Effectiveness of Print-Rich Environment for Enhancing Reading Comprehensive Skills among FLN Grade

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Abstract

This research paper analyses the effectiveness of the print-rich environment for enhancing literacy skills with a special focus on enhancing reading skills. To answer this question, purposefully a single school had been chosen and strategies were developed. It resulted that print rich environment has a strong impact on enhancing reading skills and fosters the skill of literacy by engaging them on their own, in different learning activities. This inculcated self-confidence and enabled them to express themselves in different contexts with different concepts. The implication of this study reveals that print print-rich environment can act as a powerful learning strategy for the attainment of reading comprehension skills among early-grade students to fulfill the Foundational Literacy Competencies.

Keywords: Print Rich Classroom, Foundational Literacy, Reading Comprehension Skills

Introduction

National Education Policy (NEP) 2020 is a comprehensive framework that aims to transform the education system in India. The NEP 2020 emphasizes foundational literacy and numeracy (FLN) as crucial pillars of early education. It aligns with the goals you mentioned regarding achieving universal FLN by 2027, as part of the National Mission on Foundational Literacy and Numeracy (FLN). The National Initiatives for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat) initiated the action nationwide and closely monitors progress to ensure that every child attains FLN by the end of grade three by 2026–2027.

The focus of this initiative is on competency-based learning, with an emphasis on universal acquisition of FLN skills. The key reasons for prioritizing FLN include addressing low learning levels among students, reducing dropout rates, and improving inadequate mathematical and language skills. Foundational Literacy and Numeracy (FLN) initiatives often highlight the importance of literacy skills, and creating a print-rich environment is one of the strategies to foster these skills in young learners.

An essential cognitive function that is vital to a student's capacity to comprehend and evaluate texts is reading comprehension. According to Neufeld (2005), comprehension is the process of developing a valid understanding of

a particular material. To derive meaning and learn new information, entails actively interacting with the text and applying pertinent prior knowledge. Klingner (2007) goes on to highlight that reading comprehension is a multifaceted process that involves the reader as well as the text itself.

To fully comprehend a text, pupils must go beyond simple word recognition and explore its deeper levels. It entails recognizing references, identifying factual material, identifying primary concepts, comprehending the meanings of contextual terminology, and drawing conclusions. Active engagement is essential for effective reading comprehension, as students use their language and world knowledge to link and predict from the text. It is essential to recognize the differences between word recognition and message understanding to comprehend the particular comprehension challenges that kids encounter. Due to the complexity of comprehension, emphasis must be placed on integrating information from a variety of sources, including vocabulary and past knowledge.

Reading is not only a practical exercise; it may also be enjoyable and improve cognitive and linguistic skills. Gilakjani and Sabouri (2016) claim that reading is a multifaceted activity that entails interpreting written texts. This requires the assimilation of information from several sources, including the reader's past experiences, the text's content, and the reading context. Reading is an essential ability for both academic and personal development since it allows pupils to widen their viewpoints and gain a greater awareness of other cultures.

It is essential to adjust teaching strategies to each student's unique understanding level to increase reading comprehension. Providing targeted teaching in comprehension techniques like asking, visualizing, and generating predictions may be beneficial for certain students. Some people might need assistance expanding their vocabulary or using existing knowledge before they can interact with the content. Comprehending abilities can also be improved by establishing an atmosphere that promotes reading enjoyment and active engagement. To further enhance students' engagement with texts, a variety of reading resources that are tailored to their interests and varied backgrounds should be used.

Print rich environment:

An accurate view of the ongoing development of students' literacy abilities has been made possible by the emergent literacy paradigm (Fields & Spangler, 2000; Teale & Sulzby, 1986). Through exposure to literacy's practical and significant applications in everyday situations, children learn to perceive and develop it (Fields & Spangler, 2000; Goodman & Goodman, 1979; Hall, 1987; Harste, Burke, & Woodward, 1982; Sulzby, 1994). For instance, a lot of children have print and story notions long before they start school, and they can recognize a lot of signs and prints that are related to them (Dickinson & Tabors, 2001; McGee & Purcell-Gates, 1997; Purcell-Gates, 1996). The emergent literacy viewpoint promotes the maintenance of effective literacy in schools by creating print-rich environments that support the development of beginning readers' literacy (Smith, 1994). As part of the instructional efforts that schools can support to ensure that students have functional literacy, print-rich settings are typically advised.

Print-rich environments provide important nurturing within an educational context in elementary grades, while the nature and extent of its impact on students' literacy development may be debatable (Bowman, 2003; Roskos & Neuman, 2001; Strickland, Snow, Gryphon, Bums, & McNamara, 2002). The majority of literacy strategies textbooks cover the topic of print-rich classroom settings for elementary school students. All writing and print tools, as well as their instructional application, would be present in print-rich settings. The active use of these resources in the educational process is one of the instructional and learning characteristics of a print-rich environment (Gunning, 2000; Snow, Bums, & Gryphon, 1998). However, how and to what extent does it affect students' acquisition of literacy, put another way, active use of print materials in the classroom is necessary for print-rich environments to support students' literacy development and let them truly become a part of them. In theory, teacher's reading and language arts classes introduce them to the educational idea of dynamism.

In the present study, the researcher observed that the presence of print-rich material can act as an enabling factor, attracting students' focus toward enhancing their reading comprehension skills. This inquiry aims to fill the gap by systematically examining the role of a print-rich environment in the development of students' reading skills, addressing the specific needs of FLN grade students in the sampled school. The researcher proposes to investigate the effectiveness of a print-rich environment in enhancing the reading comprehension skills of FLN-grade students in the Bhubaneswar block.

Research Questions:

1. What is the present level of attainment of reading comprehension skills among FLN-grade students in the existing educational practices?
2. What is the different print-rich material present in the school and used for creating the print-rich environment to enhance the reading comprehension skills of grade II students?
3. How effective was the implementation of a print-rich environment in enhancing the reading comprehension skills of Grade II students?
4. What are the perceptions of teachers regarding the effectiveness of a print-rich environment in improving the reading comprehension skills of Grase II students?

Objectives of the Study:

- To gauge and find out the existing level of attainment of reading comprehension skills among FLN grade students in the current educational practices.

- To ascertain the availability of print-rich materials that create an environment to support the reading skill development of FLN grade students during the classroom process.

- To examine and measure the effectiveness of a print-rich environment on the enhancement of reading comprehension skills among FLN grade students.

- To study the perceptions of teachers regarding the effectiveness of a print-rich environment in improving the reading comprehension skills of FLN-grade students.

METHODOLOGY

The study intends to assess the effectiveness of the print-rich environment in enhancing the reading comprehension skills of students by collecting and analyzing the data both qualitatively and quantitatively. The single-group pre-test and post-test experimental design was used for the present study. The study was scheduled for 9 weeks starting from August 2023 to October 2023 and the detailed design of the plan is presented in Table 1.

Sample of the study

For the present study, one Govt. UP school at Lingipur in Bhubaneswar block was selected purposively. In that school, the Grade II students were selected purposively. Grade II consists of 19 students (Boys and girls). All the students and the concerned subject teachers are taken as the sample of the present study.

Tools and Techniques for Data collection:

The researcher developed a checklist to ascertain the print materials available in the school to enable print print-rich environment for the enhancement of reading comprehension skills. It consists of a list of items to be displayed on the walls and print materials to be kept in the classroom relevant to enhance the reading skills of the students of Grade II. The investigator developed the pre-and post-test questions based on ten number of Learning Outcome items related to reading comprehension skills. A self-made classroom observation schedule (10 items) was developed to observe and evaluate the effect of the use of a print-rich environment in the language class of Grade II for enhancing reading skills. The view of the FLN teacher was also collected about the use of print-rich environments for enhancing the reading comprehension skills of Grade-II students. The plan of action was developed to ensure the enhancement of reading skill development by using a print-rich environment.

Plan of Action for Implementation of Intervention

Month/ Week/ Date	Components of Print-rich material environment	Teachers' activity	Students' activity	Remark
Aug, 2023 1st week	Display of students' work	Instruction to the students either to write, draw, or paint. Materials such as paper, crayons, pens, pencils, and colored pencils need to be provided	They will write, draw, paint, or decorate their figures with different things such as colors, sand, zinc, stone, bindis, and Chumki and submit the same by writing their names on their projects	Create confidence as they choose their project
Aug, 2023 2nd week	Interaction with the Objects	Labeling of Objects used for different purposes such as book corners, kitchen, bathroom,	Students will identify the object, name the object in their home language, talk among themselves about	

		bedroom, types of furniture, available items in the classroom, etc.	the objects, associate or differentiate the different objects, or organize talks by linking different objects	
Aug,2023 3rd week	Word wall	Ask students to associate the objects with words, instruct them to find out the initial, final, or middle sound of the words, and help them with the decoding activity	Students will find out the word for a particular object, engage themselves in blending and segmentation activities, and play word games such as starting a word with the ending sound of a particular word	
Aug, 2023 4th week	Literacy Corner (word card, templates, puzzle)	Asked the students to complete the templates, solve the puzzles, find out the words for a particular topic, organize playful activities with the word cards, picture posters, poem posters, story cards	Students are involved with word games, building stories of their own, and singing songs by observing the clues from the word cards, puzzles, or story cards.	
Sep, 2023 1st week	Reading Corner (Big book, storybook, comics)	Give enough opportunities to choose the book of their own	Explain the story, the main characters in the story, the best thing about the story, the changes he /she wants to make, the morality of the story	
Sep, 2023 2nd week	Posters of Classroom Rules	Explain the rules or regulations through stories, audio or video form, and discuss among the students by citing examples, illustrations, or actions	Students will feel the need to obey the rules and show the desired behavior in their daily activities such as keeping them neat and clean, cleaning their classroom on their own, standing in queue in the prayer class, midday meal time, departure time	
Sep, 2023 3rd week	Play equipment	Talk among the students regarding the use of a particular playing instrument, and ask different questions for numeracy and literacy activities	Students will play with the instruments, and answer questions like whether an inside or outside game, who can take part with, how many players, the position of the players, participants' age and sex	

			groups and fields, places, etc	
Sep, 2023 4th week	Chats	Provide the chart papers such family tree, animals, birds, trees, flowers, fruits, vegetables, sea day, days of the week, and month of the year and ask their likings, dislikes, availability, (wh' type questions)	Students will explain the different concepts as asked by the teacher, express their feelings through verbal and pictorial form, explain the food habits, the place residing or growing, the process of growth	
Oct, 2023 1st week	Creative writing corner	Supply the verbal and visual clues to extend a topic of their own	Extend the words, stories, and poems, add the rhyming words, invented spelling, and correct spelling with correction	

RESULT AND DISCUSSION

Achievement of Grade-II students in reading skill

The achievement of grade II students in reading skills was assessed by conducting achievement tests at the beginning and end of the implementation of the intervention. The data collected in the form of scores in the pre-test and post-test was compared and analyzed to evaluate the effectiveness of the print-rich environment for enhancing the reading skills of the students. The table representing the data is given below.

Table -2: Comparison of pre-and post-test results (n=20)

Test	Mean score	Mean Difference
Pre-test	11.85	6.25
Post-test	18.1	

The above table reveals that the mean pre-test score of the sampled students was 11.85. The mean post-test score was 18.1. The mean score difference between the tests was 6.25. It represents that by the use of the print-rich environment, the achievement level of students was improved by 31.25%. It is concluded that after 9 weeks of invention, the level of achievement of students had improved by 31.25%.

Impact of Print-Rich Environment:

Roll No	Pre-Test	Post Test	Difference	x	X2
1	12	19	7	-0.2	0.4
2	8	17	9	2.2	4.84
3	9	17	9	2.2	4.84
4	12	18	6	-0.8	0.64
5	14	19	5	-1.8	3.24
6	9	16	7	0.2	0.4
7	10	19	9	2.2	4.84
8	9	17	8	1.2	1.44
9	13	19	6	-0.8	0.64
10	11	18	7	0.2	0.4
11	13	19	6	-0.8	0.64
12	11	18	7	0.2	0.4
13	10	18	8	1.2	1.44
14	13	19	6	-0.8	0.64
15	14	19	5	-1.8	3.24
16	11	19	8	1.2	1.44
17	13	18	5	-1.8	3.24
18	12	18	6	-0.8	0.64
19	9	17	8	1.2	1.44
20	14	18	4	-2.8	7.84
			136/20 =6.8		$\sum X^2 = 42.64$

$$SD = \sqrt{\frac{\sum X^2}{N-1}} = 1.49$$

$$SE_{M_D} = \frac{SD}{\sqrt{n}} = 1.49/\ 4.47 = 0.33$$

$$t = \frac{D-0}{SE_{M_D}} = 20.60$$

The obtained 't" value i.e 19.03 is greater than the table value i.e 2.86 at 0.01 level of significance with the degree of freedom 19. hence, the null hypothesis is rejected. It reveals that there is a difference in the score of Pre-test and Post-test values of student performance. It indicates that a rich Environment helps in enhancing Compression skills among the students. Hence, the strategies followed in the classroom shall minimize the learning gaps of the students.

Availability of Print-rich material:

At the beginning of the assessment, the sample school's print-rich materials were evaluated using a comprehensive checklist designed to gauge the presence of items crucial for fostering reading skill development through a print-rich environment. It was found that the classroom has print-rich materials like Literacy kits, story cards, etc. In this context to foster the development of reading skills the classroom a print-rich environment was enabled in the classroom by collating materials like charts, picture cards, dictionary cards etc, and designing the classroom with a Literacy Corner, Reading Corner Numeracy Corner, and EVS wall. An array of print materials

within the school premises, including alphabet charts, word walls, and posters featuring sight words. Additionally, labelled classroom objects, and a diverse selection of books populated the classroom learning corners/shelves. Printed instructions guided students through activities, while bulletin boards proudly displayed student work. Charts illustrating writing conventions, such as punctuation and capitalization, were also noted, alongside charts of poems, songs, rhymes, and stories. Visual aids such as schedules and timelines provided further support for literacy learning. Furthermore, the school incorporated big books, storybooks, magazines, and worksheets tailored to literacy activities, enriching the print-rich environment. Environmental print, such as signs and logos from the surrounding community, further contributed to the immersive literacy landscape.

Print-rich environment-based activities fostering reading skills development:

The classroom activity of Grade- II in the sample school was observed by direct field visits i.e., once a week which means 4 days a month. The classroom process was observed for three months which means in a sum of 12 days. As per the assessment report of the teacher and the direct observation report by the researcher, the classroom activities conducted by using print print-rich environment were noted and tabulated below.

Table 3 Activity observed by the students

Sl. No	Activity Observed	Frequency (no. of observation noted that the activity was conducted)
1	Reading aloud from printed storybooks	04
2	Word wall activities: spelling games	10
3	Creating sentences using sight words posters	12
4	Guided reading sessions with printed reading passages	03
6	Labeling classroom objects	21
7	Reading corner (reading big books, stories, comics, poems)	02
8	Completing worksheets with printed instructions	16
9	Analyzing picture-based story charts for main ideas and key details	07
10	Conventions between students using a character-based story like (monkey and crocodile, cow-tiger, etc)	10
11	Poetry recitation from printouts	20
12	Creating visual timelines of story events	08
13	Identifying Environmental Print on the school campus (rules, slogans, awareness slogans on the wall, proverbs, etc.)	19

The above table reveals that the most frequently used activity by the teacher was labeling different objects on different themes for discussion on literacy, numeracy, and environmental studies. The teacher seemed to conduct the

activity most of the time because the students were interested in it as it was related to their daily activities and experiences. It was found that by conducting the above activities most frequently the students were able to involve themselves by collecting information from their parents, neighbors, friends, and others. The activity with the reading corner is the last one as the students were not well versed in independent reading and they were unable to get the help of their family members, friends, relatives, or other elders.

Views of the FLN teacher:

The views of the FLN grade teacher teaching Grade II, are analyzed using three headings: use of the print-rich environment for conducting literary activity to foster reading skill development, benefits of print-rich environment for enhancing reading skills, and challenges faced by the teacher to use the print-rich environment effectively for enhancing reading skill. The views under respective headings were analyzed below.

a) **Use of the print-rich environment for conducting literary activity to foster reading skill development:**
The FLN teacher viewed that it had enhanced the student's interest and enjoyment in books and reading. It provided opportunities for text and print interaction, fostering the connection of letter sounds and letter words within a meaningful context. It nurtured children's emergent reading and writing skills and expanded their vision to explain and elaborate the different concepts in the form of poems, stories, works, etc. It laid a strong foundation in fostering the creative skills among children.

b) **Benefits of the print-rich environment for enhancing reading skills**:
Regarding the benefits of the print-rich environment for developing reading skills the FLN teacher viewed that it had actualized the suggestion of NCF-2005 by connecting the classroom transaction process to the outside school and enhanced the curriculum to offer knowledge and experiences beyond textbook. It brought a drastic change in achieving the different FLN competencies by using the Four-Block approach and CRA approach by using different print materials.

c) **Challenges faced by the teacher to use the print-rich environment effectively for enhancing reading skills:**
The FLN teacher expressed that the use of a print-rich environment benefited the students but it needs consideration in aspects like storing, displaying, guiding the students in using the materials, using the same multiple times, and incorporating the same with different concepts of literacy and numeracy.

Major findings

The major findings listed from the result and analysis were: -

- The student's achievement level concerning reading skills was enhanced by using a print-rich environment like story cards, story books, word cards, reading wall, and reading activities in the classroom.
- The most frequently used print-rich material was the labeling of objects as children showed more interest in inculcating their immediate experiences inside the classroom transaction process in their home language.

- The development of students' reading skills was distinctly marked by their reading with comprehension skills as they showed that during the discussion held in the group; in the whole class discussion or the activities like storytelling, question answering session, or during the presentation of topics related with a specific topic related for a particular situation.

- The least used activities that need to be considered were Reading aloud from printed storybooks, Guided reading sessions with printed reading passages, and reading corners (reading big books, stories, comics, poems). These research findings revealed that as most of the books are new to the students, they were instructed to discuss those at the next scheduled time, and they needed others' help for which they were reluctant to do so. However, one of the greatest findings was that they were interested in these activities as they were exposed to different print materials, and they opted to listen to their seniors or teachers regarding the topics of those books.

- The activities benefiting students learning were Poetry recitation from printouts and Identifying Environmental Print on the school campus (rules, slogans, awareness slogans on the wall, proverbs, etc.). This is so because it was very joyful on their part as most of the students engaged in these activities and they felt happy and comfortable to talk to their peer groups, school-mates, community members, parents, and other persons.

- The skills observed to be enhanced among the students were the reading habit of different books beyond their text as this will enable them to read for learning at the later part of their academic career.

- The reading skills that need to be developed are reading different books for them, involving them in different question-answer sessions after telling the stories, instructing them to extend the stories, finding out their favorite characters and justifying them, giving enough opportunities to modify the story, re-telling the stories by keeping them in the situation of their favorite or hatred character.

- The challenges faced were developing the printed materials by keeping their regular courses, choosing the most common topics for a multigrade classroom, engagement of different grade students simultaneously with the same print material, availability of less number of materials for all the students, size of the classroom, management and checking the student's notebook with marked feedback, paucity of teachers as either teacher are less in number or they were engaged in different other works along with their regular school works. The process of using the print-rich material for the classroom transaction is cost and time-consuming but the impact has been studied with less time and less money.

- Teachers' positive attitude to create a print-rich atmosphere is the most important necessity.

- The diversified knowledge to integrate the same print material for different grades in different situations is the bare requirement.

- Designing or collecting and displaying the material for the achievement of different competencies by the students is the next challenge for a regular teacher in a multigrade classroom.

- Finding the materials as per the needs and interests of each of the children is another challenging issue that needs to be addressed.

  Students point of view: -

- Students found them in a more interesting atmosphere.

- Most of the time they engaged themselves in talk or were interested in talking about the materials they found in their immediate atmosphere.

- Their early literacy skills were developed after the implementation of the strategies of print-rich classrooms.

- It was found that students have developed a positive attitude towards literacy skills.

Conclusion:

The in-depth discussion of this study reveals that a print-rich classroom plays a crucial role in developing the literacy skills of early-grade children. The print-rich environment helps to develop critical thinking, self-esteem, self-confidence, and socio-cultural identity and increases interaction among teacher-pupil, pupil-pupil, and pupil-people. By transacting knowledge through print-rich classrooms, gets approval from the teachers and students. Thus, students get engaged in different contextual talks and create their learning atmosphere whereas the teachers get the benefit of managing the multi-grade classrooms by engaging the students in a natural academic atmosphere. It is also found that students can be empowered with achieving the competencies rather than textbook-based learning through a print-rich classroom, which is the need of the hour as per the suggestion of the NEP-2020, which has brought a drastic change in the system of education from the top to bottom.

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