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A Study of the Content Appropriateness of the Textbooks of FLN Prepared by Maharashtra in Light of NEP 2020 Recommendations

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Abstract

The NEP 2020 has brought significant changes to the Indian education system, emphasising the importance of foundational skills development and the preparation of modern and quality textbooks to achieve the target of lifelong learning and holistic development. Foundational Literacy and Numeracy (FLN) are an integral part of the development of the abilities of children. They are like milestones in the learning curve of a child's personality. Students who are well versed in both these aspects will essentially do well when they are required to connect new knowledge with already existing knowledge. The present study is based on the mandate of the NEP 2020 which suggests a primary focus on foundational literacy and numeracy.

This research paper presents a comprehensive study examining the content appropriateness of the textbooks developed by the State Council of Educational Research and Training, Pune, Maharashtra in the context of the National Education Policy (NEP) 2020 recommendations. The emphasis of this research is on gaining insight into teachers' experiences and perceptions of what a textbook should be like. To ascertain more about the range of perspectives, a questionnaire on a four-point scale was given out to teachers teaching at the Foundational Stage with different questions, covering content appropriateness of FLN.

The research concludes with a set of actionable recommendations to enhance the content appropriateness of FLN textbooks in line with NEP 2020 guidelines. By addressing these suggestions, Maharashtra's education system can take significant strides towards providing a more comprehensive and inclusive learning experience, empowering students with the essential foundational skills needed for lifelong learning and success.

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INTRODUCTION

The first and fundamental level of comprehension and knowledge acquisition in a particular subject or field is referred to as the Foundational Stage of learning. It serves as the foundation for a student's education and establishes the direction for their subsequent academic endeavours. Students are introduced to the basic ideas, hypotheses, and information that serve as the subject's bedrock at this phase. The objective is to give pupils a firm grasp of the fundamental ideas so they can expand on them as they progress in their education.

At this early stage of learning, textbooks are essential. They give a well-organised and thorough summary of the subject while presenting the data logically. They work as a trustworthy source of knowledge, assisting pupils in developing a thorough comprehension of fundamental ideas, theories, and details. To ensure accuracy and relevance, textbooks are prepared by subject-matter experts and evaluated by peers. They become a reliable source of knowledge for both teachers and pupils as a result.

Furthermore, textbooks include tasks and examples that support the learning process. These tests might be anything from straightforward questions about memory to intricate, knowledge-intensive puzzles. These activities are meant to foster critical thinking in pupils and a deeper, more meaningful understanding of the subjects they are studying.

Textbooks are also a crucial teaching resource. They offer a framework for instruction and act as a manual for creating lesson plans and evaluations. Textbooks can be used by teachers to make lesson plans, assign homework, and design tests. When teachers want to expand their topic knowledge, textbooks are an invaluable resource. Teachers may make sure they are giving their pupils correct and current knowledge by using textbooks as a reference.

The fact that textbooks establish a common learning standard across all schools and states is another crucial component of textbooks. With uniform textbook standards, students can change schools with ease and receive a constant level of learning. This is crucial for students since it guarantees that the knowledge they have gained at one institution will be applicable and helpful in another.

Textbooks are necessary in the Foundational Stage of learning, which is a crucial step in a student's education. They give pupils a thorough understanding of the subject, support the learning process, and give the teaching process structure. Textbooks are an invaluable resource for both students and teachers since they lay the groundwork for further study and investigation of the subject.

NEED AND JUSTIFICATION

Foundational Literacy and Numeracy (FLN) are an integral part of the development of the abilities of the child. They are like milestones in the

learning curve of a child's personality. Students who are well versed in both these aspects will essentially do well when they are required to connect new knowledge with already existing knowledge. The present study is based on the mandate of the NEP 2020 which suggests a primary focus on FLN. The NEP 2020 clearly states the following in Part I (point number 2 and 4) of the document:

2. Foundational Literacy & Numeracy: An Urgent and Necessary Prerequisite to Learning.

2.1. The ability to read and write, and perform basic operations with numbers, is a necessary foundation and an indispensable prerequisite for all future schooling and lifelong learning. However, various governmental, as well as non-governmental surveys, indicate that we are currently in a learning crisis: a large proportion of students currently in elementary school, estimated to be over 5 crore in number—have not attained FLN, i.e., the ability to read and comprehend basic text and the ability to carry out basic addition and subtraction.

2.4. On the curricular side, there will be an increased focus on FLN—and generally, on reading, writing, speaking, counting, arithmetic, and mathematical thinking—throughout the preparatory and middle school curriculum, with a robust system of continuous formative/adaptive assessment to track and thereby individualise and ensure each

student's learning. Specific hours on a daily basis—and regular events and activities over the year involving these subjects will be dedicated to encourage and enthuse students. Teacher education and the early grade curriculum will be redesigned to have a renewed emphasis on FLN.

4. Curriculum and Pedagogy in Schools National Textbooks with Local Content and Flavour

States will prepare their curricula (which may be based on the National Curriculum Framework for School Education (NCFSE) prepared by NCERT to the extent possible) and prepare textbooks (which may be based on the NCERT textbook materials to the extent possible), incorporating State flavour and material as needed. While doing so, it must be borne in mind that the NCERT curriculum would be taken as the nationally acceptable criterion. The availability of such textbooks in all regional languages will be a top priority so that all students have access to high-quality learning. All efforts will be made to ensure timely availability of textbooks in schools.

OBJECTIVES OF THE STUDY

The objectives of the study are:

1. To analyse the Content Appropriateness of the textbooks as per National Education Policy 2020 and National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN) Bharat guidelines.

2. To suggest changes and reforms in the textbooks in alignment with NEP 2020 guidelines.

SCOPE AND DELIMITATIONS OF THE STUDY

The scope of the study covers a vast range. It has tried to look into the various aspects that should be kept in mind by textbook developers before venturing into the task of textbook development. The results and suggestions of the present study can be utilised by all states when developing their textbooks. However, due to time and budgetary constraints the study was delimited on different aspects such as:

1. The study is confined to the textbooks developed by the State Council of Educational Research and Training (SCERT), Pune, Maharashtra.
2. In studying the textbooks the guidelines of NEP 2020 and NIPUN Bharat for textbook development have been kept in purview.

THE RESEARCH APPROACH

The emphasis of this research is on gaining insight into teachers' experiences and perceptions of what a textbook should be like. To ascertain more about the range of perspectives, a questionnaire was given out to teachers focusing on different aspects.

Questionnaires are an efficient and effective means of achieving insight into several viewpoints,

potentially discovering patterns or contrasts. The questionnaire was designed using the four-point scale. The statements were formulated based on the research questions themselves and ideas developed from reading relevant literatures.

They dealt with the importance of physical appearance, content appropriateness and pedagogical processes in the development of textbooks. Most statements required respondents to select one of four categories ranging from 'strongly agree' to 'strongly disagree'. Space was provided after a set of questions to reflect on further suggestions on any point that was not covered in the questionnaire. Questions to provide an understanding of the demographic were also asked, the aim of which was to investigate potential factors influencing teachers' beliefs.

Sample

The target population consisted of teachers teaching at the Foundational Stage in rural and urban schools across the state of Maharashtra. Data on various dimensions of textbook analysis was collected from 2,665 teachers teaching at the Foundational Stage.

Tools Employed in the Study

A four-point questionnaire was developed based on important dimensions of textbook development and analysis pertaining to content appropriateness in workshop mode. In the development of tools, the guidelines

of NEP 2020 and NIPUN Bharat were kept as a base because the present study focuses on suggestions and guidelines of NEP 2020.

Data Collection Procedure

For analysing the textbooks developed for the Foundational Stage by MSCERT, Pune; a questionnaire catering to various dimensions like the physical structure of the textbook, content appropriateness and pedagogical processes was developed through a workshop. The questionnaire thus prepared was converted into a Google Form with options on a four-point scale ranging from 'strongly agree' to 'strongly disagree'. The link to the Google Form was sent to officials from MSCERT who further shared it with teachers teaching at the Foundational Stage in rural and urban schools of Maharashtra. The form was kept open for 20 days. 2,665 responses were received from teachers teaching at the Foundational Stage from across the State of Maharashtra.

Scoring, Tabulation and Analysis of the Data

After the collection of data, the scores were tabulated based on the answers received. The data was entered into excel sheets and converted into percentages. An analysis of the data was done by converting and depicting the percentages into bar diagrams. The qualitative data was thoroughly analysed through the thick description.

Table 1
Region of Teaching

City name	Number	Percentage
Konkan	550	20.6
Pune	126	4.7
Nasik	1,056	39.6
Marathwada	203	7.6
Vidharabh	730	27.4

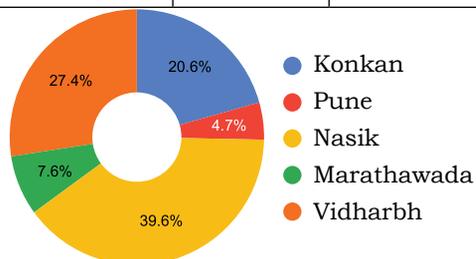


Figure 1: Region of the teaching

From the results of Table 1 and the corresponding Figure 1, it can be seen that 2,665 teachers have responded from five regions of Maharashtra, viz. 550 (20.6%) from Konkan, 126 (4.7%) from Pune, 1,056 (39.6%) from Nasik, 203 (7.6%) from Marathawada and 730 (27.4%) from Vidharbh.

CONTENT APPROPRIATENESS

This section relates to the analysis and interpretation of data pertaining to objective number two of the study which reads, 'To analyse the Content Appropriateness of the textbooks as per National Education Policy 2020 and NIPUN Bharat guidelines', and seeks to answer the research question, 'How does the content of the textbooks align with the guidelines set by National Education Policy 2020 and NIPUN

Bharat in terms of appropriateness?'. The data for objective two was collected through a questionnaire developed on a five-point scale by the investigators. This section on content appropriateness is divided into two parts—Language and Numeracy. The data collected is presented in different sections.

A. Language

Table 2

Percentage of Teachers who Said that the Content is Organised According to the Students' Language Needs

N = 2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1,172	1,440	36	17
2.	43.98	54.03	1.35	0.64

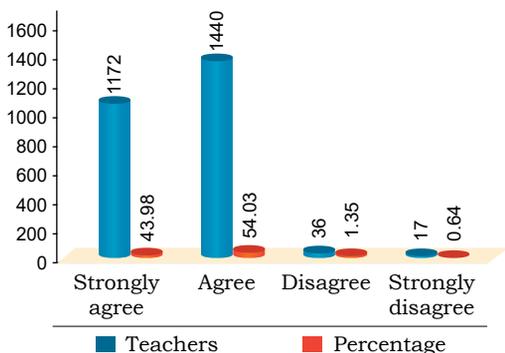


Figure 2: Percentage of teachers who said that the content is organised according to the students' language needs.

From the results of Table 2 and the corresponding Figure 2, it can be seen that 1,172 (43.98%) teachers strongly agree, 1,440

(54.03%) teachers agree, and 36 (1.35%) teachers disagree, while 17 (0.64%) teachers strongly disagree to the question that the content is organised according to the student's language needs.

Table 3

Percentage of Teachers who Said that the Content is Suitable and Relevant as per Age and Class of Students

N = 2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1,165	1,429	55	16
2.	43.71	53.62	2.06	0.60

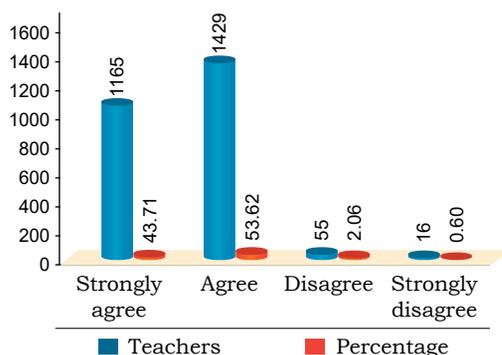


Figure 3: Percentage of teachers who said that the content is suitable and relevant as per age and class of students

From the results of Table 3 and the corresponding Figure 3, it can be seen that 1,165 (43.71%) teachers strongly agree, 1,429 (53.62%) teachers agree and 55 (2.06%) teachers disagree, with the question that the content is suitable and relevant as per age and class of students. While 16 (0.60%) teachers strongly disagree with the question.

Table 4

Percentage of Teachers who Said that the Listening Activity can Help Students to Develop Speaking Skills

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1,239	1,384	29	13
2.	46.49	51.93	1.09	0.49

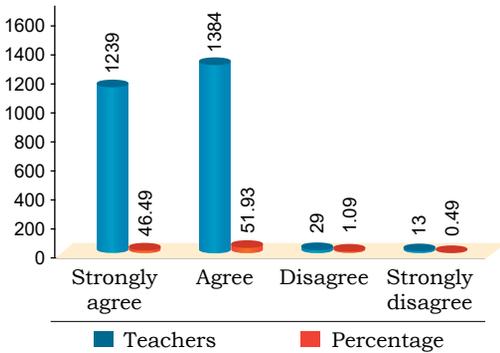


Figure 4: Percentage of teachers who said that the listening activity can help students to develop speaking skills

From the results of Table 4 and the corresponding Figure 4, it can be seen that 1,239 (46.49%) teachers strongly agree, 1,384 (51.93%) teachers agree and 29 (1.09%) teachers disagree to the question that the listening activity can help students to develop speaking skills. While 13 (0.49%) teachers strongly disagree with the question.

Table 5

Percentage of Teachers who Said that the Listening Materials are Well-recorded

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly Disagree
1.	998	1,575	71	21
2.	37.45	59.10	2.66	0.79

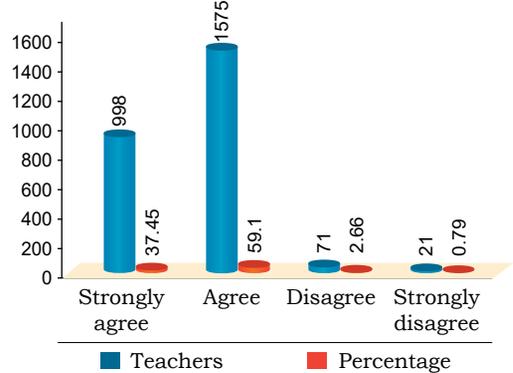


Figure 5: Percentage of teachers who said that the listening materials are well-recorded

From the results of Table 5 and the corresponding Figure 5, it can be seen that 998 (37.45%) teachers strongly agree, 1,575 (59.1%) teachers agree, and 71 (2.66%) teachers disagree with the question that the listening materials use standard English language. While 21 (0.79%) teachers strongly disagree with the question.

Table 6

Percentage of Teachers who Said that the Textbook Materials Offer a Great Range of Listening Texts

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	959	1,593	96	17
2.	35.98	59.77	3.60	0.64

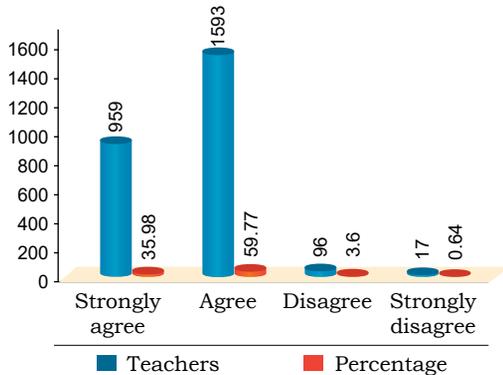


Figure 6: Percentage of teachers who said that the textbook materials offer a great range of listening texts

From the results of Table 6 and the corresponding Figure 6, it can be seen that 959 (35.98%) teachers strongly agree, 1,593 (59.77%) teachers agree, and 96 (3.6%) teachers disagree to the question that the textbook materials offer a great range of listening texts. 17 (0.64%) teachers strongly disagree with the question.

Table 7

Percentage of Teachers who Said that the Textbook Activities can help Students to Improve their Listening Skills

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1,093	1,515	41	16
2.	41.01	56.85	1.54	0.60

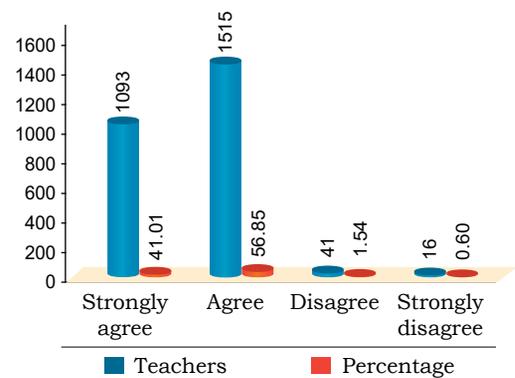


Figure 7: Percentage of teachers who said that the Textbook activities can help students to improve their listening skills

From the results of Table 7 and the corresponding Figure 7, it can be seen that 1,093 teachers strongly agree, 1,515 (56.85%) teachers agree, and 41 (1.54%) teachers disagree with the question that textbook activities can help students to improve their listening skills. While 16 (0.60%) teachers strongly disagree with the question.

Table 8

Percentage of Teachers who Said that the Tasks or Activities (e.g., dialogues, role-plays, etc.) are Appropriate for Improving Students' Speaking Skills

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1,073	1,531	46	15
2.	40.26	57.45	1.73	0.56

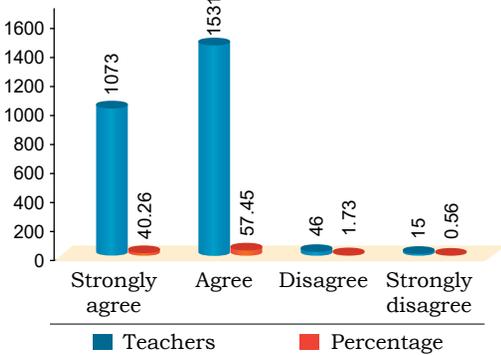


Figure 8: Percentage of teachers who said that the tasks/activities (e.g., dialogues, role-plays, etc.) are appropriate for improving students' speaking skills

From the results of Table 8 and the corresponding Figure 8, it can be seen that 1,073 (40.26%) teachers strongly agree, 1,531 (57.45%) teachers agree, and 46 (1.73%) teachers disagree to the question that the tasks/activities (e.g., dialogues, role-plays, etc.) are appropriate for improving students' speaking skills; while 15 (0.56%) teachers strongly disagree with the question.

Table 9

Percentage of Teachers who Said that there are Adequate Materials for Spoken English, for example, Pronunciation and Stress

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	951	1,605	91	18
2.	35.68	60.23	3.41	0.68

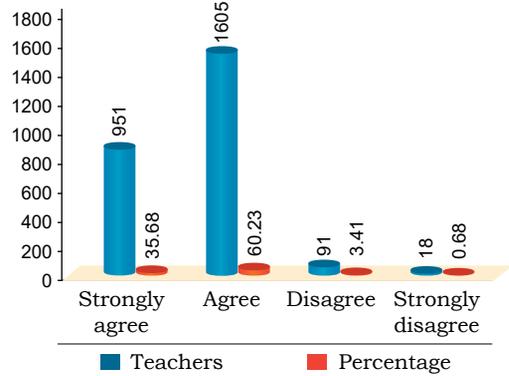


Figure 9: Percentage of teachers who said that there are adequate materials for spoken English, for example, pronunciation and stress

From the results of Table 9 and the corresponding Figure 9, it can be seen that 951 (35.68%) teachers strongly agree, 1,605 (60.23%) teachers agree, and 91 (3.41%) teachers disagree to the question that there are adequate materials for spoken English, for example, pronunciation and stress, while 18 (0.68%) teachers strongly disagree with the question.

Table 10

Percentage of Teachers who Said that the Reading Activities can Motivate Students

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly Disagree
1.	1,081	1,527	44	13
2.	40.56	57.30	1.65	0.49

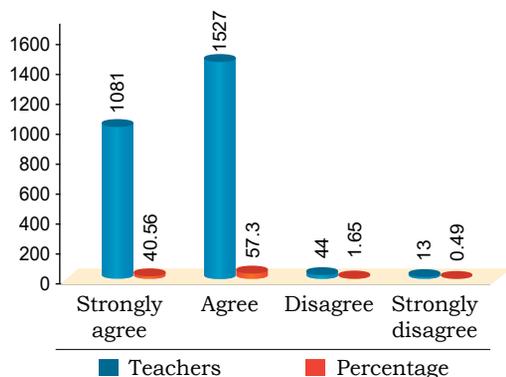


Figure 10: Percentage of teachers who said that the reading activities can motivate students

From the results of Table 10 and the corresponding Figure 10, it can be seen that 1,081 (40.56%) teachers strongly agree, 1,527 (57.3%) teachers agree, and 44 (1.65%) teachers disagree to the question that reading activities can motivate students, while 13 (0.49%) teachers strongly disagree to the question.

Table 11

Percentage of Teachers who Said that the Reading Activities can Help Learners Become Effective Readers

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1,084	1,517	48	16
2.	40.68	56.92	1.80	0.60

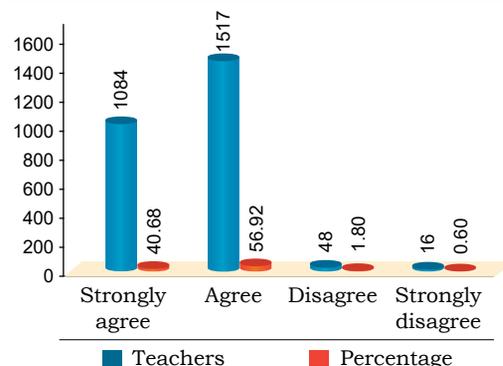


Figure 11: Percentage of teachers who said that the reading activities can help learners become effective readers

From the results of Table 11 and the corresponding Figure 11, it can be seen that 1,084(40.68%) teachers strongly agree, 1,517(56.92%) teachers agree, and 48 (1.80%) teachers disagree with the question that reading activities can help learners become effective readers. While 16 (0.60%) teachers strongly disagree with the question.

Table 12

Percentage of Teachers who Said that There is a Variety of Reading Material (eg., Prose, Poetry, etc.)

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1,137	1,466	46	16
2.	42.66	55.01	1.73	0.60

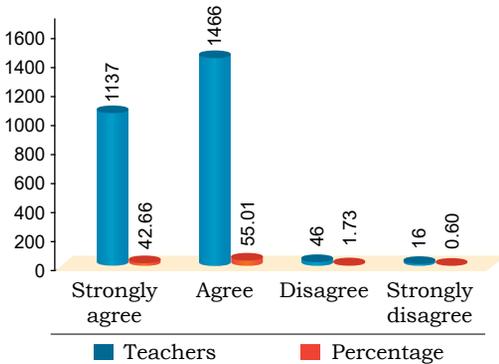


Figure 12: Percentage of teachers who said that there is a variety of reading material (eg. Prose, poetry, etc.)

From the results of Table 12 and the corresponding Figure 12, it can be seen that 1,137 (42.66%) teachers strongly agree, 1,466 (55.01%) teachers agree, and 46 (1.73%) teachers disagree with the question that there is a variety of reading material (eg. Prose, poetry, etc.), while 16 (0.60%) teachers strongly disagree with the question.

Table 13

Percentage of Teachers who Said that the Reading Materials Help Learners Use English Language in Daily Life

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1,098	1,505	46	16
2.	41.20	56.47	1.73	0.60

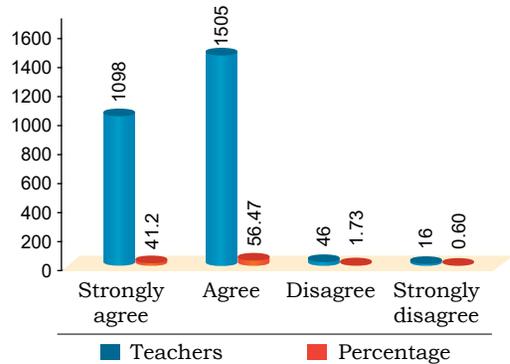


Figure 13: Percentage of teachers who said that the reading materials help learners use English language in daily life

From the results of Table 13 and the corresponding Figure 13, it can be seen that 1,098 (41.2%) teachers strongly agree, 1,505 (56.47%) teachers agree, and 46 (1.73%) teachers disagree with the question that reading materials help learners use English language in daily life, while 16 (0.60%) teachers strongly disagree with the question.

Table 14

Percentage of Teachers who Said that the Writing Tasks are Appropriate for Improving Students' Writing Skills

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1,160	1,454	36	15
2.	43.53	54.56	1.35	0.56

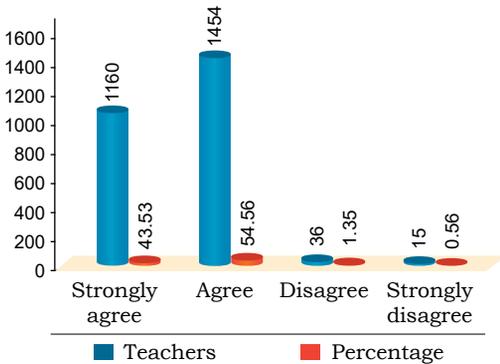


Figure 14: Percentage of teachers who said that the writing tasks are appropriate for improving students' writing skills

From the results of Table 14 and the corresponding Figure 14, it can be seen that 1,160 (43.53%) teachers strongly agree, 1,454 (54.56%) teachers agree, and 36 (1.35%) teachers disagree to the question that the writing tasks are appropriate for improving students' writing skills, while 15 (0.56%) teachers strongly disagree to the question.

Table 15

Percentage of Teachers who Said that the Writing Tasks are Appropriate for Improving Students' Grammar and Composition

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1,018	1,551	81	15
2.	38.20	58.20	3.04	0.56

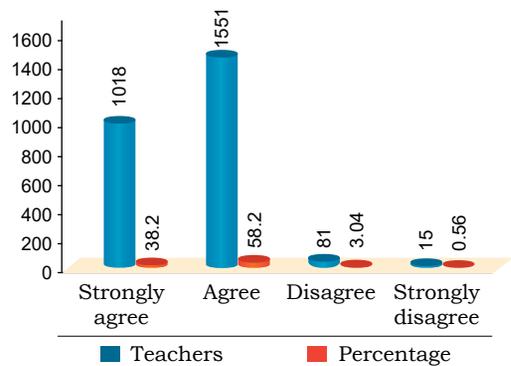


Figure 15: Percentage of teachers who said that the writing tasks are appropriate for improving students' grammar and composition

From the results of Table 15 and the corresponding Figure 15, it can be seen that 1,018 (38.2%) teachers strongly agree, 1,551 (58.2%) teachers agree, and 81 (3.04%) teachers disagree with the question that the writing tasks are appropriate for improving students' grammar and composition while 15 (0.56%) teachers strongly disagree to the question.

Table 16

Percentage of Teachers who Said that the Textbook Encourages the Ability to Express Ideas in the Written Form

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1,050	1,550	50	15
2.	39.40	58.16	1.88	0.56

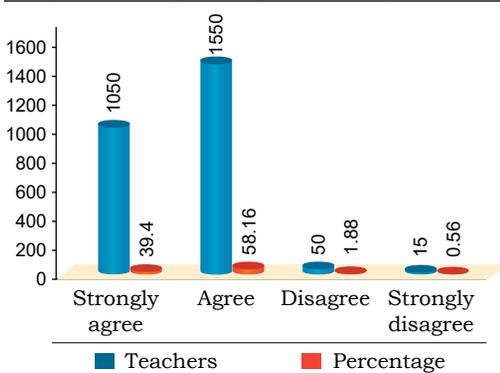


Figure 16: Percentage of teachers who said that the textbook encourages the ability to express ideas in the written form

From the results of Table 16 and the corresponding Figure 16, it can be seen that 1,050 (39.4%) teachers strongly agree, 1,550 (58.16%) teachers agree, and 50 (1.88%) teachers disagree to the question that the textbook encourages the ability to express ideas in the written form, whereas 15 (0.56%) teachers profoundly disagree with the question.

Table 17

Percentage of Teachers who Said that the Vocabulary Items are Appropriate for the Students' Age Group

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1,109	1,484	58	14
2.	41.61	55.68	2.18	0.53

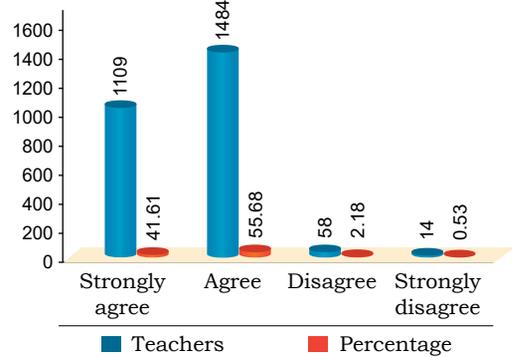


Figure 17: Percentage of teachers who said that the vocabulary items are appropriate for the students' age group

From the results of Table 17 and the corresponding Figure 17, it can be seen that 1,109 (41.61%) teachers strongly agree, 1,484 (55.68%) teachers agree, and 58 (2.18%) teachers disagree with the question that the vocabulary items are appropriate for the student's age group, while 14 (0.53%) teachers strongly disagree with the question.

Table 18

Percentage of Teachers who Said that the Textbook Incorporates Sufficient Materials for Improving Vocabulary

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1,042	1,534	72	17
2.	39.10	57.56	2.70	0.64

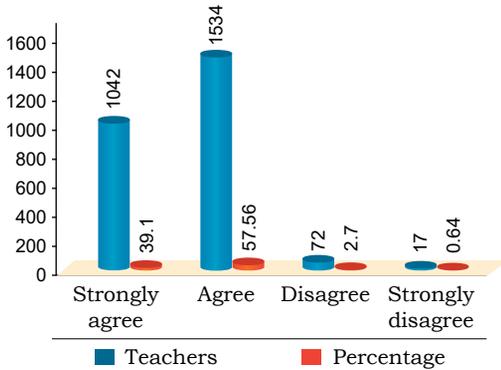


Figure 18: Percentage of teachers who said that the textbook incorporates sufficient materials for improving vocabulary

From the results of Table 18 and the corresponding Figure 18, it can be seen that 1,042 (39.1%) teachers strongly agree, 1,534 (57.56%) teachers agree, and 72 (2.7%) teachers disagree to the question that the textbook incorporates sufficient materials for improving vocabulary, while 17 (0.64%) teachers strongly disagree with the question.

Table 19

Percentage of Teachers who Said that the Materials for Teaching Grammar, Vocabulary and Pronunciation are Graded in a Suitable Manner

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	995	1,564	89	17
2.	37.34	58.69	3.34	0.64

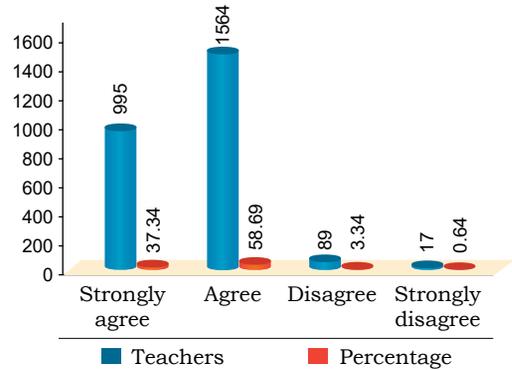


Figure 19: Percentage of teachers who said that the materials for teaching grammar, vocabulary and pronunciation are graded in a suitable manner

From the results of Table 19 and the corresponding Figure 19, it can be seen that 995 (37.34%) teachers strongly agree, 1,564 (58.69%) teachers agree, and 89 (3.34%) teachers disagree to the question that the materials for teaching grammar, vocabulary and pronunciation are graded in a suitable manner, while 17 (0.64%) of the teachers strongly disagree with the question.

Table 20

Percentage of Teachers who Said that the Grammar Items in the Textbook are Appropriate for the Students' Age Group

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1,045	1,541	64	15
2.	39.21	57.82	2.40	0.56

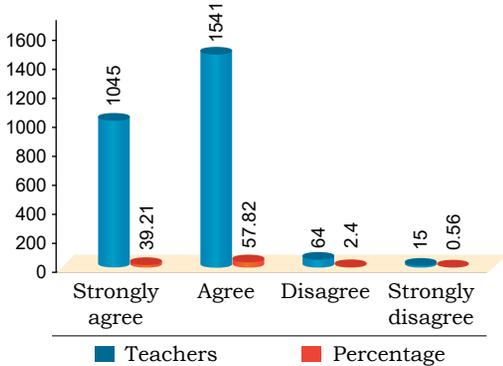


Figure 20: Percentage of teachers who said that the grammar items in the textbook are appropriate for the students' age group

From the results of Table 20 and the corresponding Figure 20, it can be seen that 1,045 (39.21%) teachers strongly agree, 1,541 (57.82%) teachers agree, and 64 (2.4%) teachers disagree with the question that the grammar items in the textbook are appropriate for the students' age group, while 15 (0.56%) of the teachers strongly disagree with the question.

B. Numeracy

To what extent is the textbook effective according to the numeracy skills (number, measurement, spatial understanding, basic operations with numbers, arithmetical reasoning, etc.)

Table 21

Percentage of Teachers who Said that Real Objects, Visual Examples, Diagrams and Figures are Provided to Develop Fundamental Operations of Arithmetic at the Beginning Stage

N=2,665

S. N.	Strongly Agree	Agree	Disagree	Strongly disagree
1.	1,201	1,420	30	14
2.	45.07	53.28	1.13	0.53

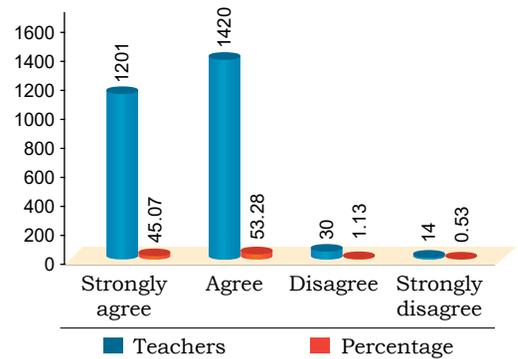


Figure 21: Percentage of teachers who said that real objects, visual examples, diagrams and figures are provided to develop fundamental operations of arithmetic at the beginning stage

From the results of Table 21 and the corresponding Figure 21, it can be seen that 1,201 (45.07%) teachers

strongly agree, 1,420 (53.28%) teachers agree, and 30 (1.13%) teachers disagree to the question that real objects, visual examples, diagrams and figures are provided to develop fundamental operations of arithmetic at the beginning stage. While 14 (0.53%) of the teachers strongly disagree with the question.

Table 22

Percentage of Teachers who Said that Textbook Activities or Illustrations Facilitate the Understanding of Numerals

N=2,665

S. N.	Strongly Agree	Agree	Disagree	Strongly disagree
1.	1,259	1,367	25	14
2.	47.24	51.29	0.94	0.53

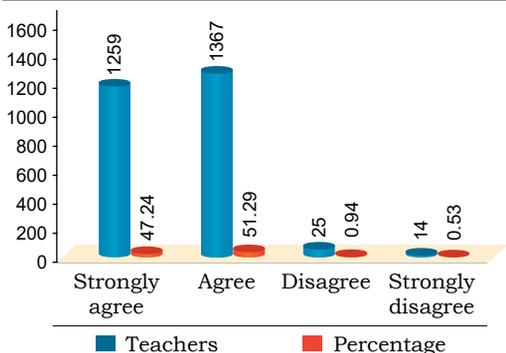


Figure 22: Percentage of teachers who said that textbook activities/illustrations facilitate the understanding of numerals

From the results of Table 22 and the corresponding Figure 22 it can be seen that 1,259 (47.24%) teachers strongly agree, 1,367 (51.29%) teachers agree, and 25 (0.94%) teachers disagree to the question that the textbook activities/illustrations

facilitate the understanding of numerals. While 14 (0.53%) of the teachers strongly disagree with the question.

Table 23

Percentage of Teachers who Said that Examples or Illustrations from Local/Daily Life are Provided in the Textbook

N=2,665

S. N.	Strongly Agree	Agree	Disagree	Strongly disagree
1.	1,180	1,433	36	16
2.	44.28	53.77	1.35	0.60

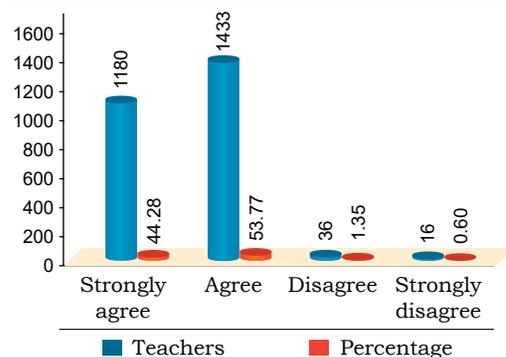


Figure 23: Percentage of teachers who said that examples or illustrations from local/daily life are provided in the textbook

From the results of Table 23 and the corresponding Figure 23, it can be seen that 1,180 (44.28%) teachers strongly agree, 1,433 (53.77%) teachers agree, and 36 (1.35%) teachers disagree to the question that the examples/illustrations from local/daily life are provided in the textbook. While 16 (0.60%) of the teachers strongly disagree with the question.

Table 24

Percentage of Teachers who Said that Classification of Items or Objects According to Numbers and Shapes is Facilitated Through Textbook Activities

N=2,665

S. N.	Strongly Agree	Agree	Disagree	Strongly disagree
1.	1,146	1,461	41	17
2.	43.00	54.82	1.54	0.64

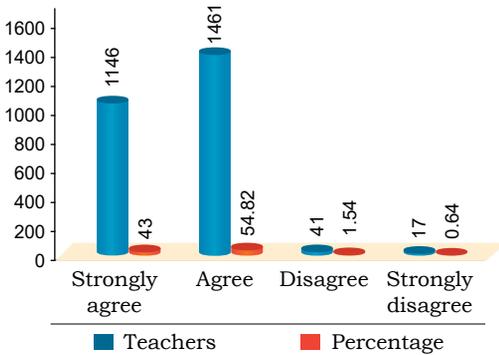


Figure 24: Percentage of Teachers who said that Classification of Items or Objects According to Numbers and Shapes is Facilitated Through Textbook Activities

From the results of Table 24 and the corresponding Figure 24, it can be seen that 1,146 (43.00%) teachers strongly agree, 1,461 (54.82%) teachers agree, and 41 (1.54%) teachers disagree with the question that Classification of items/objects according to numbers and shapes is facilitated through textbook activities. While 17 (0.64%) of the teachers strongly disagree with the question.

Table 25

Percentage of Teachers who Said that Data Handling Skills have been Promoted in the Textbook Through Visuals and Numerical Activities

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1,067	1,545	33	16
2.	40.04	57.97	1.24	0.60

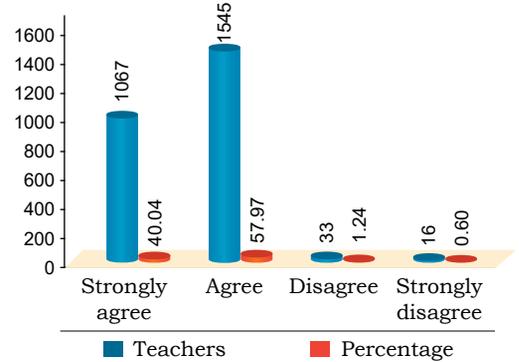


Figure 25: Percentage of teachers who said that data handling skills have been promoted in the textbook through visuals and numerical activities

From the results of Table 25 and the corresponding Figure 25, it can be seen that 1,067 (40.04%) teachers strongly agree, 1,545 (57.97%) teachers agree, and 33 (1.24%) teachers disagree to the question that the data handling skills has been promoted in the textbook through visuals and numerical activities. While 16 (0.60%) of the teachers strongly disagree with the question.

Table 26

Percentage of Teachers who Said that Concept and Understanding of Measurement, Mass, Volume and Temperature is Handled with the Help of Daily life Examples from the Locale

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1	1,055	1,539	36	15
2	39.59	57.75	1.35	0.56

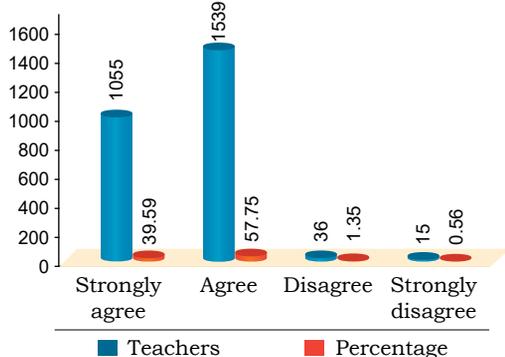


Figure 26: Percentage of teachers who said that the concept and understanding of measurement, mass, volume and temperature is handled with the help of daily life examples from the locale

From the results of Table 26 and the corresponding Figure 26, it can be seen that 1,055 (39.59%) teachers strongly agree, 1,539 (57.75%) teachers agree, and 36 (1.35%) teachers disagree with the question that concept and understanding of measurement, mass, volume and temperature is handled with the help of daily life examples from the locale. While 15 (0.56%) of the teachers strongly disagree with the question.

Table 27

Percentage of Teachers who Said that Mathematical Language Used in the Textbook is According to the Students' Age and Culture

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1	1,068	1,540	41	16
2	40.08	57.79	1.54	0.60

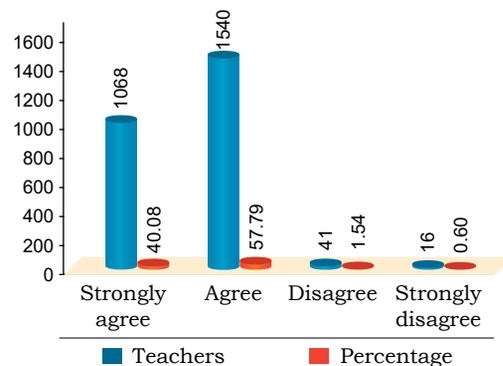


Figure 27: Percentage of teachers who said that Mathematical Language used in the Textbook is According to the Students' age and Culture

From the results of Table 27 and the corresponding Figure 27, it can be seen that 1,068 (40.08%) teachers strongly agree, 1,540 (57.79%) teachers agree, and 41 (1.54%) teachers disagree with the question that the mathematical language used in the textbook is according to the students' age and culture. While 16 (0.60%) of the teachers strongly disagree with the question.

Table 28

Percentage of Teachers who Said that the Difficulty Level of Mathematical Concepts and Operations are Progressively Increased Within and Between Classes

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1	1,050	1,560	38	17
2	39.40	58.54	1.43	0.64

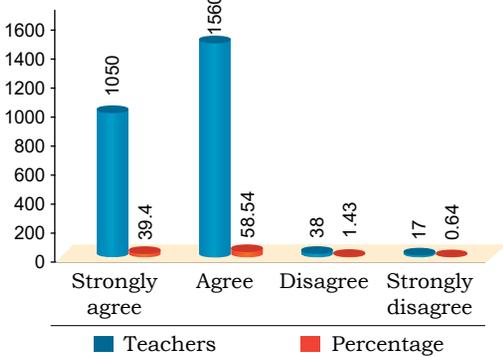


Figure 28: Percentage of teachers who said that difficulty level of mathematical concepts and operations are progressively increased within and between classes

From the results of Table 28 and the corresponding Figure 28, it can be seen that 1,050 (39.4%) teachers strongly agree, 1,560 (58.54%) teachers agree, and 38 (1.43%) teachers disagree with the question that difficulty level of mathematical concepts and operations are progressively increased within and between classes, while 17 (0.64%) of the teachers strongly disagree with the question.

Table 29

Percentage of Teachers who Said that Basic Life Skills are Dealt Through Mathematical Operations

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1	1,083	1,534	29	19
2	40.64	57.56	1.09	0.71

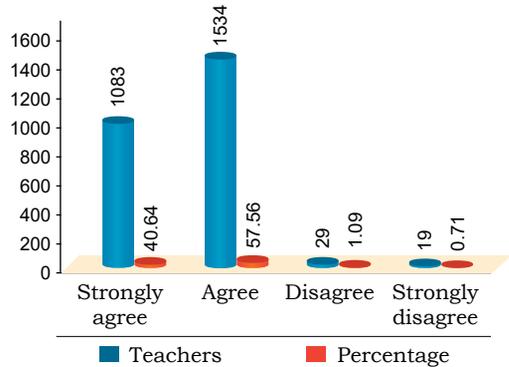


Figure 29: Percentage of teachers who said that basic life skills are dealt through mathematical operations

From the results of Table 29 and the corresponding Figure 29, it can be seen that 1,083 (40.64%) teachers strongly agree, 1,534 (57.56%) teachers agree, and 29 (1.09%) teachers disagree with the question that the basic life skills are dealt through mathematical operations, while 19 (0.71%) of the teachers strongly disagree with the question.

Table 30

Percentage of Teachers who Said that Textbook Activities Motivate in the Development of Basic Life Skills Like Handling Money, Communication, Cooperation, Dealing with Individuals, etc.

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1	1,072	1,531	46	16
2	40.23	57.45	1.73	0.60

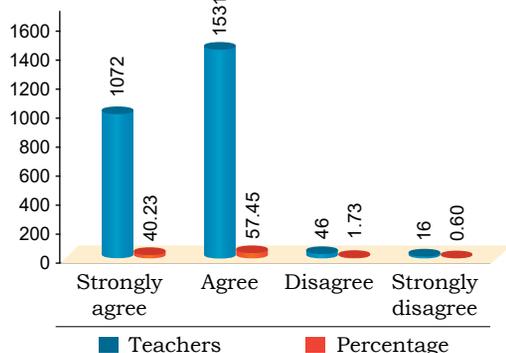


Figure 30: Percentage of teachers who said that textbook activities motivate in the development of basic life skills like handling money, communication, cooperation, dealing with individuals, etc.

From the results of Table 30 and the corresponding Figure 30, it can be seen that 1,072 (40.23%) teachers strongly agree, 1,531 (57.45%) teachers agree, and 46 (1.73%) teachers disagree with the question that the textbook activities motivate in the development of basic life skills like handling money, communication, cooperation, dealing with individuals, etc., while 16 (0.60%) teachers strongly disagree with the question.

Table 31

Percentage of Teachers who Said that the Items or Activities Help in the Development of Twenty-first Century Skills

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1	1,026	1,571	52	16
2	38.50	58.95	1.95	0.60

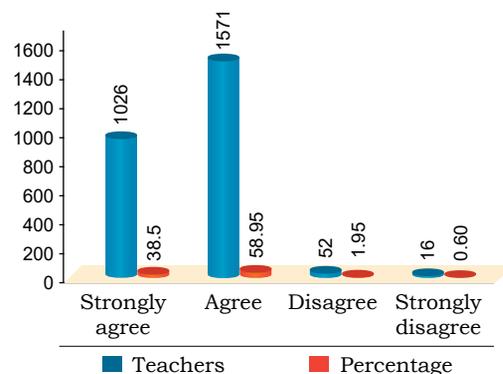


Figure 31: Percentage of teachers who said that the items or activities help in the development of twenty-first century skills

From the results of Table 31 and the corresponding Figure 31, it can be seen that 1,026 (38.5%) teachers strongly agree, 1,571 (58.95%) teachers agree, and 52 (1.95%) teachers disagree with the question that the Items/activities help in the development of twenty-first century skills while 16 (0.60%) of the teachers strongly disagree with the question.

Table 32**Percentage of Teachers who Said that the Reading and Writing of Numbers is According to Students' Age Group**

N=2,665

S. N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1,167	1,454	29	15
2.	43.79	54.56	1.09	0.56

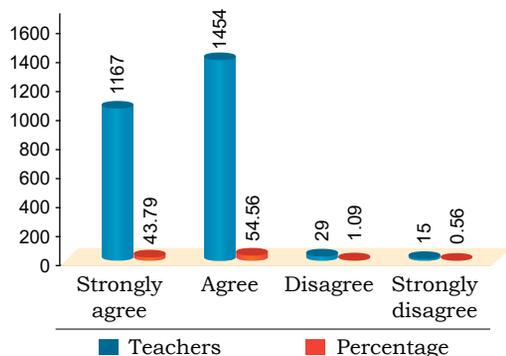


Figure 32: Percentage of teachers who said that the reading and writing of numbers is according to students' age group

From the results of Table 32 and the corresponding Figure 32, it can be seen that 1,167 (43.79%) teachers strongly agree, 1,454 (54.56%) teachers agree, and 29 (1.09%) teachers disagree with the question that reading and writing of numbers is according to students' age group, while 15 (0.56%) of the teachers strongly disagree with the question.

RECOMMENDATIONS AND SUGGESTIONS

1. Teaching learning materials and classroom practices should go hand in hand with content and pedagogical processes.

2. It has been seen that students learn better when they are engaged well, therefore, highly engaging, joyful, and innovative additional learning resources should be developed for the Foundational Stage.
3. Suitable jokes, proverbs, short stories, anecdotes, cartoons, caricatures, even newspaper articles, cartoon shows, movies, online resources, podcasts, rap songs, ideas set to music, etc., can be used for the process of teaching and learning.
4. Teaching learning material in all languages has to be created in all languages. If material is developed in the mother tongue of the students it will prove to be more beneficial.
5. Teaching through play way/ discovery/art and learning by doing has to be given weightage. For this purpose, toys, games, sports, puzzles, quizzes, worksheets or workbooks, and story books, etc., are to be used extensively.
6. A reading and learning corner should be created in the classroom where students can spend meaningful time and acquire good reading habits. Content should be such that it is related to the learning outcomes of a particular grade.
7. To foster the habit and enjoyment of reading, children should be encouraged to read books and print materials outside of the scope of the usual curriculum.

8. Listening tasks need to be well-planned and well-recorded. Recording in a tone, accent and pace that is comprehensible to children of specific age groups should be utilised.
9. More material on speaking can be created to cater to the requirements of pronunciation, stress and intonation. Material that is contextual and joyful can be created.
10. Meaningful and purposeful communication can be taught to students by placing them in contextual situations through role play, group activities, etc.
11. Textbooks can be relooked and redesigned keeping in mind the guidelines proposed by NIPUN Bharat and the three developmental goals, (see annexure).
12. Preparation of stage-wise and subject-wise learning matrices of simple measurable learning outcomes and their codification can be used by teachers to benchmark levels of achievement by each child.
13. Mapping of learning outcomes of the curriculum can be done, which can help determine the goals and the levels of learning of the children.
14. Inclusion is the key to imparting several life skills; it shall be the responsibility of the teacher to ensure it. Activities in the textbook can be planned so that they give an impetus to inclusion.
15. Content and activities in the book should be such that it is linked to the daily life situations of the children and their environment, area, culture, language, ethnicity, gender, etc.
16. In addition to emphasising the acquisition of knowledge, teaching and learning should also emphasise the development of values, life skills, and other skills.
17. For pupils with learning challenges, specialised e-learning materials for FLN (mathematics and reading literacy) should be developed.
18. Critical thinking, communication, collaboration, and creativity are essential twenty-first century learning abilities that should be incorporated into pedagogy. Emphasis should be on diversity, flexibility, and quality.
19. The textbooks should include art integrated learning for the development of early language, literacy, and numeracy as well as socio-emotional, ethical, and cultural understanding.
20. For students to be able to develop proficiency in each subject, classroom interactions should be built around incorporating real-life scenarios while keeping inter or multidisciplinary learning in mind.
21. Activities and group work to improve and inform about health, hygiene and sanitation should find place in the curriculum.

22. More interactive and easily accessible e-content should be developed for all classes.
23. Pictorial representations with local contexts should be provided for practising the skill of writing.
24. Language used in textbooks of numeracy should be simplified and should be of the level of students.
25. More bilingual or multilingual books should be developed.
26. Teacher training on using the textbook, developing authentic material, developing teaching-learning resources and e-content should be organised for the teachers teaching at the Foundational Stage.
27. Teachers should upgrade themselves professionally by learning new skills, so that they can keep pace with the demands of the time.

CONCLUSION

At this early stage of learning, textbooks are an essential component of the process of learning. They give a well-organised and thorough summary of the subject while presenting the data logically. They work as a trustworthy source of knowledge, assisting pupils in developing a thorough

comprehension of fundamental ideas, theories, and details. To ensure accuracy and relevance, textbooks should be prepared by subject-matter experts and evaluated by peers. After going through rigorous procedures, the textbook can become a reliable source of knowledge for both teachers and pupils as a result.

Furthermore, textbooks should also include tasks and examples that support the learning process. These tests might be anything from straightforward questions about memory to intricate, knowledge-intensive puzzles. These activities are meant to foster critical thinking in pupils and a deeper, more meaningful understanding of the subjects they are studying.

The fact that textbooks establish a common learning standard across all schools and states is another crucial component shared through the vision of NEP 2020. With uniform textbook standards, students can change schools with ease and receive a constant level of learning. This is crucial for students who are changing schools or states since it guarantees that the knowledge they have gained at one institution will be applicable and helpful in another.

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