important technical tool for the children's reading skills achievements.

Neumann (2018) explored the effects of using literacy apps like tablets on emergent literacy skills in English speaking children between the age 2-5. From a total of 48 children, 24 in the iPad group were given a nine-week iPad literacy skills like letter name and sound knowledge, letter name and letter writing, and print concepts, whereas the non-treatment waitlist control group children participated in activities with their regular teachers (blocks, puzzles, painting and sand play) and shared story book reading. The iPad group showed remarkable progress in letter name and sound knowledge, print concepts and name writing skills. The iPad group for nine weeks, 30 minutes per week learned three new alphabet letters each week, using three apps (letter matching, letter tracing, and drawing). Tablets can positively support letter name and sound learning and aspects of emergent writing development. The children enjoyed using tablets and apps to interact with letters and words in engaging and multisensory ways.

2.2.1 Major Observations

This section explains research studies reviewed related to reading skills development, practices and teaching to preschoolers. There are nineteen studies found relevant and reviewed by the researcher. Out of these nineteen studies, nine studies explain various interventions executed on pre-school children for the reading skills enhancement, development of phonemic awareness and English language teaching, one study is about the development of mobile application for the English language to enhance literacy skills. Five studies about various teaching methods, eight studies talk about psychometric assessment and three studies are about the challenges faced by students and challenges during the teaching – learning of English language. The researcher found the quasi-experimental study conducted by Karimkhanlooei&Sefiniya (2005) effective to inculcate reading skills in pre-school children. Forty students (Experimental Group – 20 & Control Group – 20) were selected and effects of phonics program were assessed on teaching alphabet, reading and writing English as a second language. Yeung (2012) utilized a 12-week long language enriched phonological

awareness instruction program on young Chinese ESL learners in Hong Kong. Children's learning was measured through receptive and expressive vocabulary, phonological awareness skills at the syllable, rhyme and phoneme levels, reading and spelling in English through quasi-experimental method. These activities have been very helpful for the researcher to develop the intervention program.

2.3 STUDIES RELATED TO PHONOLOGICALAWARENESS

This section presents the eight relevant research reviews related to phonological awareness.

Bond, Ross, Smith and Nunnery (1995) investigated the effects of Sing, Spell, Read and Write program-SSRW on reading achievement of beginning readers-kindergarten through grade 3. Eight randomly selected schools across the United States were selected for this program with a strong phonics orientation. The analysis of the data in reading, writing, and spelling revealed that SSRW was somehow more effective than the traditional curriculum for teaching word attack and letter-word identification, especially in low-stratum schools. The ANOVA conducted in kindergarten and first grade for reading showed significant higher results.

Lovett and Steinbach (1997) Lovett and Steinbach (1997) used the Direct Instruction methodology to help 120 severely impaired readers overcome decoding and phonemic awareness challenges. In the framework of word recognition and decoding training, the children were taught phonological analysis and blending orally, as well as letter sound associations. The main focus of the curriculum was on sound blending and learning a left-to-right phonological decoding method. The second program taught children how to acquire, use, and monitor four metacognitive decoding strategies in grade2/3, 4, and 5/6 to check whether programmes are differently effective at different grade level. The phonological program showed greater transfer across phonological processing domain, whereas the strategy training program yielded broader transfer for real words. The findings suggest that the phonological deficits associated with reading disability can easily be controlled/remedied by focused and intensive remediation, especially in elementary years.

Vandervelden and Siegel (1997) conducted an intervention to enhance teaching phonological processing skills and reading in Early Literacy. The sample consisted of 30 children aged 5.1-6.0 from two schools for a 1-week long program. The instruction was designed to facilitate children the gradually expanding use of letter-phoneme relationships in early reading and spelling. The results showed that the experimental group performed

significantly better in the post-test in the area of phonological processing skills and in reading. The teaching of sounds of letters and phoneme awareness as part of using letter-phoneme relationships in recognizing printed words, spelling, and in reading aloud words seems to be effective for enhancement of early reading and may possibly lessen the probability of reading disability.

Lesaux& Siegel (2003) examined patterns of reading development in native English-speaking (L1) children and those who spoke English as a second language(ESL). There were 978 (790 L1 speakers and 188 ESL speakers) children who participated in kindergarten to grade 2 longitudinal study. In kindergarten and grade 2, they received instruction in reading, spelling, phonological processing and memory. All the kindergarteners received phonological awareness instruction, whereas in grade 1 phonics instruction. Subtests of DIBELS were employed to assess Initial Sound Fluency, Letter Naming Fluency, and Letter-word Identification and subtests of Woodcock –Johnson tests of achievement were used to assess Letter-word identification and Word attack. The findings showed that early identification and intervention is beneficial for ESL speakers, and that the effects of bilingualism on the acquisition of early reading skills may be positive.

Dixon (2004) carried out a research on learning to read in a non-native language and to analyze the relationship between English oral-language and Early Literacy Skills of kindergarten children and their home background in Singapore. A total of 297 Kindergarten children, five years of age participated in the study of different ethnicities. Oral English vocabulary, Phonological awareness, Early English reading and writing proficiency were assessed. The results indicated that the ethnicity, phonological awareness and English vocabulary were significant predictors of English writing and reading scores. Phonological awareness combined with knowledge of the letter-sound correspondence showed a larger effect than the English vocabulary, hence an effective intervention in phonological and phonemic awareness activities such as identifying and generating rhymes, and deleting/ substituting phonemes can pave the way rather than rote memorization of word spellings.

Cartledge (2009) conducted a research on supplemental early reading intervention on the beginning literacy skills of ELL in Kindergarten and grade1. The study provided insight regarding the learning needs of the young ELL children. The Early Reading Intervention (ERI; Simmons &Kame'enui, 2003) was used on all the children to investigate the effects of the instruction on phoneme segmentation fluency(PSF) and nonsense word fluency(NWF). DIBELS (Good & Kaminski,2002) was used to assess these fluencies. The findings showed

significant gains in the number of letter sounds produced correctly and, in the phonemes, segmented.

Slavin et al. (2009) reviewed research on the achievement outcomes of alternative approaches for struggling readers in grades K-5. The study reviewed one-to-one tutoring, small group tutorials, classroom instructional process approaches, and computer-assisted instruction. The study was for 12 weeks or longer of 96 studies, with randomized or well-matched control groups and use of valid measures, independent of treatments. Phonics based tutoring had much better outcomes, also one-to-one phonetically focused tutoring showed more progress. Classroom instruction programs with cooperative learning had better results for struggling readers. Computer-assisted instruction had few effects on reading. The review suggests that a long-term high quality one-to-one phonetic instruction for early intervention in elementary reading can be effective.

Sigmundson, Haga, Ofteland&Solstad (2020) examined when children could break the reading code in the first year of school in Norwegian alphabet and how learning to read depends on the foundation of alphabetic knowledge. The study assessed letter-sound knowledge of 356 children of 5-6year age, at the beginning of the school year, mid-year and at the end of the school year. 11% children broke the reading code before they entered school. The knowledge of letter-sound alone was not sufficient for breaking the code, reader's self-concept and literacy interest were also important for reading development. The findings suggest that the fastest way to teach reading is by teaching grapheme-phoneme correspondences. More letter names and letter sound children know, earlier they manage to break the code.

2.3.1 Major Observations

This section shows the review of relevant research papers about phonological awareness. Total eight significant studies were retrieved and reviewed in the section. Two studies explain interventions to enhance phonological awareness, two studies explain the relationship between English oral language and early literacy skills. Phonological awareness is a significant aspect to inculcate the reading skills in preschoolers. The researcher found the DIBELS program very effective to measure the improvement in reading skills of preschoolers. No studies or interventions of DIBELS assessment has been found in India till now. So, the researcher sees the opportunity to implement the tool for preschoolers in India.

2.4 STUDIES RELATED TO PHONICS

In this section, there are total four selected studies on phonics instruction.

Dixon, Stuart and Masterson (2002) investigated whether children's earliest orthographic representations would include the letters corresponding to the initial and final phonemes they could isolate in the spoken word. Three groups were formed; the first one could identify both word initial and word final phonemes, the second group only word initial, and the third group, could not identify any phonemes. After the intervention, the first group could learn new words quickly than the other groups, since they knew initial and final word sound. The results indicated that children who could apply phonemic segmentation, learnt words quickly and were better readers and eventually could spell, too.

Wyse & Goswami (2008) reviewed the teaching of early reading in England, commissioned by the UK government and recommended that synthetic phonics (sound to word) should be the preferred approach for young English learners. Rose (2006) posited that from practice synthetic phonics offers the vast majority children the best route to become skilled readers.

Jamaludin et al. (2015) carried out a research program to check the effectiveness of synthetic phonics in the development of early reading skills among struggling young ESL readers. From the pretest and posttests, adapted from the PALS (Phonological Awareness Literacy Screening) for preschool and grade 1 to 3 tests, tested children's early reading skills. Also, semi-structured interviews were conducted on selected 8 participants through a systematic sampling procedure. The results showed a significant improvement in decoding and comprehension skills after the synthetic phonics instruction.

Jalaludin and Hashim (2019) reviewed the benefits and limitations of synthetic phonics for struggling young ESL readers. The objective of this review paper was to discuss the importance of early reading skills development among preschoolers and also understand the effect of synthetic phonics instruction for the young children. The study discusses the importance of synthetic phonics in teaching reading along with its benefits and limitations. Synthetic phonics is found to be very effective for the first language learning beginners in the primary grade and also for second language learners (ESL) to make use of letters sounds, vocabulary and meaning to decode and comprehend texts. Letter identification and then word recognition in synthetics phonics is useful for reading successfully. Another benefit of synthetic phonics is that, it is highly effective in helping readers to master the decoding skill, as it provides them with a strategy to decode unfamiliar words. Many studies conducted in different learners' background of English language as first, second or foreign language

pointed out that phonics is a great word recognition tool in reading, regardless of their socioeconomic status. However, some studies also showed that phonics had very little impact on reading comprehension. Long- term effects of phonics instruction affected negatively on struggling learners' reading performance. So, only in the first and second year of learning, phonics should be taught, thereafter the focus should be on reading comprehension.

2.4.1 Major Observations

This section presents the three relevant reviews related to phonics. One study is a quasi-experimental study. Two studies discussed the importance of synthetic phonics for the teaching of English language. Jalaluddin and Hashim (2019) discuss the importance of early reading skills development among preschoolers and also understand the effect of synthetic phonics instruction for the young children. Wyse and Goswami (2008) also mentioned that synthetic phonics needs to be recommended to teach to young English learners. The researcher found this approach effective and planned to add activities related to synthetic phonics in the intervention.

2.5 STUDIES RELATED TO DIBELS

There is a total of eight studies in this segment which have employed the DIBELS (Dynamic Indicators of Basic Early Literacy Skills) tool for research purpose.

Musti-Rao S. (2005) carried out a study investigating the effects of a supplemental early reading intervention on the phonemic awareness and alphabetic principal skills of students identified at-risk for reading failure. Eight children (7 kindergarten and one grade 1) were selected based upon low scores in the DIBELS in the beginning-and middle-of-year. Early reading intervention about 20 minutes three days a week for sixteen-, twelve-, and eight-weeks were carried out. Phoneme Segmentation Fluency and Nonsense Word Fluency were measured on the target children using DIBELS. The results showed that all target children made substantial gains in the area of phonemic awareness and alphabetic principle. This study clearly suggests that early interventions with explicit, intensive, and systematic instruction can manage to teach to read even to the 'hard-to-teach' children.

Riedel B (2007) inspected the relation between DIBELS and reading comprehension at the end of grade 1 and grade 2 in 1518 first grade children from urban schools. ROC (Receiver Operating Characteristic) analyses were employed to determine optimal DIBELS cut scores

for predicting satisfactory reading comprehension. A subtest of DIBELS, Oral Reading Fluency(ORF) was a better predictor of comprehension with good accuracy than other subtests of DIBELS.

Brice & Brice (2009) stated in the paper 'Investigating Phonemic Awareness and Phonic Skills in Spanish-English Bilingual and English-Speaking Kindergarten Students', that monolingual and bilingual children have different levels of sound/phonemic awareness and acquisition levels. The study further focuses on the importance of phonemic awareness and phonic skills for reading, especially in English-language-learning children. The study had 80 children in four groups comprising of 20 high-reading-level English monolinguals, 20 low-reading-level English monolinguals, 20 high-reading-level English-Spanish bilinguals and 20 low-reading-level English-Spanish bilinguals. DIBELS, Dynamic Indicators of Basic Early Literacy Skills, 6th Edition was used to assist grouping the students according to the reading levels. DIBELS is a set of standardized, individually administered measures of early literacy development which can monitor the development of pre-reading and early literacy skills (Good and Kaminski, 2002). The data collection had phoneme –grapheme identification task, a MANOVA using Wilks's Lambda ***F*** statisticwas used to examine the effects of phoneme grapheme identification scores.Findings suggest that there is a difference in the ability of monolingual and bilingual speakers to identify voiced versus voiceless contrasts, which is evident even in the Kindergarten children and phonemic awareness and phonics skills can help bilingual children to read well.

Berthelsen A (2013) carried out a survey of best practices in Literacy instruction in Public Preschool Programs in Iowa. Dialogic reading -Read aloud was the strategy preschool teachers adopted for four weeks in the control group, and a survey method was employed to check the progress. Also, activities in the area of phonological awareness, concept about print, comprehension/vocabulary, alphabet knowledge, and letter sounds were included for the 4-year-old students. The findings suggested that dialogic and interactive reading techniques are helpful for teachers and parents to use to help preschool children develop emergent literacy skills which are beneficial in the alignment of preschool curriculum with students' progress.

Werkheiser S (2014) explored the effects of a literature-based social-emotional learning curriculum on the kindergarten children's social-emotional behaviors, awareness, and early reading skills in a large elementary school. There were two experimental and two control teachers, and a total of 53 children participated in the study. The assessment tool was

Assessment of Children's Emotion Skills Test by Schultz, Izard, and Bear (2004) to measure social awareness and emotional accuracy skills and the DIBELS Next Assessment to measure First Sound Fluency and Letter Naming Fluency, both before and after implementation of Strong Start, the literature-based social skills curriculum. The results showed that children developed a rich, descriptive social-emotional vocabulary. The best outcomes for simultaneous language, literacy, and social- emotional development of children are achieved if they can be combined with integrated Read Aloud discussions, social interactions, and activities.

Stokes Lakeisha Shante (2015) studied prekindergarten impact on early literacy readiness, and evaluated the gains in early literacy, and the prekindergarten teachers' knowledge of early literacy. Convenient sampling for the survey indicated that teachers' college degrees were related to their knowledge of phonological skills. DIBELS was used to assess the early childhood literacy skills of Prekindergarten, Kindergarten, and First grade students. The findings pointed out that the teachers' knowledge of early literacy skills impacted their learners' achievement, hence it was crucial that high-quality teacher education should be available in this area.

Billow C (2017) researched on how the extent of phonemic awareness knowledge and skills early childhood teachers bring to beginning literacy instruction lays the foundation upon which reading success of the children under their care is built. The survey of Teacher PHaKS (Phonological Awareness Knowledge and Skills) was administered to Head Start and community teachers, 32 surveys from each. ANOVA was carried out for analyzing the data. The findings suggest that teaching of phonological awareness in preschool has become a key component and the teachers need to be more prepared for teaching it in a developmentally appropriate way.

Dotson (2019) examined the relationship between Kindergarten and First-Grade DIBELS Next and TRC (Text Reading and Comprehension) Scores and Third-Grade TCAP (Tennessee Comprehensive Assessment Program) ELA (English Language Arts) Scores at a selected school district in Tennessee, USA. There were 343 children in elementary schools selected to administer DIBELS Next and TRC in Kindergarten in 2014-2015 and first-grade in 2015-2016 and third-grade TCAP ELA in 2017-2018. There were eight research questions and eight null hypotheses using Pearson correlation coefficient and multiple linear regression. The findings indicated that both first-grade DIBELS Next composite scores and first-grade TRC level of proficiency are strong predictors of third-grade TCAP ELA. The results of the study support the use of curriculum-based measurements in kindergarten and first-grade as

early reading screeners. Also, the study highlights the importance of high-quality, balanced reading instruction in kindergarten and first grade that involves phonemic awareness, phonics, comprehension, vocabulary, and fluency.

2.5.1 Major Observations

This section illustrated the review of research studies related to DIBELS tool. The DIBELS is the tool which is administered to measure the fluency of reading skills components. Total eight studies reviewed here are done in foreign countries. To the knowledge of the researcher, no Indian research was found where the DIBELS tool is used for the research or education purpose. Brice & Brice (2009) highlighted the importance of phonemic awareness and phonic skills among 20 English monolinguals and 10 English-Spanish bilinguals. Dotson (2019) studied the relationships between kindergarten and First-Grade DIBELS to understand the importance of high-quality, balanced reading instruction in kindergarten. Early literacy for English language development was studied by Berthelsen (2013), Billow, C (2017) and Shante (2015) to understand the extent of teachers' knowledge and the impact of the teaching phonological awareness, in a developmentally appropriate way for preschoolers. Rao (2005) utilized the DIBELS tool to measure the effects of a supplemental early reading intervention for phonemic awareness and alphabetic principal skills of students, to overcome the reading challenges for English language.

2.6 DISCUSSION

The purpose of the study is to enhance reading skills of pre-schoolers through an intervention program. Various interventions, assessments to measure the improvement in reading skills and teaching methodologies have been discussed here. The researcher gained the insight of probable research design and tools to measure the reading skills as well activities which can be carried out during the interventions. Phonological Awareness, Phonics, Vocabulary, Fluency and Comprehension were found to be the significant components to enhance reading skills. Phonological Awareness training was found to be very effective in teaching Phonemic Awareness to students. Phonological Awareness training succeeded in teaching children to manipulate phonemes, including segmentation, blending, and deletion in multiple activities. Phonological Awareness training improved children's ability to read and spell in both the short and the long term. Programmes that concentrated on teaching one or two Phonological Awareness skills had a greater impact on Phonological Awareness learning than programmes teaching three or more. Children learned Phonological Awareness skills faster when they

were taught phoneme manipulation with letters than when they were taught without letters. Teaching children in small groups produced larger effect sizes on Phonological Awareness acquisition than teaching children individually or in classroom-size groups. Students in the lower grades, namely preschool and kindergarten, showed larger effect sizes in acquiring Phonological Awareness than children in 1st grade and above.

The length of training had an impact as well, with the shortest training having the smallest effect size. Although the effect size of instructors was smaller than that of other trainers, classroom teachers delivered Phonological Awareness training that was successful in encouraging transfer to reading. Reading skills were transferred from Phonological Awareness training on computers. Learner characteristics did make a difference. Kindergartners improved their spelling more than 1st graders. Children with a mid-to-high SES had a bigger effect size in spelling than students with a low SES. The effect of Phonological Awareness training in English on spelling was greater than that of Phonological Awareness training in other languages. Synthetic phonics is defined as the instruction of kids to pronounce the sounds associated with letters and to mix the sounds to form words. When pupils are taught to segment words into phonemes and pick letters for those phonemes as part of Phonological Awareness training, they are being taught to spell words phonemically, which is another type of phonics education. These phonics teaching approaches existed long before they were labelled as phonemic awareness training (Balmutha, 1982; Chall, 1967). Although teaching children to manipulate sounds in spoken sentences is a relatively new concept, phonemic awareness training that involves segmenting and blending letters is not. The label is the only thing that's new. Because phonemes are the phonological units that correspond to letters, explicit education in the alphabetic principle must involve a focus on them. The incorporation of phonemic awareness training in phonics education is likely a major component contributing to its efficacy in teaching children to read (National Reading Panel, 2000). Sound Foundations, developed by Byrne and Fielding-Barnsley (1991) for pre-schoolers, is an example of a programme focused on teaching only one sort of phoneme manipulation. Phoneme identity was taught in this programme. Across different words, children learned to detect instances of the same sound in both the initial and ending locations. The kids were shown numerous large posters with illustrations of various objects. Their task was to select objects with a specific beginning or ending sound, such as sea, seal, sailor, or sand, from a broader set. In addition, students were shown a variety of pictures on worksheets or cards and were asked to pick the ones that had the targeted sounds.

Each session focused on one phoneme in one location. The phoneme's representative letter was also introduced. The Phonological Awareness training described above was given to pre-schoolers with an average age of 4.5 years old, or a control training that focused on basic reading and semantic activities with the same posters and worksheets. For 12 weeks, children were taught in groups of four to six youngsters, with one 30-minute instruction per week.

Children in the Phonological Awareness-trained group were able to recognise significantly more initial and ending phonemes in words than control kids at the end of the training. They were better at recognising not only sounds they had rehearsed, but also sounds they had never heard before, demonstrating that phoneme identity skills were transferable to untaught phonemes. Phonological Awareness training increased pre-schoolers' rudimentary word recognition skills, as evidenced by the fact that trained kids read more words than control pupils.

O'Connor et al. (1995) investigated the efficacy of several methods of teaching PA, asking whether PA instruction should be wide rather than concentrated in order to be most effective. They randomly allocated at-risk kindergarten students with poor PA to one of three training settings. Children engaged in a range of sound manipulation exercises, including isolating, segmenting, blending, and deleting phonemes; segmenting and blending syllables and onset-rime units; and working with rhyming words, as part of the overall treatment. Children solely practised segmenting and blending onsets, rimes, and phonemes in the concentrated treatment. Training was prolonged for ten weeks, with two 15-minute sessions per week for a total of five hours of training. Beginning in the fifth week, letter-sound associations were taught in both groups for the sounds that were being practised orally. In the PA exercises, however, students were not taught how to manipulate phonemes using letters. The third treatment, which served as a control, received merely the letter-sound instruction.

Children who acquired one or two Phonological Awareness skills profited more and had a stronger transfer to reading than children who had three or more skills, according to NRP studies. More skill teaching may interfere with or limit children's understanding of the alphabetic principle, or cause misunderstanding about which manipulations to use for reading transfer tasks.

Also, the number of phonological skills taught in kindergarten is less relevant than the number of skills offered. According to Schatschneider, Francis, Foorman, Fletcher, and Mehta (1999), the following tasks are ranked from easy to difficult:

1. Identifying the names of photographs that begin with the same sound is called first-sound comparison.

2. Making real words out of blending onset-rime units
3. Making real words out of blending phonemes
4. Deleting a phoneme and pronouncing the remaining word
5. Segmentation of phonemes
6. Making nonwords out of phonemes.

The components of reading such as phonological awareness, phonemics, fluency are utilised to measure the fluency in reading skills through DIBELS tool. In this chapter, few studies are reviewed where DIBELS have been used as a tool to measure the fluency of reading skills among pre-schoolers by inculcating the age-appropriate activities which can be used by teachers and parents to enhance reading skills of English language of pre-schoolers.

2.7 IMPLICATIONS OF REVIEW OF RELATED LITERATURE

Researchers have established some preliminary skills that are crucial for learning how to read and found children benefit immensely if taught from preschool (National Institute for Literacy, 2008).

"The ability to assess the sound structure of spoken language" is defined as phonological awareness (Schuele, Skibbe, & Rao, 2007, p. 275). Preschoolers pay close attention to the sounds that compose up words during this process. Phonemic awareness is a subset of phonological awareness that refers to specific sounds (Schuele et al., 2007, p. 276). Later decoding experiences with printed words will be shaped by phonological awareness abilities developed early on. Parents and instructors can utilize activities including learning and reciting nursery rhymes, playing rhythm games, practicing sounds in words, identifying initial sounds in words, and blending sounds to produce words to assist preschool children learn more about the sounds in words (Hawken et al., 2005).

Phonological awareness skills can be regarded as a continuum of less to more complicated skills. Children are aware of syllable segments first, followed by rhyme, initial sounds, and end sounds. As their pre-reading skills improve, children gain the capacity to combine sounds and subsequently split words into phonemes. The ability to erase or substitute sounds is the final talent on the continuum (Schuele et al., 2007).

Phonemic awareness abilities are taught to preschool children through code-focused interventions.Rhyming and alliteration, as well as segmenting and blending phonemes, are among the interventions that improve phonemic awareness skills, according to current

research.Children must take an active role in interventions that teach them about the sounds that letters and letter blends make (Pullen & Justice, 2003).

So, based on the research we can safely say that developing/enhancing reading skills, especially, phonological awareness, phonics, vocabulary, fluency and comprehension would be very important to make a child an independent learner.

The research reviews indicated that there is not been much research done for English medium kindergarteners' reading skills enhancement in India, whereas abroad plenty of research and policies exist for reading for young children.

Unlike West, there are still some gaps in our schools where the medium of instruction is English, private and government schools. With non-native speakers of English, it is imperative that children learn to break the reading code in English early and benefit from learning, otherwise the chances of stagnation and dropping out of schools will be quite high.

So, to minimize the losses, we can work towards teaching better strategies to help children pick up good reading skills early.

The intervention programme is designed by the researcher attempts to bridge the gap by enhancing reading skills in kindergarten so that children retain their interest in learning, without the handicap of reading problems.

Also, the research so far has indicated that there are not many programmes in India to teach children basic reading skills in English. Irrespective of the types of schools they are in, parents' education and SES, all children can benefit from such an intervention programme. There is a clear-cut need to have a programme by which children can break the reading code and begin to read independently.

From the review of related literature, one can see there are no such programmes developed for kindergarten students in India.

The intervention programme used the DIBELS Next tool to administer the age-appropriate fluencies in kindergarteners, namely, FSF (First Sound Fluency), PSF (Phoneme Segmentation Fluency), LNF (Letter Naming Fluency), and NWF (Nonsense Word Fluency).

This is probably the first time ever the DIBELS Next is used in an Indian context at kindergarten level.

This chapter sums up majority of research done in the area of reading skills and its enhancement methods/activities, in India and abroad.

The researcher after doing extensive research on reading skills development and enhancement, could draw up an intervention programme suitable for children of English

medium schools, studying in senior kindergarten in Ahmedabad. Many developmentally appropriate activities for this purpose were designed to be carried out in a joyful method.

The activities employed by the researcher to enhance the reading skills are shown in the Appendix 2.