

**A Study of the Textbooks of FLN prepared by Maharashtra
in Light of NEP 2020 Recommendations**

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Preface

Early childhood is a crucial period for development of literacy and numeracy which starts in the first three years of life and is strongly correlated with everyday communication acts, ideas, and artwork created by young children. Language, reading, writing, and numeracy development all start with parents, the home learning environment, and young children interacting with literacy materials like books, paper, and crayons. This knowledge of the early stages of literacy development adds to the body of recent research that emphasizes the significance of early experiences in the formation of the brain.

Children in their early years are vivacious, energetic, curious, and interested in the people, things, and events around them. Their skills are constantly developing as they actively seek to make sense of their experiences. Children actively employ their senses to understand the world around them as they learn by doing. Through the activities they engage in, they learn and create knowledge. There is no denying the fact that textbooks hold a place of importance when it comes to young learners. When adults and children read books together, it fosters a strong emotional connection between them. Children's vocabularies and fundamental language and numeracy skills are greatly expanded by books. Reading fosters analytical thinking. Children's imaginations are nurtured and expanded through books. Textbooks play a major role in the development of the cognitive, affective and psychomotor skills of young children.

The NEP 2020 has given specific importance to Foundational Literacy and Numeracy. FLN has a wider impact, as it affects the understanding of the content of other subjects as well. The research project will assess the effectiveness of the textbooks developed under FLN in the state of Maharashtra in light of NEP 2020 and NIPUN Bharat recommendations. The study will also develop some tools to see whether the textbooks will support in meeting the Learning Outcomes in the young learners. Besides, quantitative and qualitative study of the illustrations, font, printing etc. the textbook will also be done to see if they motivate the young learners to read the textbooks. It will help in better understanding of the various dimensions of textbooks and how they can help in the development of FLN. Moreover, through the assessment of textbooks the researchers will be able to provide the state functionaries the status and suggestions for further improvement. The findings and suggestions can also be taken up by other states when developing their own textbooks.

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Chapter 1- Introduction

1.0 Introduction

John F. Kennedy once stated “Children are the world’s most valuable resource and its best hope for the future.” The globe is changing dramatically fast, as are technological advancements. In practically every technologically advanced region of the world, we observe some form of technology invention or advancement occurring every day. People having critical thinking skills are needed for these professions that have been created as a result of the enormous advances made in artificial intelligence in order to both execute them and, inevitably, to survive on the planet by earning their livelihood. Governmental public policy formulations and implications are very crucial. In this regard, the most recent National Education Policy, 2020 from the government is centered on developing a skilled workforce to make India compete with any influential and powerful region on the planet. As it is clearly mentioned in Section 4.4 of the **National Education Policy** that “The aim of education will not only be cognitive development, but also building character and creating holistic and well-rounded individuals equipped with the key 21st century skills.”

The reason why our nation prioritizes education over all other factors and sets 2030 as the timeframe for attaining its objectives is given that every other major world power has common aspirations for the same timeframe. “The Incheon Declaration was adopted on 21 May 2015 at the World Education Forum (WEF 2015) held in Incheon, Republic of Korea. The Incheon Declaration constitutes the commitment of the education community to Education 2030 and the 2030 Agenda for Sustainable Development, recognizing the important role of education as a main driver of development.”

1.1 NIPUN Bharat

The National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN) is an Indian educational program aimed at improving the foundational literacy and numeracy skills of primary school students. These skills are considered essential for a child's overall development and success in school and in life, and the program aims to provide students with the foundation they need to pursue further education and achieve their full potential.

The New Educational Policy (NEP) 2020 initiative, NIPUN Bharat, has been introduced for children between the ages of 3 and 9 who are the focus group for the NIPUN Bharat Program, which aspires to accomplish their needs and preferences. NIPUN Bharat is aimed to help and motivate kids, as well as their schools, instructors, parents, and communities, in any manner possible to help actualize our children's maximum potential and take the nation to new heights. By the end of grade 3, by 2026–2027, every child in the nation is expected to have mastered fundamental literacy and numeracy skills. Lakshya Soochi, or Targets for Foundational Literacy and Numeracy, is the term used to denote the Mission's objectives.

NIPUN is implemented by the Ministry of Human Resource Development (MHRD) and is designed to be integrated into the existing curriculum at the primary school level. The program focuses on providing students with the necessary skills to read, understand, and interpret texts, as well as to perform basic mathematical operations. It is implemented through a combination of teacher training, educational materials, and support for schools and communities.

One of the key components of NIPUN is teacher training. Teachers participating in the program receive training on how to effectively teach literacy and numeracy skills to primary school students. This includes training on how to use the educational materials provided by the program, as well as how to incorporate these materials into the existing curriculum. In addition, teachers receive support and guidance on how to create a positive and supportive learning environment for their students.

In addition to teacher training, NIPUN also provides educational materials to participating schools. These materials are designed to help students develop their literacy and numeracy skills in a fun and engaging way. The materials include books, worksheets, and other resources that are tailored to the needs and abilities of primary school students.

Finally, NIPUN provides support to schools and communities to help them implement the program effectively. This includes providing funding and resources to help schools purchase necessary materials and hire additional teachers if needed. In addition, the program works with communities to create a supportive environment for learning, and to ensure that students have the necessary resources and support they need to succeed.

Overall, NIPUN is an important program that is working to improve the literacy and numeracy skills of primary school students in India. By providing teacher training, educational materials,

and support to schools and communities, the program is helping to ensure that all students have the opportunity to succeed and reach their full potential.

1.2 Foundational Literacy and Numeracy

Recognizing the importance of early learning, the National Education Policy 2020 states that “Our highest priority must be to achieve universal foundational literacy and numeracy (FLN) in primary school and beyond by 2025. The rest of the policy will be largely irrelevant for such a large portion of our students if this most basic learning (reading, writing, and arithmetic at the foundational level) is not first achieved.” As some of the strategies for achieving 100 percent foundational level (up to Grade 3) learning by 2025, a three-month preparatory course, access to digital content through enlivened textbooks (ETB-DIKSHA), student-led peer learning, and community tutoring are proposed.”

1. Foundational Language And Literacy

The pre-existing knowledge of language helps in building literacy skills in languages and The key components in Foundational Language and Literacy are Oral Language Development, Decoding, Reading Fluency, Writing. Oral skills are fundamental to a child's development of reading and academic performance. Children's overall wellbeing is influenced by their ability to communicate with others as they gain confidence in their verbal communication abilities. One of the abilities that helps a child understand concepts and comprehend other people's viewpoints is listening. This fosters the evolution of the child's extrovert rather than his/her introverted traits. Oral language skills empower a child to convey how he feels about the things he observes around him, especially his likes and dislikes, and to make decisions according to his preferences rather than conforming to the circumstances around. This proves to be massively crucial when learning takes place in a classroom. It boosts the child's potential for learning and academic success. Studies have demonstrated that poor oral language ability leads to mental health problems. This is what NEP 2020 aims at.

According to NIPUN Bharat- Guidelines for Implementation, Foundational Language and literacy means-

Oral language development in home language; appropriate exposure to the school language including good listening comprehension skills, development of print and phonological awareness

and development of emergent reading and writing skills in the preschool years are crucial for language and literacy development in early primary school years. The pre-existing knowledge of language helps in building literacy skills in languages. Children who have a strong foundation in their home language can learn English/second language more easily.

The key components in Foundational Language and Literacy are:

- Oral Language Development: The experiences in oral language are important for developing skills of reading and writing.
- Phonological Awareness: This domain includes the competencies of word awareness, rhyme awareness, and awareness of sounds within words which should emerge from their meaningful engagement with language.
- Decoding: This domain includes competencies of print awareness, akshara knowledge and decoding, and word recognition
- Vocabulary: This domain includes the competencies of oral vocabulary, reading/writing vocabulary, and morphological analysis of words.
- Reading Comprehension: This domain covers the competencies of understanding texts and retrieving information from them, as well as interpreting texts.
- Reading Fluency: Refers to the ability to read a text with accuracy, speed (automaticity), expression (prosody), and comprehension that allows children to make meaning from the text
- Concept about Print: Children need exposure to different types of print rich environment to develop the skill of comprehension.
- Writing: This domain includes the competencies of writing aksharas and words as well as writing for expression.
- Culture of Reading/Inclination towards Reading: Involves the motivation to engage with a wide variety of books and other reading materials.

The National Reading Panel (2000) conducted an exhaustive review of research on phonics, and drew the following conclusions:

- "Learning the alphabetic system, that is, letter-sound correspondences and spelling patterns, and learning how to apply this knowledge in their reading, is a vital element of the process for beginners."

- "Compared to other programmes that offer unsystematic or no phonics training, systematic phonics instruction significantly contributes to children's improvement in reading. When compared to phonics training offered after the first grade, early phonics instruction was found to be significantly more effective. These findings make it abundantly evident how helpful systematic phonics training is for young learners in kindergarten and first grade, as well as how well-suited these age groups are to learning phonemic and phonological principles."
- "For a very long time, systematic phonics training has been employed extensively with good outcomes. Children of various ages, skills, and socioeconomic situations have found success with a number of phonics programmes. These details ought to convince educators and the general public that systematic phonics training is an important component of an effective classroom reading programme."

2. Foundational Numeracy And Mathematics Skills

Foundational Numeracy means the ability to reason and to apply simple numerical concepts in daily life problem solving. The major aspects and components of early mathematics are: Pre-number concepts, Numbers and operations on numbers, Shapes and operations on number, Shapes and Spatial Understanding, Measurement, Data Handling.

Students who can think creatively are advantageous not only to oneself but to their teachers as well. Higher-level pupils need more critical thinking skills to approach complex problems, as well as a systematic and logical approach to problem-solving. It aids the teachers since it facilitates the process for them to include more prudent teaching strategies. Each step in the problem solving process involves the use of techniques and abilities that define the complexity of the problem that can be solved and the overall success of influencing change. Children begin learning how to solve simple problems at a young age (learning to eat, move with coordination, and communicate), and as they age, their problem-solving skills become more advanced (enabling them to solve more difficult problems).

This is one of the motives of NEP 2020 which aligns with the motives of Foundational Literacy and Numeracy to develop critical thinking ability among the students. It is clearly stated in NEP

2020 section 4.25 “ Mathematics and computational thinking will be given increased emphasis throughout the school years, starting with the foundational stage, through a variety of innovative methods, including the regular use of puzzles and games that make mathematical thinking more enjoyable and engaging.”

According to NIPUN Bharat- Guidelines for Implementation, Foundational Numeracy and Mathematics Skills means-

Foundational Numeracy means the ability to reason and to apply simple numerical concepts in daily life problem solving. The development of pre-number and number concepts, knowledge and skills of comparing, seriation, classification and recognizing patterns during pre-school serves as a foundation for mathematics learning in early primary classes. The major aspects and components of early mathematics are:

- Pre-Number Concepts: Count and understand the numeration system
- Numbers and operations on numbers: Learn conventions needed for mastery of Mathematical techniques such as the use of a base ten system to represent numbers
- Measurement: Understand and use standard algorithms to perform operations of addition, subtraction, multiplication and division on numbers up to three digits
- Shapes and Spatial Understanding: Perform simple computations in her/his own way up to three-digit numbers and apply these to their day to life activities in different contexts
- Patterns: Learn vocabulary of relational words to extend his/her understanding of space and spatial objects

The results of the survey on fundamental reading and numeracy skills of more than 86,000 Class 3 students throughout India were released by the education ministry on Sep. 7, 2022. According to the ministry, more than 18,000 teachers participated in the survey, which included students from 10,000 schools. Foundational literacy and numeracy assessments look at students' proficiency in reading, writing, and fundamental math. The study's findings will be utilized to create interventions at the school level. It was based on a survey that was done in 20 languages.

Solving problems more accurately reflects the nature of mathematics. If students develop problem-solving abilities, they will be better equipped to apply their mathematical knowledge to both academic and real-world challenges. As you work through the hypothetical questions, your

enthusiasm in learning grows. It gives them the freedom to choose how they want to approach the topic and work at their own pace.

Math skills are developed through problem solving. It equips students with the skills necessary to use their mathematical knowledge to address both hypothetical and practical issues. This method is regularly used in the work of research mathematicians. One well-framed mathematical problem offers the opportunity for a lengthy period of investigation once pupils have mastered a problem-solving approach to math. Solving problems becomes enjoyable for them. Which serves one of the main objectives of NEP 2020 mentioned in Section 4.33 that “The aim of assessment in the culture of our schooling system will shift from one that is summative and primarily tests rote memorization skills to one that is more regular and formative, is more competency-based, promotes learning and development for our students, and tests higher-order skills, such as analysis, critical thinking, and conceptual clarity.” (P.17)

Through their participation in activities, young children develop knowledge. We should provide children the chance to explore their surroundings, manipulate objects, conduct experiments, and ask questions and seek clarification in order for them to comprehend ideas and improve their abilities. Each child re-constructs his or her own perception of the world through these hands-on experiences that help them comprehend how a system works.

1.3 Early Childhood Care And Education (ECCE)

The Government's National Education Policy, 2020 focuses on creating skilled people to make a competitive India to not only compete with technological advancements but to excel and bring the world's attention to our country and make our presence felt across the globe. It, already, has traditionally been difficult for teachers and students to teach and learn mathematics. The methodologies being used to teach mathematics in classrooms have, in some ways, fallen below expectations. Even after finishing primary school, it is frequently discovered that learners lack basic knowledge of both language and math skills. The annual academic performance and future prospects of kids are being hampered by this learning problem in Indian schools. Competency-based learning initiatives that have emerged from research on these topics are included in the new National Education Policy (NEP) 2020. According to NEP 2020, students should have

strong foundational language and math proficiency coupled with 21st-century talents including problem-solving skills.

The Foundational Stage will consist of five years of flexible, multilevel, play/activity-based learning and the curriculum and pedagogy of ECCE. (Section 4.2, NEP 2020)

One of the main goals of the NEP 2020 is to provide universal access to quality education for all children in India, regardless of their socio-economic background.

One of the key components of the NEP 2020 is the emphasis on early childhood care and education (ECCE). The policy recognizes the importance of investing in early childhood education, as it has been shown to have a positive impact on a child's overall development and future success. As a result, the NEP 2020 aims to provide universal access to ECCE for children aged 3 to 6 years old.

The NEP 2020 also includes a number of other provisions related to ECCE, including:

- The establishment of a National Early Childhood Care and Education Council to oversee the implementation of ECCE programs and policies.
- The expansion of the existing Integrated Child Development Services (ICDS) program, which provides ECCE services to children in rural and urban areas.
- The inclusion of ECCE as a mandatory subject in teacher training programs.
- The introduction of a new curriculum for ECCE that is developmentally appropriate and takes into account the diverse needs of children.

By investing in ECCE and supporting the development of young children, the policy aims to ensure that all children have the opportunity to reach their full potential.

1.4 NAS Survey In Literacy And Numeracy

The evaluation and accreditation of private schools is one of the prominent elements of the National Education Policy 2020. In India, parents want their children to enroll in private schools so that they can give them a better learning environment. It is assumed that private schools provide academic proficiency at a far higher level than government schools. There are

significantly more private schools than government schools, which raises questions about the public's propensity to prefer the private sector and, as a result, undermines confidence in the government's attempts to look out for the country's children. These measures are required in order to alter this view and claw back the public's confidence in government institutions.

Contrary to appearances, however, reality is different. As mentioned in Section 1.2.4 of the National Curriculum Framework for Foundational Stage, “Private, and other preschools have largely functioned as downward extensions of school. Though some provide better infrastructure and learning resources for children, most primarily focus on formal teaching and rote memorization, with high pupil-teacher ratios and limited developmentally appropriate play-based and activity-based learning.”

Still, NEP 2020 focuses on aligning the private institutions with the vision for achieving full human potential, developing an equitable and just society, and promoting national development. In order to achieve that, NEP 2020 is centered on narrowing the gap between teaching methodologies and the learning outcomes. NEP 2020 Section 3.6 clearly states that “To make it easier for both governments as well as non-governmental philanthropic organizations to build schools, to encourage local variations on account of culture, geography, and demographics, and to allow alternative models of education, the requirements for schools will be made less restrictive. The focus will be to have less emphasis on input and greater emphasis on output potential concerning desired learning outcomes.”

The National ECCE Policy (2013) clearly states that ‘To standardize the quality of ECCE available to children, basic Quality Standards and Specifications will be laid down for ECCE which will be enforced across public, private, and non-governmental service providers. It recommends that a Regulatory Framework for ECCE across all service providers should be developed by the National ECCE Council, to be implemented by 2016. (National Curriculum Framework for Foundational Stage Section 3.2)

1.5 NEP 2020 to minimize the gap

The National Education Policy (NEP) 2020 aims to minimize gaps in the Indian education system by implementing several key changes including:

1. A focus on multilingual education to ensure that all students have access to education in their mother tongue or regional language.
2. A revamp of the curriculum to include more emphasis on critical thinking and problem-solving skills.
3. An increase in the use of technology in education to improve access to quality education.
4. A focus on vocational education and skills training to prepare students for the workforce.
5. A shift towards a flexible and holistic approach to education that emphasizes the development of the whole child, including their emotional and physical well-being.
6. A greater focus on teacher training to improve the quality of education.
7. A comprehensive strategy to ensure education for all children, with special focus on girls, marginalized and disadvantaged children.
8. A focus on research and innovation in education to continuously improve the education system.

NEP 2020 aims to create a more inclusive, equitable, and accessible education system that better meets the needs of all students and prepares them for the future.

“According to a World Bank assessment, just 50% of children in India have foundational learning (fundamental information), which causes difficulty when they reach class 5. With NEP, we want to overcome this 50% difference. Following implementation, teachers now know what and how to teach children in the most fun way possible. With their training, they have made significant advances in teaching approaches, and we are expected to meet the gap in the coming two years,” said Ashish Dhawan, founder and chairman of Central Square Foundation, which is partnered in giving its support for implementing the NIPUN mission in UP and other states.” The State School Standard Authority (SSSA), which has been proposed by the NEP, is to be established by each state by 2023. The most astounding aspect is that these bodies will not only be monitoring the minimum common standards in Government run schools but private schools as well.

“An effective quality self-regulation or accreditation system will be instituted for all stages of education including pre-school education - private, public, and philanthropic - to ensure compliance with essential quality standards. To ensure that all schools follow certain minimal professional and quality standards, States/UTs will set up an independent, State-wide, body

called the State School Standards Authority (SSSA). The SSSA will establish a minimal set of standards based on basic parameters (namely, safety, security, basic infrastructure, number of teachers across subjects and grades, financial probity, and sound processes of governance), which shall be followed by all schools. The framework for these parameters will be created by the SCERT in consultation with various stakeholders, especially teachers and schools.” (NEP 2020 Section 8.5 (c)) . This is being done to ensure that adequate attention is paid to the improvement of conflict of interest which should be eliminated in public schools.

The goal of education is to improve something beyond, simply, the nation's literacy rate. The foundation of healthy persons and societal well-being is high-quality education. Being educated while still lacking awareness about ways to prevent ailments is contradictory to the educational objectives. Learning how to protect oneself as well as others from things that make them sick is fundamental. In order for children to thrive in school, it is crucial to ensure they are healthy and fit. Statistics from UNESCO’s Global Education Monitoring Report show that the attainment of higher levels of education among mothers improves children’s nutrition and vaccination rates, while reducing preventable child deaths, maternal mortality The 2015 Incheon Declaration confirms that education develops the skills, values and attitudes that enable citizens to lead healthy and fulfilled lives, make informed decisions, and respond to local and global challenges. The National Education Policy (NEP) 2020 emphasizes the importance of health education in the overall development of students. Some of the key points related to health education in NEP 2020 include:

1. Incorporating health education into the curriculum at all levels, from primary to higher education, to promote physical and mental well-being.
2. A focus on holistic health education that includes not only physical health but also emotional and mental health, as well as environmental and social health.
3. Encouraging the development of healthy habits and lifestyles through regular physical activity, healthy eating, and stress management.
4. Providing health education that is inclusive and takes into account the diverse needs and backgrounds of students.
5. Emphasizing the need for health education that is evidence-based and culturally appropriate.

6. Providing training and support for teachers to enable them to effectively teach health education.
7. Encouraging collaboration between schools and healthcare providers to ensure that students have access to the health services they need.

NEP 2020 aims to promote the physical, emotional, mental, environmental and social well-being of students, by providing comprehensive health education that is integrated into the curriculum, and by creating an enabling environment in schools for health promotion.

National Steering Committee for National Curriculum Frameworks in its National Curriculum Framework for Foundational Stage 2022, in Section 1.2.4 clearly raises its motives regarding how important health is, in contributing to attaining educational objectives.

“At the current time, most early childhood education is delivered in the form of Anganwadis and private preschools, with a very small proportion coming from preschools run by NGOs and other organizations. Where well supported, the Anganwadi system of preschool education, under the aegis of the ICDS, has worked with great success in many parts of India, especially with respect to healthcare for mothers and infants. Anganwadis have truly helped to support parents and build communities; they have served to provide critical nutrition and health awareness, immunization, basic health check-ups, and referrals, and connections to local public health systems, thus setting up crores of children for healthy development and, therefore, far more productive lives.”

The National Education Policy (NEP) 2020 places a strong emphasis on vocational education as a means to prepare students for the workforce and to promote social and economic development.

Some of the key points related to vocational education in NEP 2020 include:

1. Providing vocational education at all levels of the education system, from primary to higher education, to ensure that students have the skills and knowledge they need to succeed in the workforce.
2. Offering vocational education as an integral and mandatory part of the curriculum, with a focus on hands-on, experiential learning.
3. Encouraging collaboration between schools and industry to ensure that vocational education is aligned with the needs of the workforce and to provide students with relevant work experience and internships.

4. Introducing vocational education in schools from grade 6 in order to expose students to a wide range of vocational fields and to provide them with a solid foundation for further studies or for entering the workforce.
5. Providing vocational education in a multidisciplinary and interdisciplinary manner to ensure that students have a well-rounded education and are prepared for a variety of careers.
6. Making vocational education accessible to all students, including those from marginalized and disadvantaged backgrounds, by providing financial support and other resources.
7. Providing incentives to students who opt for vocational education and to schools that provide such education.

NEP 2020 aims to create a more inclusive and equitable education system that prepares all students for the workforce by providing them with relevant and high-quality vocational education.

In Switzerland, students learn about apprenticeships and start them when they are still young. They begin the process in about fourth grade and most start apprenticeships by the age of 15 and then have skills for work by high school graduation. Switzerland has great high school graduation rates, with almost all students (97 percent) finishing high school, and low youth unemployment rates at about eight percent.

1.6 Need And Justification

Foundational Literacy and numeracy is 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 with both these aspects will essentially do well when they will be required to connect new knowledge with already existing knowledge. The present study is based on the mandate of the NEP 2020 which suggests primary focus on foundational literacy and numeracy. The NEP 2020 clearly states the following in Part I (point number 2 and 4) of the document-

2. Foundational Literacy and Numeracy: An Urgent & 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 foundational literacy and numeracy, i.e., the ability to read and comprehend basic text and the ability to carry out basic addition and subtraction with Indian numerals.

2.4. On the curricular side, there will be an increased focus on foundational literacy and numeracy - 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 individualize and ensure each student's learning. Specific hours daily - and regular events over the year-on activities 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 foundational literacy and numeracy

4. Curriculum and Pedagogy in Schools National Textbooks with Local Content and Flavour States will prepare their own curricula (which may be based on the 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 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

1.7 Objectives Of The Study

The objectives of the study are-

1. To study the physical features of the textbooks of Foundational Literacy and Numeracy prepared by State Council of Educational Research and Training, Pune, Maharashtra.
2. To analyse the Content Appropriateness of the textbooks as per National Education Policy 2020 and NIPUN Bharat guidelines.
3. To study the pedagogical approaches utilized for transaction of content in the textbooks.

1.8 Research Questions

1. What are the physical features of the textbooks of Foundational Literacy and Numeracy developed by the State Council of Educational Research and Training, Pune, Maharashtra?
2. How does the content of the textbooks align with the guidelines set by National Education Policy 2020 and NIPUN Bharat in terms of appropriateness?
3. What pedagogical approaches are used in the transaction of content in the textbooks, and how effective are they in facilitating student learning?

1.9 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 utilized by all states when developing their textbooks. However, due to time and budgetary constraints the study was delimited on different aspects as follows-

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

Chapter 2- Literature Review

2.0 Introduction

A literature review is a crucial step in the research process as it provides a comprehensive overview of the existing research on a particular topic. It plays a vital role in guiding the researcher in understanding the background and context of the research and in identifying the key theories, concepts, and empirical findings related to the topic. It also helps the researcher to identify gaps in the existing research and to identify areas where further research is needed. Additionally, a literature review enables the researcher to understand the strengths and limitations of existing research methods and to identify new and innovative methods that can be used in their own research. Furthermore, it allows the researcher to identify potential sources of bias and confounding factors in existing research and to take these into account in their own research design. It also helps the researcher to identify potential ethical considerations related to the research topic and to ensure that their own research adheres to ethical standards. In summary, a literature review is an essential step in the research process as it provides the researcher with the necessary background and context to conduct high-quality and meaningful research.

Textbook analysis is the process of evaluating and interpreting the content and structure of educational textbooks. This process involves critically examining the content, layout, and design of the textbook, as well as its alignment with national curriculum standards and guidelines. The goal of textbook analysis is to assess the quality and effectiveness of the textbook as an educational tool. This can be done by analyzing the textbook's organization, the language and style used, the illustrations and visual aids, the layout and design, and the accuracy and relevance of the information presented. Additionally, textbook analysis can also include evaluating the textbook's alignment with national curriculum standards and guidelines, such as the National Education Policy (NEP) or the National Curriculum Framework (NCF). The analysis can also include assessing if the textbook is inclusive and culturally responsive. Textbook analysis is an important step in evaluating the effectiveness of educational materials, and can help educators and policymakers make informed decisions about the selection and use of textbooks in the classroom.

Textbooks for foundational literacy and numeracy are educational materials designed to support the development of basic reading and math skills in young students. These textbooks are

typically used in primary and pre-primary schools and are designed to be age-appropriate and engaging for young learners. They cover a wide range of subjects including language, mathematics, and other activities that support literacy and numeracy development. The content of these textbooks is often presented in a variety of formats, including text, illustrations, and photographs, to make it more engaging and interactive for young children. They are also designed to be colorful, with illustrations that are large and easy for children to see and understand. Additionally, the language used in these textbooks is simple and easy to understand, making it accessible for young children who may not yet have a strong grasp of reading and writing. These textbooks are also designed to align with national curriculum standards and guidelines such as the National Education Policy (NEP) and National Curriculum Framework (NCF) to ensure that they are effective in promoting foundational literacy and numeracy skills among students.

2.1 Review of Related Previous Studies

1. A study of the significance of vocationalization of education and skill development in India, with particular reference to the state of Maharashtra, was undertaken by Majumdar. S. Swati in 2012. The study's objectives were to provide a plan of action for establishing a link from the schoolroom to the higher VET sector and a single mechanism for regulating VET. The major goals were to look into the current set of regulations for VET and the delivery of VET education to students in India, with a focus on the state of Maharashtra, as well as the government policies established for the advancement of VET education in India. The investigation used stratified random sampling to choose the sample from the ITI/ITC institutions in the state of Maharashtra. A sampling technique was used to gather the data, with 2818 students from 20 ITI and 40 VJC having 10% of girls and 90% of guys. According to the investigator, there should be a single statutory agency for all VET programmes, as well as an independent quality council, and a credit system should be adopted for student evaluation and transfer.
2. The challenges which the vocational education stream confronts are explored in Chakravarty, D., and Gupta's paper from 2020, "Current and Emerging Challenges in Vocational Education," alongside recommendations for improving the quality of vocational education offered in India. A National Policy for Skill Development and Entrepreneurship was formulated in 2015 with the objective of training 40 crore citizens

by 2022 and implementing the system through the establishment of various agencies, such as NSQF, SSCs, and NSDC. There are several issues with vocational education, like the fact that it doesn't inspire aspiration in the community, parents, or students. There are numerous reasons for this, along with social and economic ones, government initiatives that don't adequately cover the country and integrate with the formal education system, and inadequacies in the school's infrastructure, including its trainers, workshops, and industry connections, which make it challenging to provide high-quality vocational education. Vocational education is essential for boosting youth employability and skills and for producing qualified candidates for the job market. The community and parents need to be educated about the value of vocational education and the marketability of the skills that will be taught in schools. To achieve the desired level of vocational education, schools should actively participate in this programme and offer the necessary infrastructure in addition to instructors.

3. In his paper titled "Significance of Vocational Education in India," Jeyaraman, A.K. (2020), claimed that vocational education strengthens a nation's employment and economy and that India has come a long way in implementing and improving vocational education. In the population between the ages of 15 and 29 years, only 10% of people obtained vocational training, of which 2% received formal training and the remaining 8% non-formal training, according to the NSSO data. Only 3% of those with formal training are in employment. Despite the success of the vocational training offered by ITIS, the majority of private institutions offering such training are not approved by the government. The high secondary school dropout rate is a challenge for the Indian VET system. (b) Typically, it is offered at the senior secondary level; there is little involvement from business and private organizations. There are very few TVET institutions, inadequately prepared faculty are not readily available, there are no possibilities for ongoing skill development, and the current system is not responsive to these issues. Institutions for vocational education that are structurally stiff and out of date. To fully benefit from vocational education, India has to modernize key TVET components to make them accessible, flexible, relevant, and creative. The Government of India has designed the "National Vocational Qualification Framework," an international

comparability of qualifications framework, to encourage and promote reforms and to facilitate nationally standardized and approved qualifications for skill development.

4. Prabavathy (2020) analyzed and explored the efficacy of virtual manipulatives in enhancing basic arithmetic skills among primary school students with dyscalculia. The study was carried out with 32 students with symptoms of dyscalculia in a rural district of Tamilnadu. The purposive sampling design was adopted. Virtual manipulatives concerning various learning modalities were designed based on the diagnostic test. The intervention was provided for the students for two months. The findings of the study revealed that virtual manipulatives enhanced the basic arithmetic skills of children with dyscalculia and also enhanced their motivation to learn Mathematics.
5. Chacko and Vidhukumar (2020) found the prevalence of specific learning disabilities and its determinants among the school going children in Ernakulam district, Kerala. Children from Grade 4 to Grade 7 participated in the study and the sample was selected through multistage stratified cluster sampling. For screening and confirmation of the diagnosis of specific learning disabilities, NIMHANS index for Specific Learning Disabilities and Malin's Intelligence Scale for Indian Children (MISIC) were used by the researcher. The results revealed that prevalence of Specific Learning Disabilities was 16.49%, out of which the prevalence of learning disabilities in mathematics was 9.93%.
6. Jogi and Kikas (2016) conducted a longitudinal study on 864 first and third grade students from thirty-three schools in Estonia. The research was based on the interrelations of both calculation and problem-solving skills as well as task-persistent behaviour. Secondly the study also aimed to study the effect of non-verbal intelligence, linguistic abilities and executive functioning on mathematics skills and task persistence. The data collection was done twice, where the executive functioning, linguistic abilities and the non-verbal intelligence was assessed in grade I. The results clearly showed that solving complex tasks needs executive functioning and task persistence, and there was a connection of mathematics skills and self-regulation in grade I and III. The researchers also underlined the use of instructional strategies to further these connections
7. Gupta and Venkatesan (2014) empirically reviewed the literature on executive function in context of learning disability in children. The study highlights how the children with above-average to average intelligence inspite, of all the available resources perform

poorly in one of the learning areas exhibit a risk in executive functioning. The study is to primarily understand the list of studies in the Indian context and highly recommend long-term executive function interventions/training to improve the children with Learning disabilities.

8. Morsanyi et al. (2018) aimed to estimate the prevalence rate of Specific Learning Disability in Mathematics (SLDM). The performance of 2421 primary school children was assessed on standardized tests of mathematics. 6% of total sample had severe difficulties with mathematics and after applying the exclusion criteria, 5.7% were identified as having Specific Learning Disabilities in Mathematics (SLDM).
9. Nicolielo Carrilho and Hage (2017) studied the effect of metacognitive reading strategies in children with learning disabilities and determined whether there is a relationship between their use and text comprehension. The sample comprised of 30 children, aged between 8 to 12 years, of both genders, divided into experimental group (EG) of 15 children with learning disabilities and control group (CG) of 15 children without learning disability. Results showed that the children with learning disabilities showed deficits in the use of metacognitive reading strategies when compared to the children without learning disabilities. The results also suggested that if the performance in reading strategies was better, then textual comprehension also became better and vice versa and metacognitive reading skills contributed to reading comprehension.
10. Ogunsola (2016) investigated the effects of metacognition and direct instruction on spelling abilities of pupils with learning disabilities. Pre- test post-test control group quasi experimental design was adopted. 60 primary pupils with spelling disabilities were randomly selected from three public primary schools. The sampled schools were divided into metacognition direct instruction group and control group. Four tools were utilized: Pupil Rating Scale, Right Word Recognition, Pupil's English Note Book and Test of Verbal Ability. Those who met the inclusion criteria were treated through metacognitive instructions, while those in the control group received lessons through conventional methods. It was found that participants who were exposed to direct instruction had the highest mean score and this was followed by metacognition, while the control group obtained least mean score.

11. OPRE Network of Infant Toddler Researches (2016) conducted a study on Developmental foundations of school readiness for infants and toddlers. The study concluded that infancy /toddlerhood is the time when foundations of school readiness begin –adults who interact with infants and toddlers must be aware of the opportunities that exist to support these early developing skills and abilities in young children. All the areas of the domains are interrelated and the development of one domain influences the development of other domains.

Chapter 3- Design and Methodology of the Study

3.0 Introduction

Creswell (2008, 46) points out that quantitative research can include a qualitative element and vice versa. Creswell and Plano Clark (2007) set out distinct Research Design for mixed methods research. Their rationale is that ‘mixed methods research provides trends that offset the weaknesses of both quantitative and qualitative research’ that it ‘provides more comprehensive evidence for studying a research problem than either quantitative or qualitative research alone’ and that it ‘helps answer questions that cannot be answered by qualitative or quantitative approaches alone’ (Creswell and Plano Clark, 9)

However they are very specific about the research designing permitted within mixed methods research, stating that ‘rigorous high quality studies result from well designed research procedures’ (Creswell and Plano Clark, 73) and that simply using quantitative and qualitative method without mixing the data itself is simply a collection of multiple methods.

Whether seen as a mixed method design, or a primarily quantitative or qualitative design which includes an element of the other type of research, it is clear that quantitative and qualitative research can complement each other.

In this research quantitative investigation will help to provide a reasonably broad understanding of teachers’ perceptions. However, in order to gain a deeper understanding of individual perception and to avoid simplistic over generalizations or the assumption of homogeneity, qualitative research will also Be utilized. However, in this research it facilitates both depth and breadth of understanding

3.1 The Research Approach

The emphasis of this research is on gaining insight into teachers' experiences and perceptions of how a text book should be like. To ascertain more about the range of perspectives, a questionnaire was given out to teachers with different questions (see appendices).

Questionnaires are an efficient and effective means of achieving an insight into a number of 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 which had developed from reading relevant literature relating to goals and identity.

They dealt with the importance of physical appearance, content appropriateness and pedagogical processes in the development of text books. 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.

3.2 Sample

The target population consisted of teachers teaching at the Foundational Stage in the rural and urban schools across the state of Maharashtra. Data on various dimensions of textbook analysis was collected from 2665 teachers teaching at the Foundational Stage.

3.3 Tools Employed in the Study

A three day workshop for development of tools for the study was organised in the Institute. Academicians and researchers were invited to delve into and help in the development of the tools. After thorough discussions a four point questionnaire was developed based on important dimensions of textbook development and analysis which are as follows-

1. Physical appearance of the textbook
2. Content appropriateness
3. Pedagogical approaches

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.

3.4 Data Collection Procedure

For analysing the textbooks developed for the Foundational stage by MSCERT, Pune; a questionnaire catering to various dimensions like 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. 2665 responses were received from teachers teaching at the Foundational Stage from across the state of Maharashtra.

3.5 Scoring, Tabulation and Analysis of the Data

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

Chapter 4- Data Analysis

4.0 Introduction

The first chapter deals with the introduction, background, need and justification, objectives and research questions of the study. Review of related literature has been presented in the second chapter. In the third chapter, the methodology, sample, tools, procedure of data collection and the statistical techniques to be employed for the analysis of data are presented. The analysis of results and its interpretations are presented under different headings in this chapter.

4.1 Location of the School

Table 4.1 Location of the School

S.N.	Regions	Response	Percentage
1.	Rural	272	10.21
2.	Urban	2393	89.79
	Total	2665	

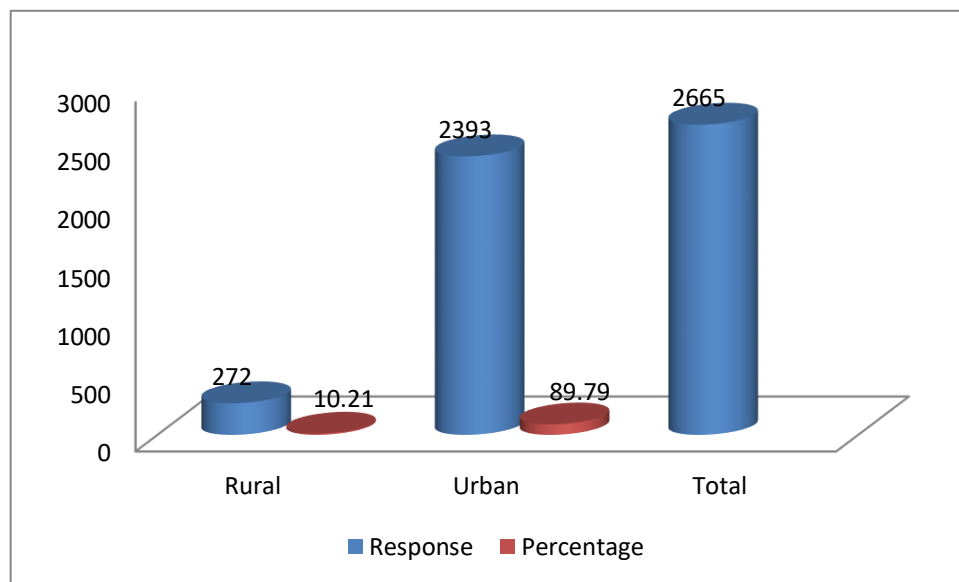


Figure 4.1: Location of the School

From the result of table 4.1 and the corresponding figure 4.1 it can be seen that 272 (10.2 percent) schools are in the rural region and 2393 (89.79 percent) schools are in the urban region of Maharashtra, from where data has been collected for the present research.

4.2: Region of Teaching

Table 4.2: Region of Teaching

City name	Konkan	Pune	Nasik	Marathwada	Vidharabh
Number	550	126	1056	203	730
Percentage	20.6	4.7	39.6	7.6	27.4

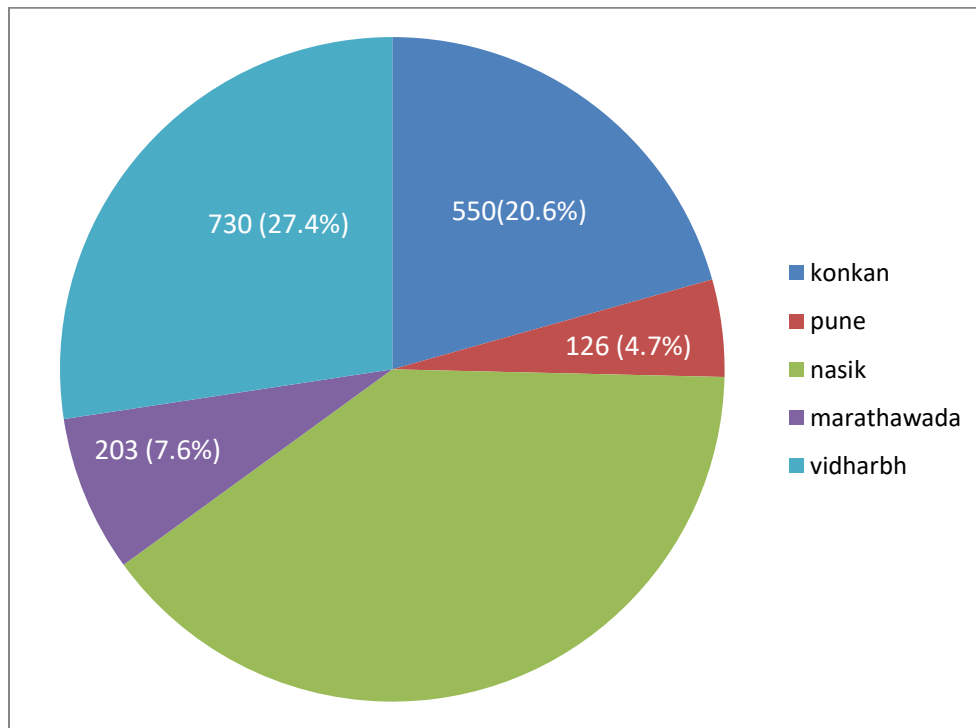


Figure 4.2: Region of the Teaching

From the results of table 4.2 and the corresponding figure 4.2 it can be seen that 2665 teachers have responded from 5 regions of Maharashtra viz. 550 (20.6 percent) from Konkan, 126 (4.7 %) from Pune, 1056 (39.6 percent) from Nasik, 203 (7.6 percent) from Marathawada and 730 (27.4 percent) from Vidharbh.

4.3: Educational Qualification of Teachers

Table 4.3: Educational Qualification of Teachers

S.N	Qualification	No. of teachers	Percentage
1	BA	1806	67.8
2	B.Sc	70	2.6
3	B.Ed	453	17
4	M.Ed	43	1.6
5	MA	657	24.7
6	M.Sc	9	0.3

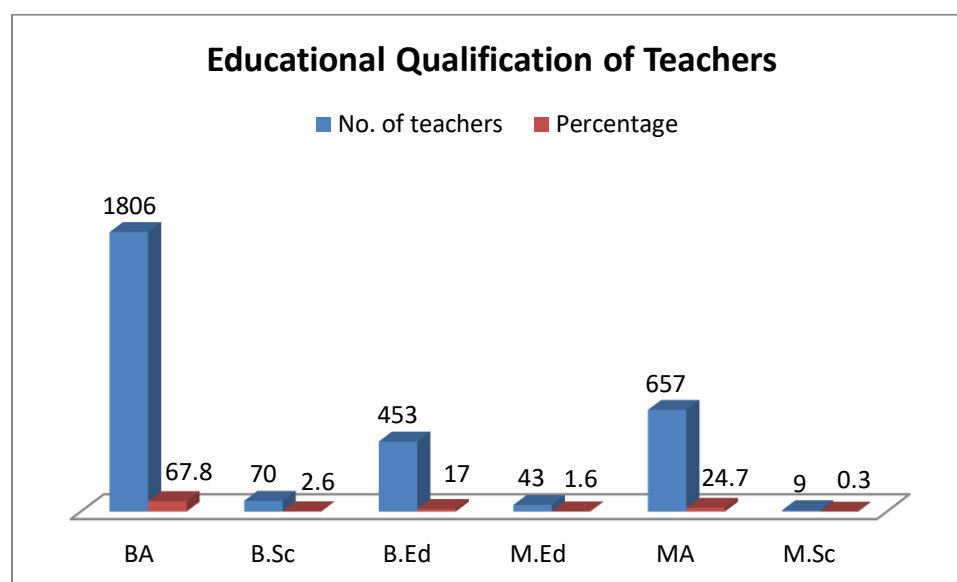


Figure 4.3: Region of the Teaching

From the results of table 4.3 and the corresponding figure 4.3 it can be seen that 1806 (67.8 percent) teachers have B.A as their educational qualifications, 70 (2.6 percent) have B.Sc., 453 (17 percent) have B.Ed., 43 (1.6 percent) have M.Ed., 657 (24.7 percent) have M.A and 9 (0.3 percent) teachers have M.Sc. respectively.

4.4 Physical Features of the textbook

This section relates to analysis and interpretation of data pertaining to objective number 1 of the study that reads, ‘To study the physical features of the textbooks of Foundational Literacy and Numeracy prepared by State Council of Educational Research and Training, Pune, Maharashtra’, and seeks to answer the research question, ‘What are the physical features of the textbooks of Foundational Literacy and Numeracy developed by the State Council of Educational Research and Training, Pune, Maharashtra?’. The data for objective 1 was collected through a questionnaire developed on a five point scale by the investigators. The data collected is presented under different sections.

4.4.1: Percentage of teachers who said that the cover of the textbook is attractive

Table 4.4.1: Percentage of teachers who said that the cover of the textbook is attractive

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1476	1160	4	25
2.	55.38	43.53	0.00	0.94

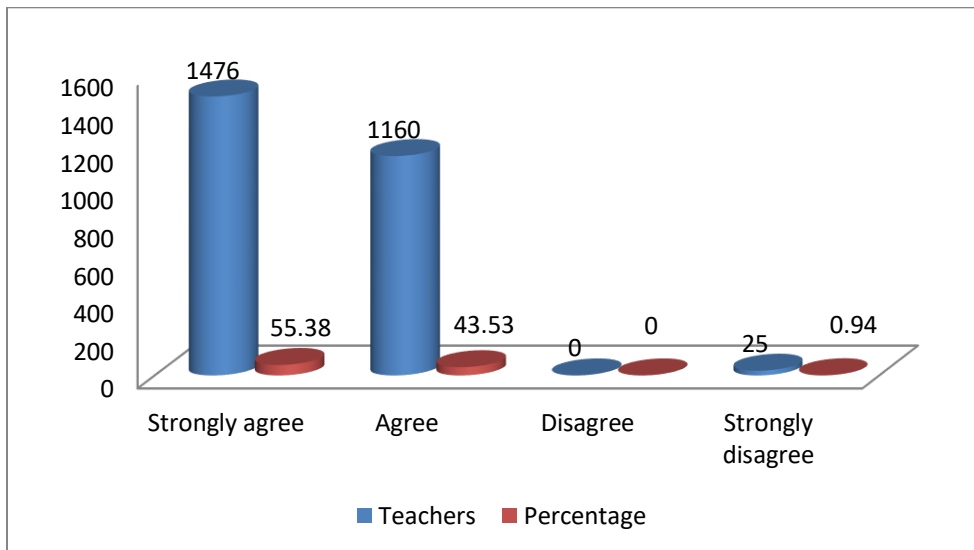


Figure 4.4.1: Percentage of teachers who said that the cover of the textbook is attractive

From the results of table 4.4.1 and the corresponding figure 4.4.1 it can be seen that 1476 (55.38%) teachers strongly agree, 1160 (43.53%) teachers agree, 4 (0.15%) teachers disagree while 25 (0.94%) teachers strongly disagree with the question that the cover of the textbook is attractive.

4.4.2 Percentage of teachers who said that the cover page of the book reflects subject matter

Table 4.4.2: Percentage of teachers who said that the cover page of the book reflects subject matter

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1313	1309	20	23
2.	49.27	49.12	0.75	0.86

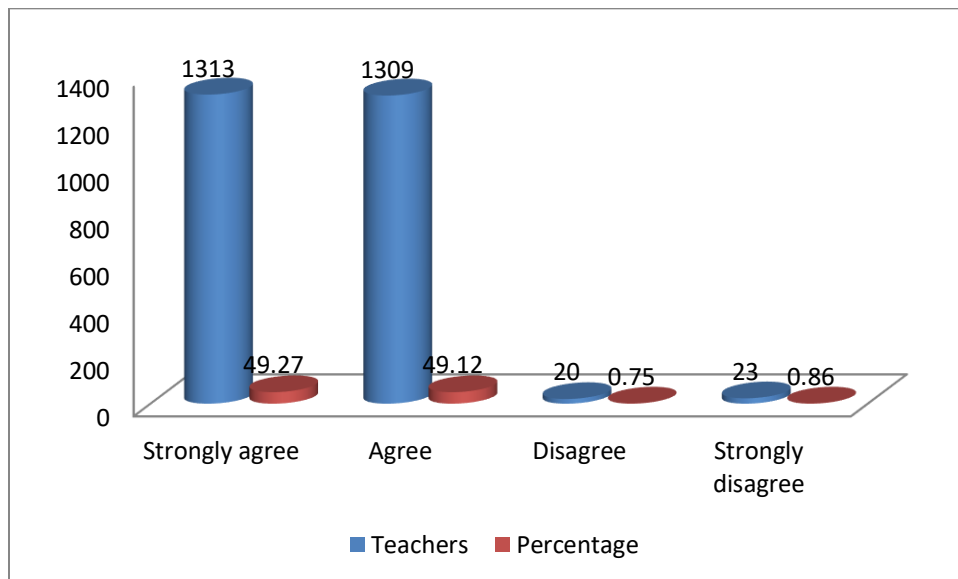


Figure 4.4.2: Percentage of teachers who said that the cover page of the book reflects subject matter

From the results of table 4.4.2 and the corresponding figure 4.4.2 it can be seen that 1313 (49.27%) teachers strongly agree, 1309 (49.12%) teachers agree and 20 (0.75%) teachers disagree while 23(0.86%) of the teachers strongly disagree with the question that the cover page of the book reflects the subject matter.

4.4.3 Percentage of teachers who said that the printing of the book is legible

Table 4.4.3: Percentage of teachers who said that the printing of the book is legible

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1445	1161	34	25
2.	54.22	43.56	1.28	0.94

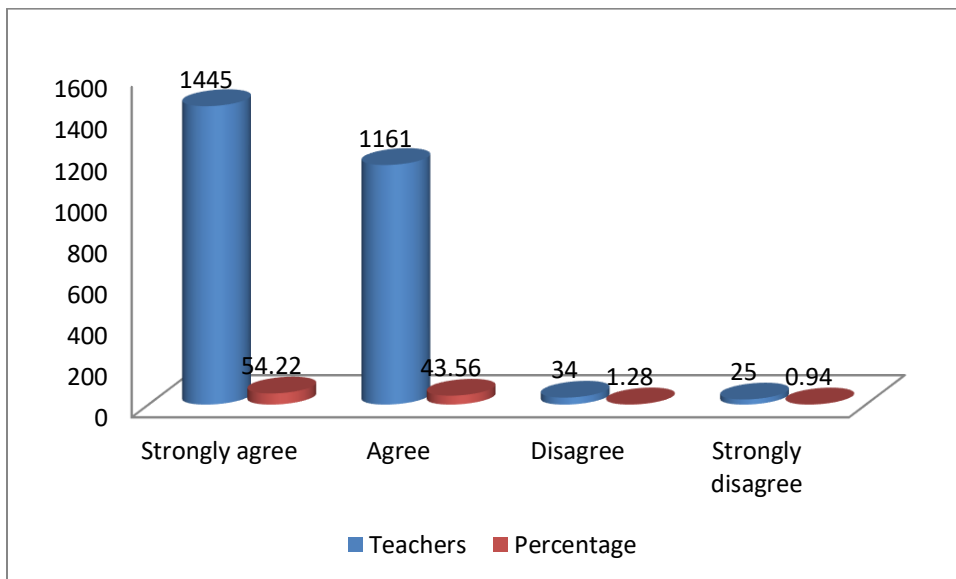


Figure 4.4.3: Percentage of teachers who said that the printing of the book is legible

From the results of table 4.4.3 and the corresponding figure 4.4.3 it can be seen that 1445 (54.22%) teachers strongly agree, 1161 (43.56%) teachers agree, 34 (1.28%) teachers disagree and 25 (0.94%) teachers strongly disagree with the question that the printing of the book is legible.

disagree and 25 (0.94%) teachers strongly disagree to the question that printing of the book is legible.

4.4.4: Percentage of teachers who said that the font size of the book is suitable to the class and age

Table 4.4.4: Percentage of teachers who said that the font size of the book is suitable to the class and age

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1493	1113	28	31
2.	56.02	41.76	1.05	1.16

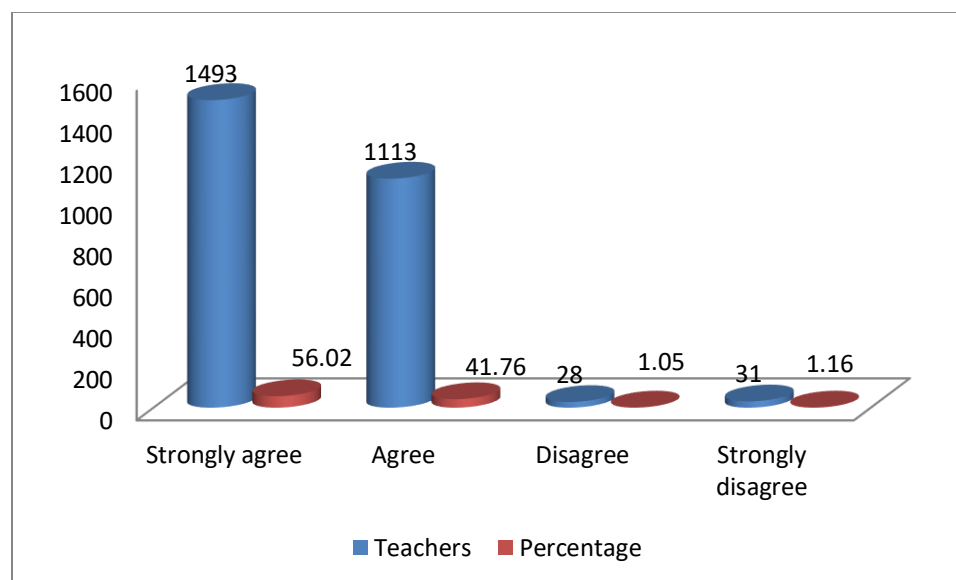


Figure 4.4.4: Percentage of teachers who said that the font size of the book is suitable to the class and age

From the results of table 4.4.4 and the corresponding figure 4.4.4 it can be seen that 1493 (56.02%) teachers strongly agree, 1113 (41.76%) teachers agree, 28 (1.05%) teachers disagree,

while 31 (1.16%) teachers strongly disagree with the question that the font size of the book is suitable for the class and age.

4.4.5: Percentage of teachers who said that the textbook has a complete and detailed table of contents

Table 4.4.5: Percentage of teachers who said that the textbook has a complete and detailed table of contents

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1212	1389	41	23
2.	45.48	52.12	1.54	0.86

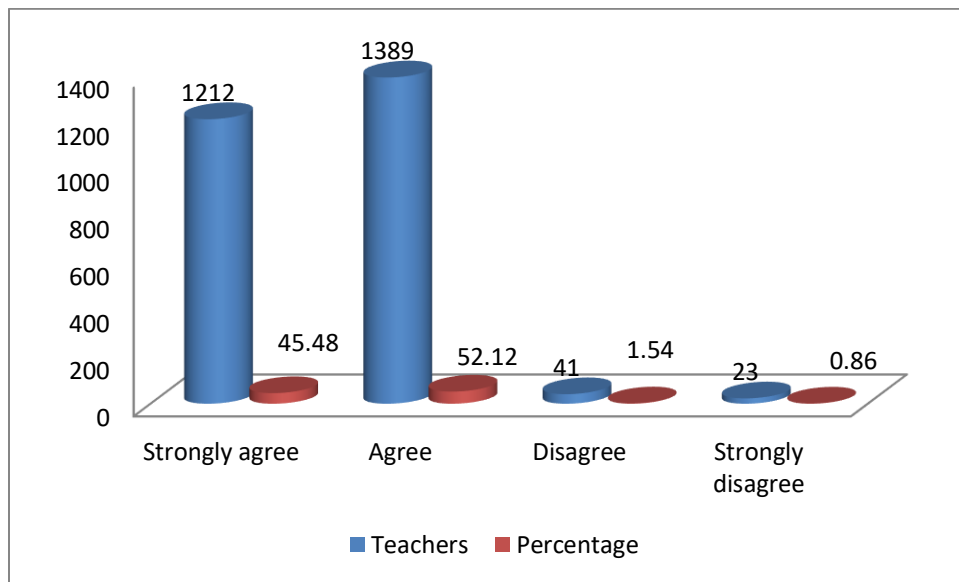


Figure 4.4.5: Percentage of teachers who said that the textbook has a complete and detailed table of contents

From the results of table 4.4.5 and the corresponding figure 4.4.5 it can be seen that 1212 (45.48%) teachers strongly agree, 1389 (52.12%) teachers agree and 41 (1.54%) teachers

disagree, while 23 (0.86%) teachers strongly disagree to the question that textbook has a complete and detailed table of contents.

4.4.6: Percentage of teachers who said that the main heading and sub heading in the textbook are well organized

Table 4.4.6: Percentage of teachers who said that the main heading and sub heading in the textbook are well organized

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1364	1254	23	24
2.	51.18	47.05	0.86	0.90

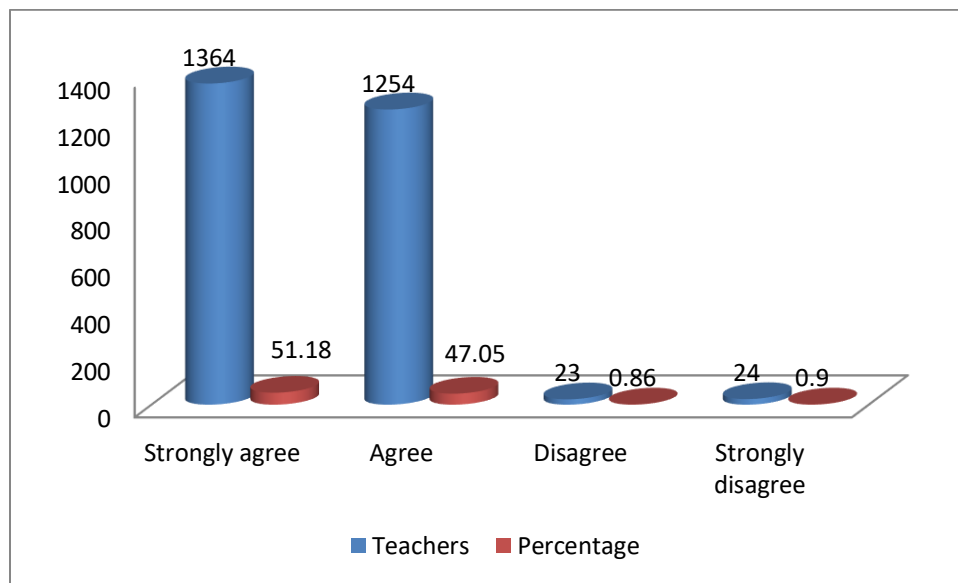


Figure 4.4.6: Percentage of teachers who said that the main heading and sub heading in the textbook are well organized

From the results of table 4.4.6 and the corresponding figure 4.4.6 it can be seen that 1364 (51.18%) teachers strongly agree, 1254 (47.05%) teachers agree and 23 (0.86%) teachers disagree, while 24 (0.90%) teachers strongly disagree to the question that the main headings and subheadings in the textbook are well organized.

4.4.7: Percentage of teachers who said that the instructions in the textbook help to grasp the content well

Table 4.4.7: Percentage of teachers who said that the instructions in the textbook help to grasp the content well

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1307	1301	28	29
2.	49.04	48.82	1.05	1.09

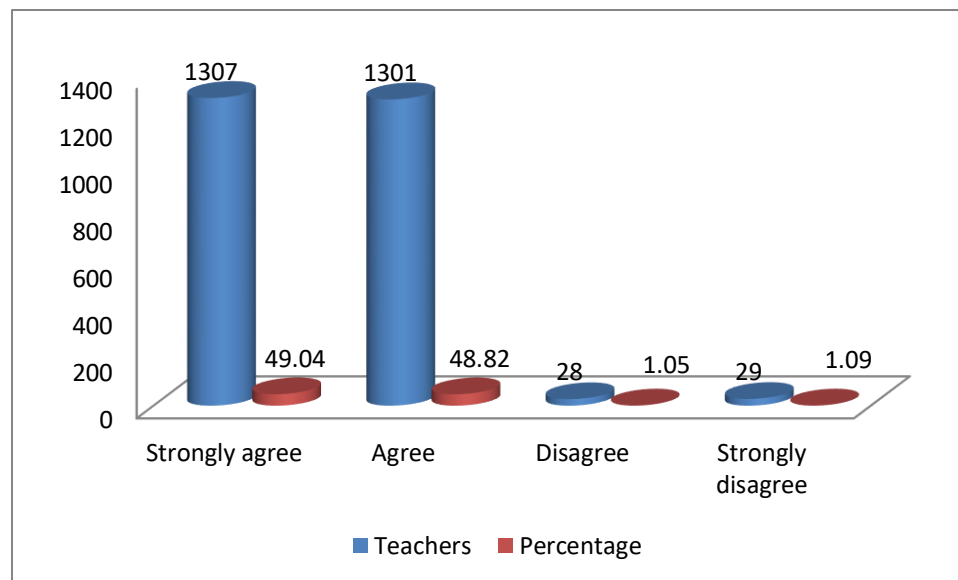


Figure 4.4.7: Percentage of teachers who said that the instructions in the textbook help to grasp the content well

From the results of table 4.4.7 and the corresponding figure 4.4.7 it can be seen that 1307 (49.04%) teachers strongly agree, 1301 (48.82%) teachers agree and 28 (1.05%) teachers disagree, while 29 (1.09%) teachers strongly disagree to the question that instructions in the textbook help to grasp the content well.

4.5 Content Appropriateness

This section relates to analysis and interpretation of data pertaining to objective number 2 of the study that 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 2 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 under different sections.

A. Language

4.5.1 To what extent is the textbook appropriate according to the content

4.5.1.1 Percentage of teachers who said that the content is organized according to the students’ language needs

Table 4.5.1.1 Percentage of teachers who said that the content is organized according to the students’ language needs

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1172	1440	36	17
2.	43.98	54.03	1.35	0.64

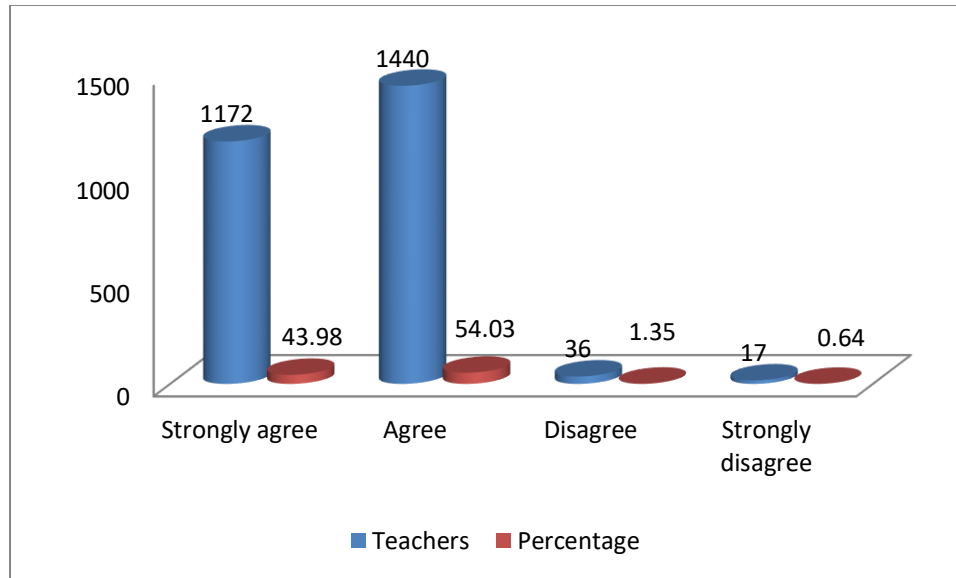


Figure 4.5.1.1 Percentage of teachers who said that the content is organized according to the students' language needs

From the results of table 4.5.1.1 and the corresponding figure 4.5.1.1 it can be seen that 1172 (43.98%) teachers strongly agree, 1440 (54.03%) teachers agree and 36 (1.35%) teachers disagree, while 17 (1.64%) teachers strongly disagree to the question that the content is organized according to the students language needs

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

Table 4.5.1.2 Percentage of teachers who said that the content is suitable and relevant as per age and class of students.

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1165	1429	55	16
2.	43.71	53.62	2.06	0.60

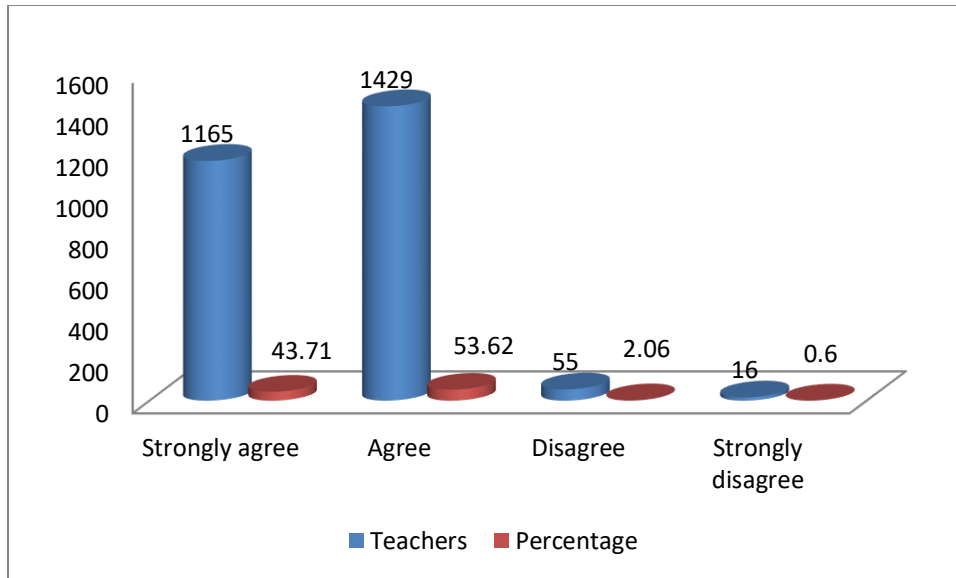


Figure 4.5.1.2 Percentage of teachers who said that the content is suitable and relevant as per age and class of students

From the results of table 4.5.1.2 and the corresponding figure 4.5.1.2 it can be seen that 1165 (43.71%) teachers strongly agree, 1429 (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 (0.6%) teachers strongly disagree with the question.

4.5.1.3 Percentage of teachers who said that the topics of units are interesting for students

Table 4.5.1.3 Percentage of teachers who said that the topics of units are interesting for students

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1146	1456	46	17
2.	43.00	54.63	1.73	0.64

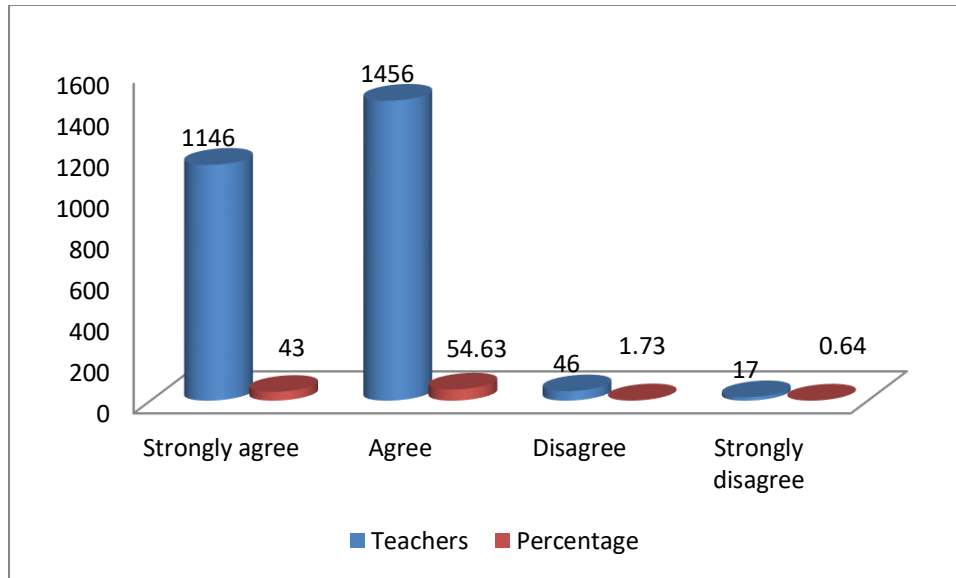


Figure 4.5.1.3 Percentage of teachers who said that the topics of units are interesting for students

From the results of table 4.5.1.3 and the corresponding figure 4.5.1.3, it can be seen that 1146 (43%) teachers strongly agree, 1456 (54.63%) teachers agree and 46 (1.73%) teachers disagree with the question that the topics of units are interesting for students, while 17(0.64%) teachers strongly disagree.

4.5.2 To what extent is the textbook effective according to the four language skills (listening, speaking, reading and writing)

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

Table 4.5.2.1 Percentage of teachers who said that the listening activity can help students to develop speaking skills

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1239	1384	29	13
2.	46.49	51.93	1.09	0.49

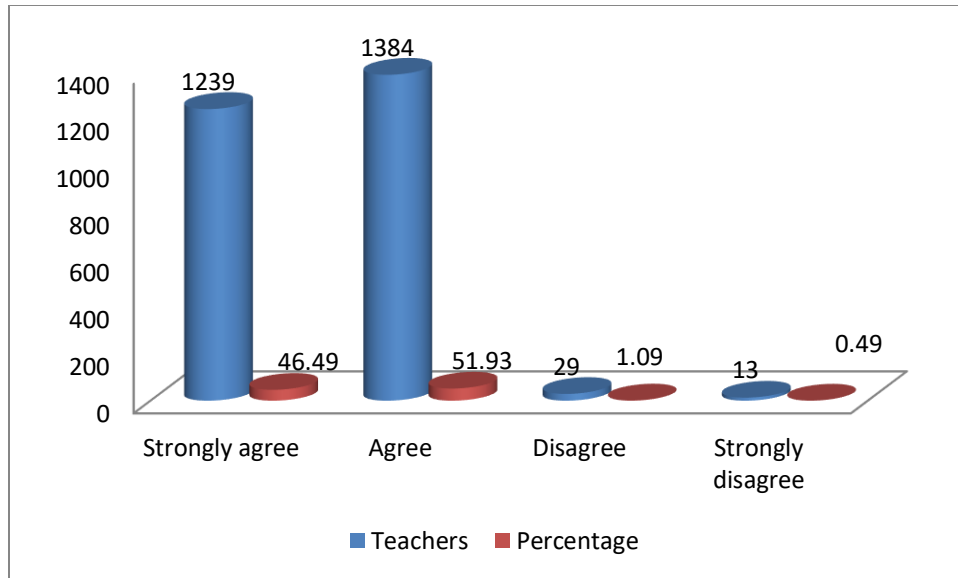


Figure 4.5.2.1 Percentage of teachers who said that the listening activity can help students to develop speaking skills

From the results of table 4.5.2.1 and the corresponding figure 4.5.2.1 it can be seen that 1239(46.49%) teachers strongly agree, 1384(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.

4.5.2.2 Percentage of teachers who said that the Listening materials are well-recorded

Table 4.5.2.2 Percentage of teachers who said that the Listening materials are well-recorded

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	994	1562	91	18
2.	37.30	58.61	3.41	0.68

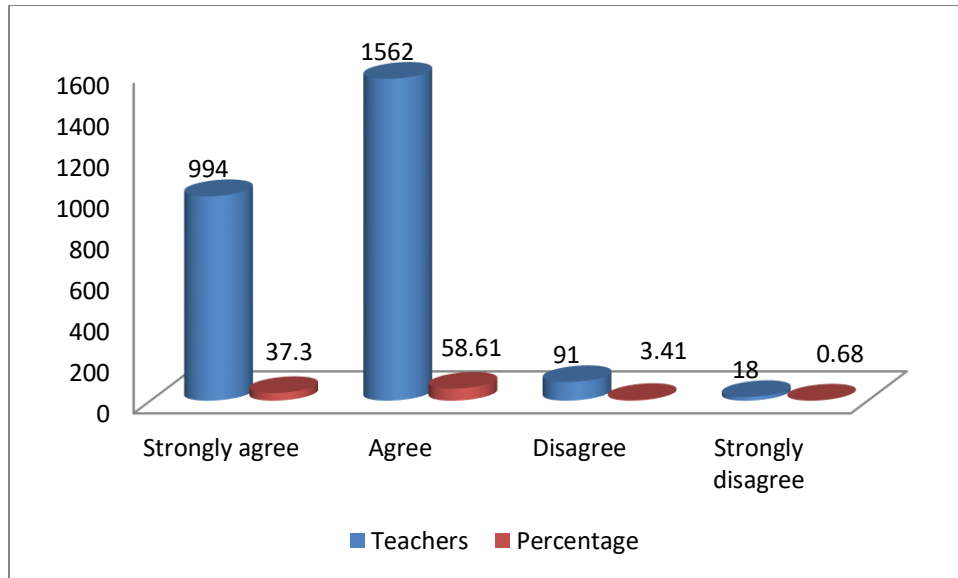


Figure 4.5.2.2 Percentage of teachers who said that the Listening materials are well-recorded

From the results of table 4.5.2.2 and the corresponding figure 4.5.2.2 it can be seen that 994 (37.3%) teachers strongly agree, 1562 (58.61%) teachers agree and 91 (3.14%) teachers disagree to the question that listening materials are well-recorded. While 18 (0.68%) teachers strongly disagree to the question that Listening materials are well-recorded.

4.5.2.2 Percentage of teachers who said that the Listening materials are well-recorded

Table 4.5.2.2 Percentage of teachers who said that the Listening materials are well-recorded

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	998	1575	71	21
2.	37.45	59.10	2.66	0.79

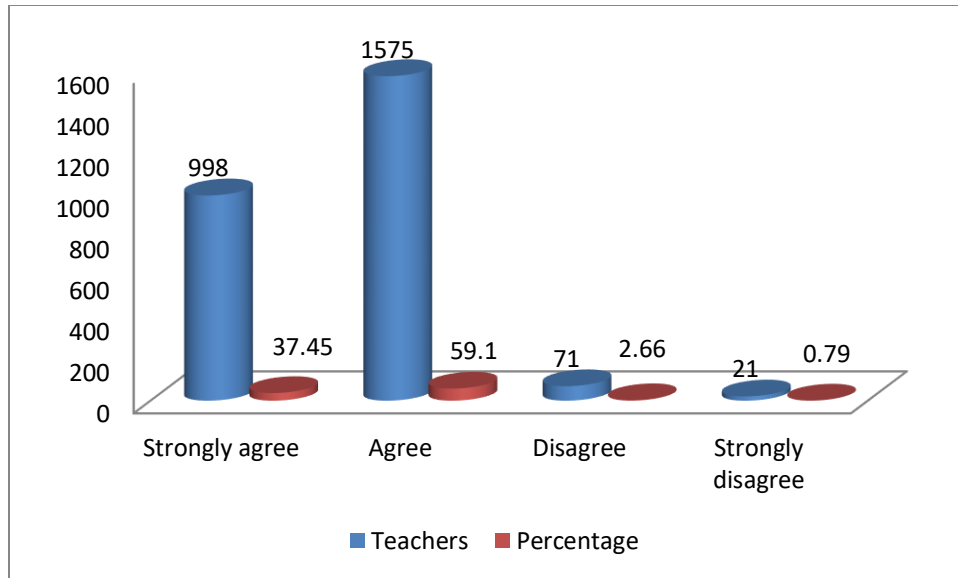


Figure 4.5.2.2 Percentage of teachers who said that the Listening materials are well-recorded

From the results of table 4.5.2.2 and the corresponding figure 4.5.2.2 it can be seen that 998 (37.45%) teachers strongly agree, 1575(59.1%) teachers agree and 71 (2.66%) teachers disagree to the question that the listening materials use Standard English language. While 21(0.79%) teachers strongly disagree to the question that the listening materials use standard English language

4.5.2.3 Percentage of teachers who said that the textbook materials offer a great range of listening texts

Table 4.5.2.3 Percentage of teachers who said that the textbook materials offer a great range of listening texts

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	959	1593	96	17
2.	35.98	59.77	3.60	0.64

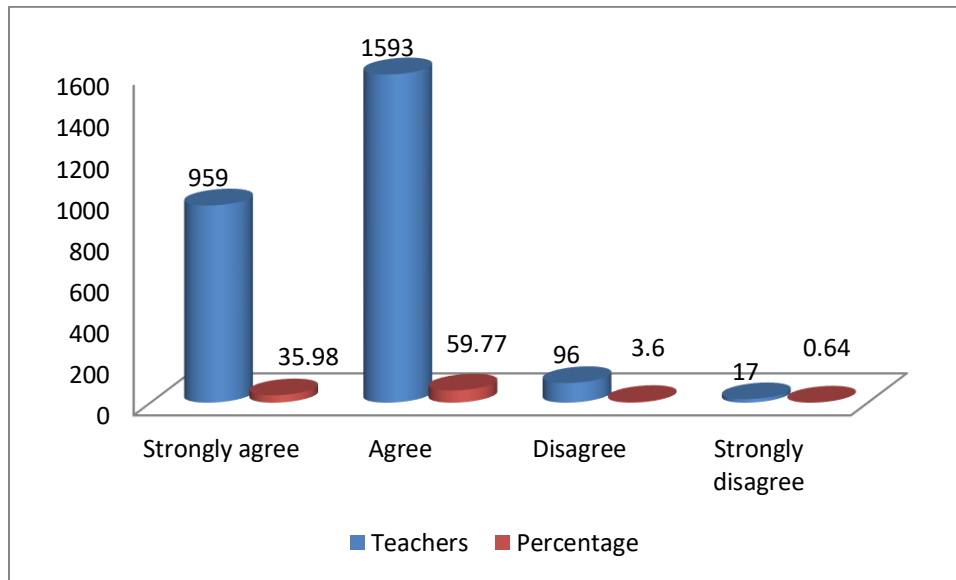


Figure 4.5.2.3 Percentage of teachers who said that the textbook materials offer a great range of listening texts

From the results of table 4.5.2.3 and the corresponding figure 4.5.2.3 it can be seen that 959(35.98%) teachers strongly agree, 1593(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 to the question that the textbook materials offer a great range of listening texts.

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

Table 4.5.2.4 Percentage of teachers who said that the Textbook activities can help students to improve their listening skills

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1093	1515	41	16
2.	41.01	56.85	1.54	0.60

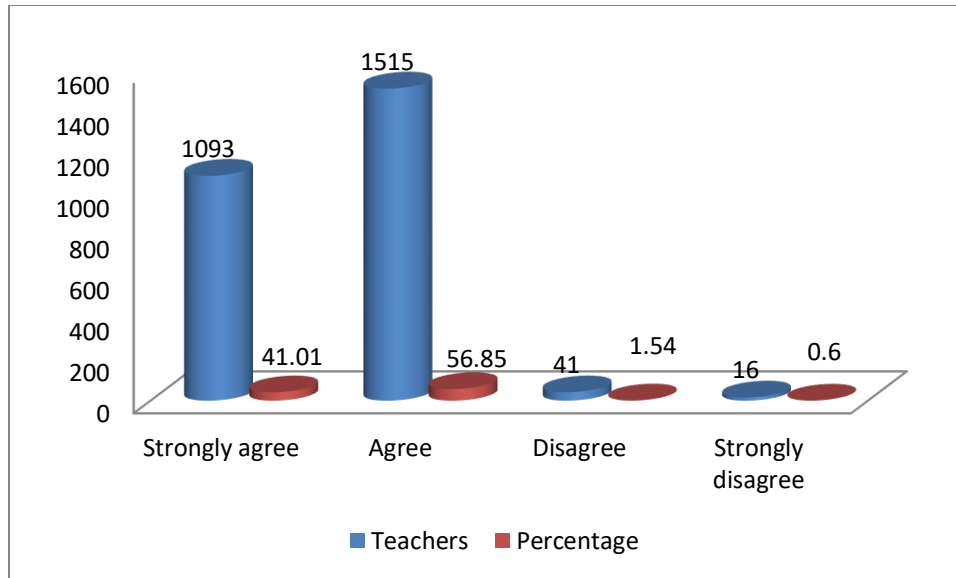


Figure 4.5.2.4 Percentage of teachers who said that the Textbook activities can help students to improve their listening skills

From the results of table 4.5.2.4 and the corresponding figure 4.5.2.4 it can be seen that 1093 teachers strongly agree, 1515(56.85%) teachers agree and 41 (1.54%) teachers disagree to the question that Textbook activities can help students to improve their listening skills. While 16(0.6%) teachers strongly disagree to the question that Textbook activities can help students to improve their listening skills.

4.5.2.5 Percentage of teachers who said that The tasks/activities (e.g. dialogues, role-plays, etc). are appropriate for improving students’ speaking skills

Table 4.5.2.5 Percentage of teachers who said that The tasks/activities (e.g. dialogues, role-plays, etc). are appropriate for improving students’ speaking skills

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1073	1531	46	15
2.	40.26	57.45	1.73	0.56

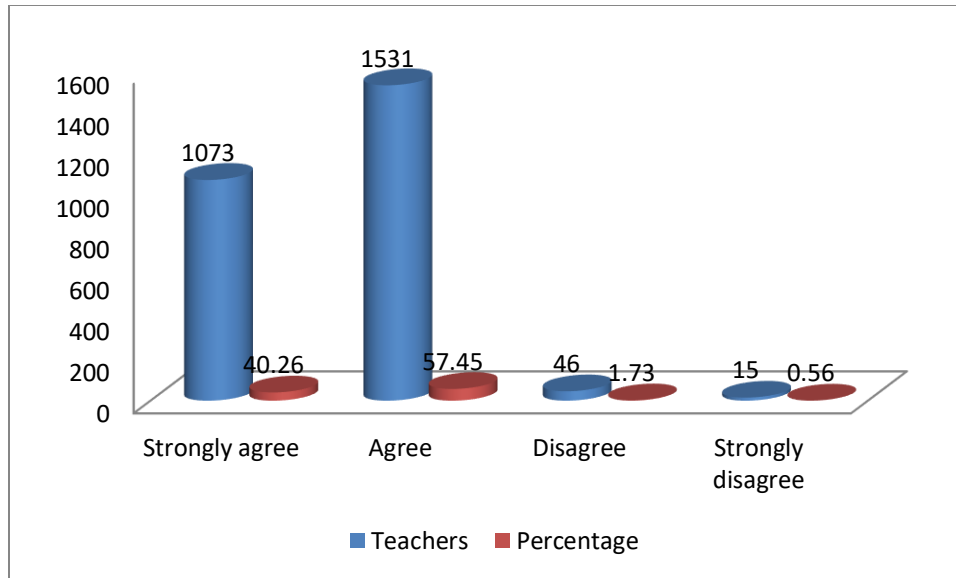


Figure 4.5.2.5 Percentage of teachers who said that The tasks/activities (e.g. dialogues, role-plays, etc). are appropriate for improving students' speaking skills

From the results of table 4.5.2.5 and the corresponding figure 4.5.2.5 it can be seen that 1073(40.26%) teachers strongly agree, 1531(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.

4.5.2.6 Percentage of teachers who said that there are adequate materials for spoken English for example pronunciation and stress

Table 4.5.2.6 Percentage of teachers who said that there are adequate materials for spoken English for example pronunciation and stress

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	951	1605	91	18
2.	35.68	60.23	3.41	0.68

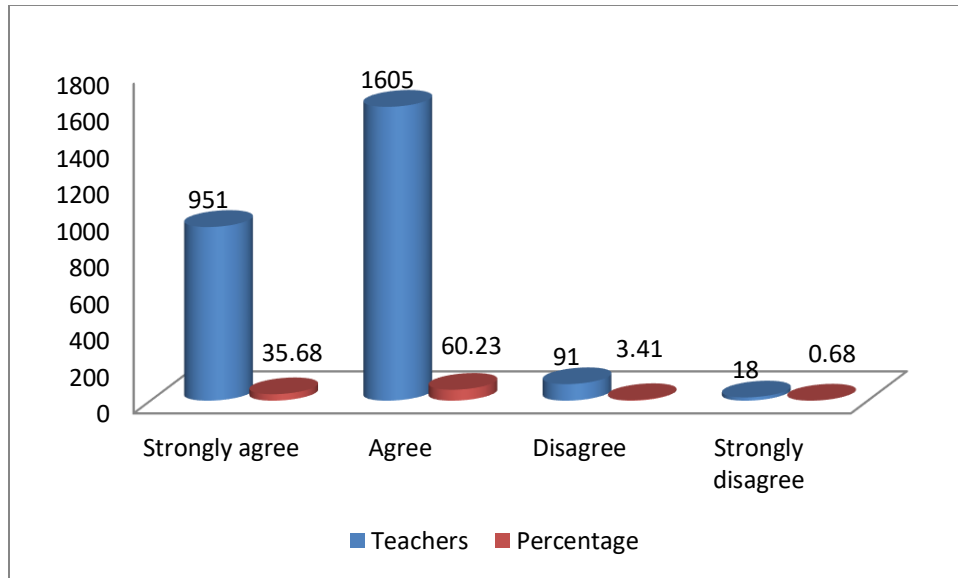


Figure 4.5.2.6 Percentage of teachers who said that there are adequate materials for spoken English for example pronunciation and stress

From the results of table 4.5.2.6 and the corresponding figure 4.5.2.6 it can be seen that 951 (35.68%) teachers strongly agree, 1605 (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.

4.5.2.7 Percentage of teachers who said that the reading tasks are appropriate for improving students' reading skills

Table 4.5.2.7 Percentage of teachers who said that the reading tasks are appropriate for improving students' reading skills

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1057	1537	56	15
2.	39.66	57.67	2.10	0.56

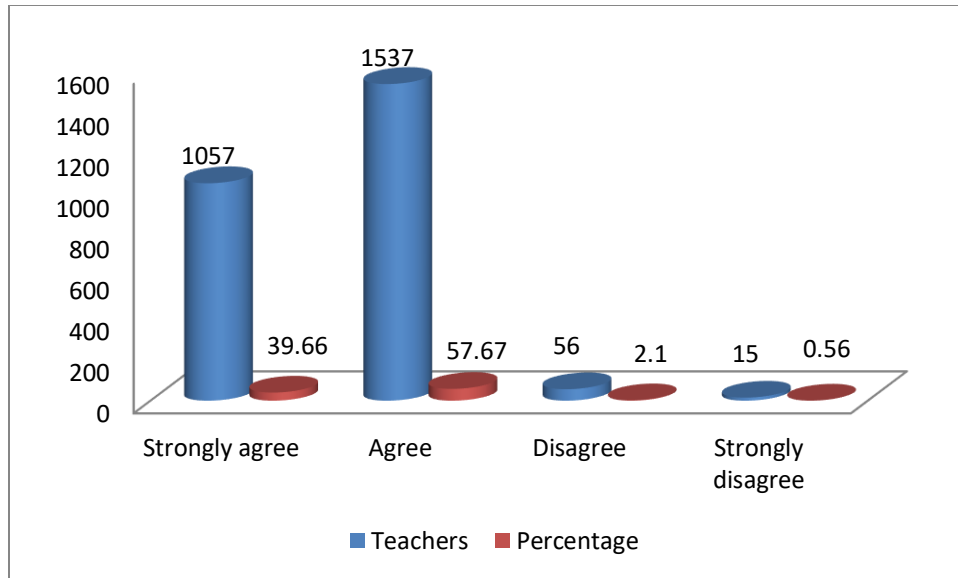


Figure 4.5.2.7 Percentage of teachers who said that the reading tasks are appropriate for improving students' reading skills

From the results of table 4.5.2.7 and the corresponding figure 4.5.2.7 it can be seen that 1057(39.66%) teachers strongly agree, 1537(57.67%) teachers agree and 56 (2.1%) teachers disagree to the question that reading tasks are appropriate for improving students' reading skills. While 15 (0.56%) teachers strongly disagree to the question that the reading tasks are appropriate for improving students' reading skills.

4.5.2.8 Percentage of teachers who said that the Reading activities can motivate students

Table

4.5.2.8 Percentage of teachers who said that the Reading activities can motivate students

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1081	1527	44	13
2.	40.56	57.30	1.65	0.49

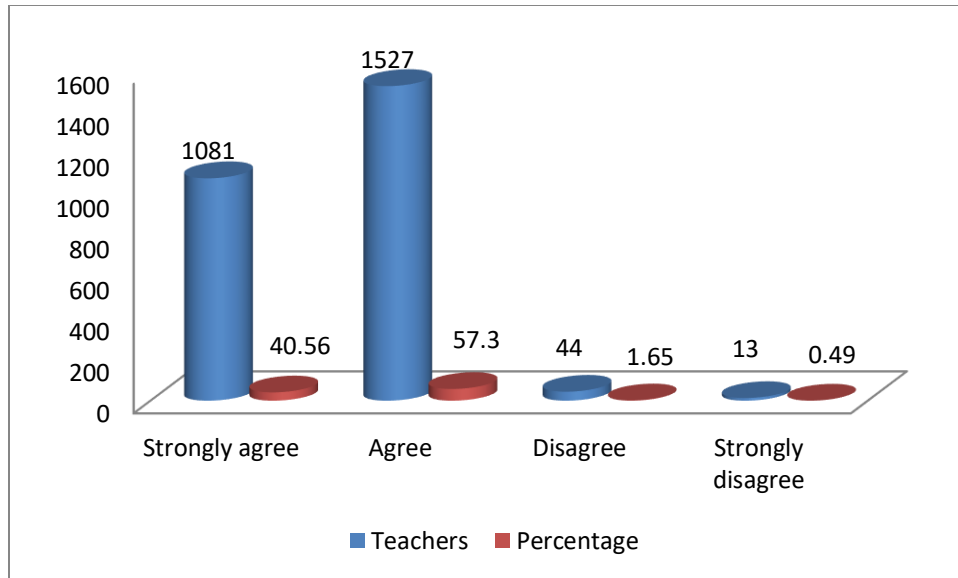


Figure 4.5.2.8 Percentage of teachers who said that the Reading activities can motivate students

From the results of table 4.5.2.8 and the corresponding figure 4.5.2.8 it can be seen that 1081(40.56%) teachers strongly agree, 1527(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 that the Reading activities can motivate students.

4.5.2.9 Percentage of teachers who said that the Reading activities can help learners become effective readers

Table 4.5.2.9 Percentage of teachers who said that the Reading activities can help learners become effective readers

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1084	1517	48	16
2.	40.68	56.92	1.80	0.60

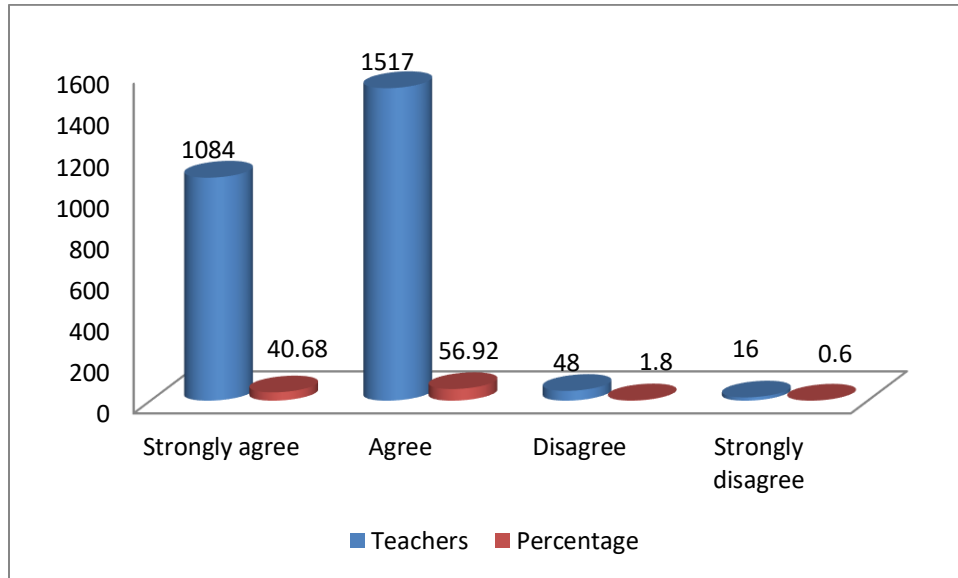


Figure 4.5.2.9 Percentage of teachers who said that the Reading activities can help learners become effective readers

From the results of table 4.5.2.9 and the corresponding figure 4.5.2.9 it can be seen that 1084(40.68%) teachers strongly agree, 1517(56.92%) teachers agree and 48 (1.8%) teachers disagree to the question that Reading activities can help learners become effective readers. While 16 (0.6%) teachers strongly disagree to the question that the reading activities can help learners become effective readers.

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

Table 4.5.2.10 Percentage of teachers who said that there is a variety of reading material (eg. Prose, poetry, etc.)

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1137	1466	46	16
2.	42.66	55.01	1.73	0.60

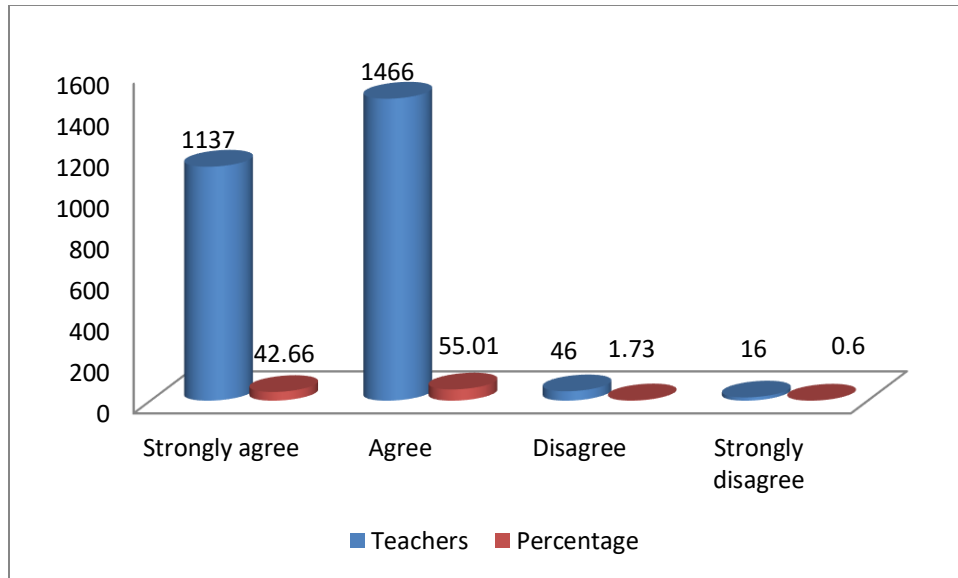


Figure 4.5.2.10 Percentage of teachers who said that there is a variety of reading material (eg. Prose, poetry, etc.)

From the results of table 4.5.2.10 and the corresponding figure 4.5.2.10 it can be seen that 1137(42.66%) teachers strongly agree, 1466(55.01%) teachers agree and 46 (1.73%) teachers disagree to the question that there is a variety of reading material (eg. Prose, poetry, etc.); while 16 (0.6%) teachers strongly disagree to the question that the there is a variety of reading material (eg. Prose, poetry, etc.).

4.5.2.11 Percentage of teachers who said that the reading materials help learners to use English language in daily life

Table 4.5.2.11 Percentage of teachers who said that the reading materials help learners to use English language in daily life

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1098	1505	46	16
2.	41.20	56.47	1.73	0.60

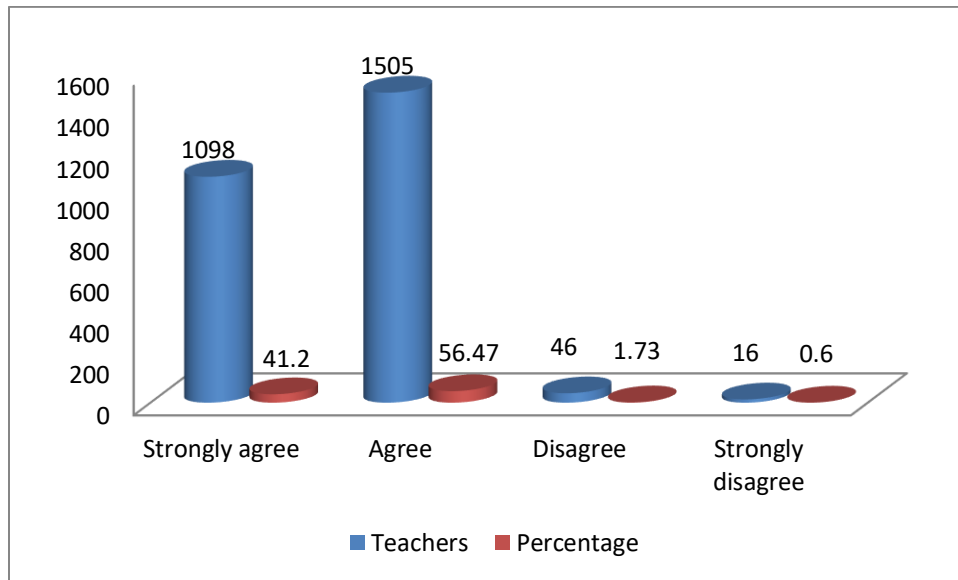


Figure Table 4.5.2.11 Percentage of teachers who said that the reading materials help learners to use English language in daily life

From the results of table 4.5.2.11 and the corresponding figure 4.5.2.11 it can be seen that 1098(41.2%) teachers strongly agree, 1505(56.47%) teachers agree and 46 (1.73%) teachers disagree to the question that reading materials help learners to use English language in daily life, while 16 (0.6%) teachers strongly disagree to the question that the reading materials help learners to use English language in daily life.

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

Table 4.5.2.12 Percentage of teachers who said that the writing tasks are appropriate for improving students' writing skills

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1160	1454	36	15
2.	43.53	54.56	1.35	0.56

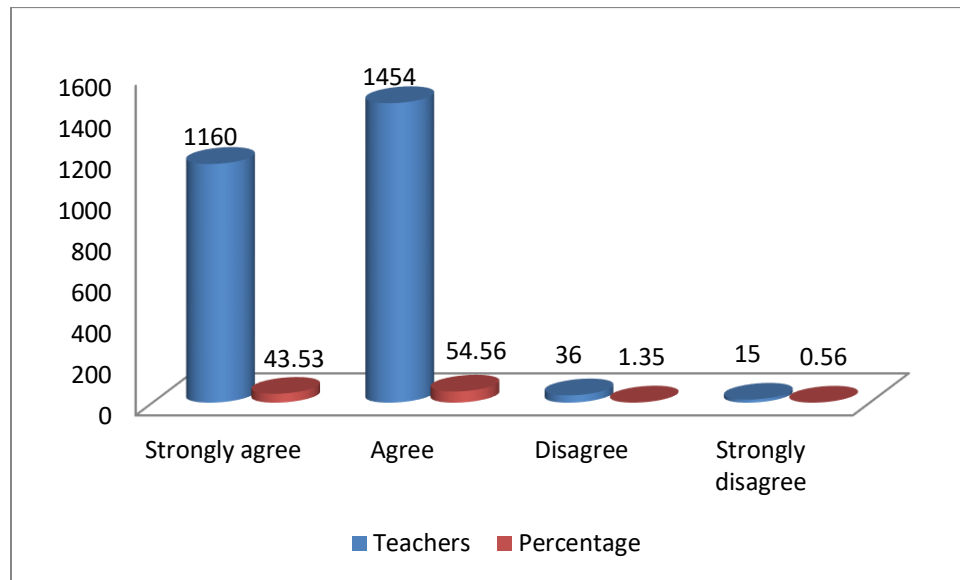


Figure 4.5.2.12 Percentage of teachers who said that the writing tasks are appropriate for improving students' writing skills

From the results of table 4.5.2.12 and the corresponding figure 4.5.2.12 it can be seen that 1160 (43.53%) teachers strongly agree, 1454 (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.

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

Table 4.5.2.13 Percentage of teachers who said that the writing tasks are appropriate for improving students' grammar and composition

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1018	1551	81	15
2.	38.20	58.20	3.04	0.56

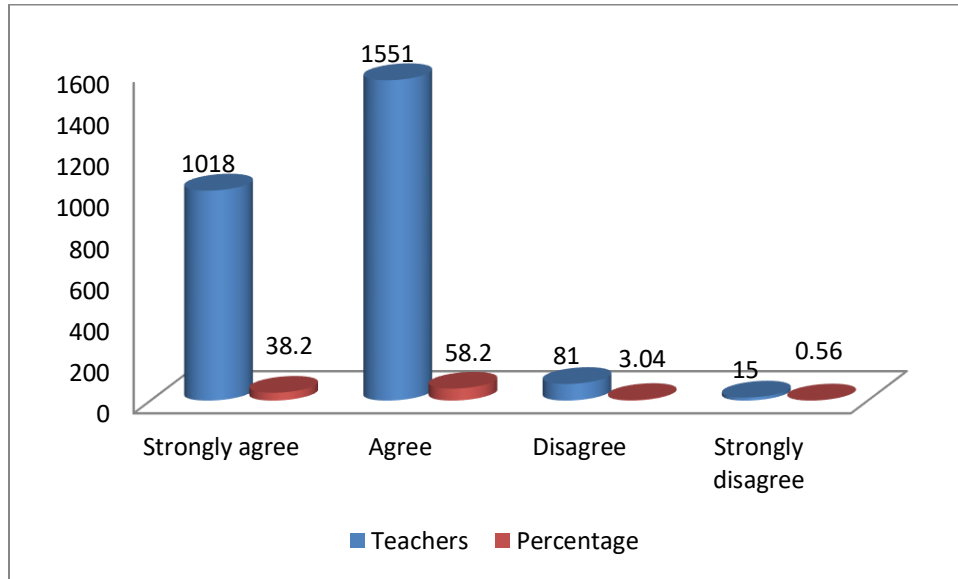


Figure 4.5.2.13 Percentage of teachers who said that the writing tasks are appropriate for improving students’ grammar and composition

From the results of table 4.5.2.13 and the corresponding figure 4.5.2.13 it can be seen that 1018 (38.2%) teachers strongly agree, 1551 (58.2%) teachers agree and 81(3.04%) teachers disagree to the question that the writing tasks are appropriate for improving students’ grammar and composition. While 15 (0.56%) teachers strongly disagree to the question that the writing tasks are appropriate for improving students’ grammar and composition.

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

Table 4.5.2.14 Percentage of teachers who said that the textbook encourages the ability to express ideas in the written form

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1050	1550	50	15
2.	39.40	58.16	1.88	0.56

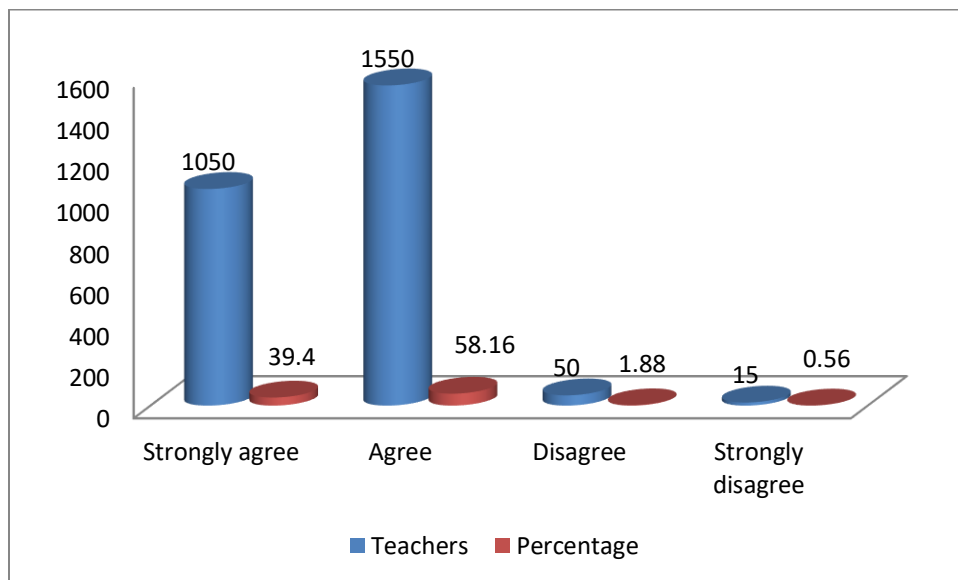


Figure 4.5.2.14 Percentage of teachers who said that the textbook encourages the ability to express ideas in the written form

From the results of table 4.5.2.14 and the corresponding figure 4.5.2.14 it can be seen that 1050 (39.4%) teachers strongly agree, 1550 (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 disagree profoundly with the question.

4.5.2.15 Percentage of teachers who said that the Writing Tasks are Suitable in terms of Accuracy

Table 4.5.2.15 Percentage of teachers who said that the Writing Tasks are Suitable in terms of Accuracy

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1087	1521	40	17
2.	40.79	57.07	1.50	0.64

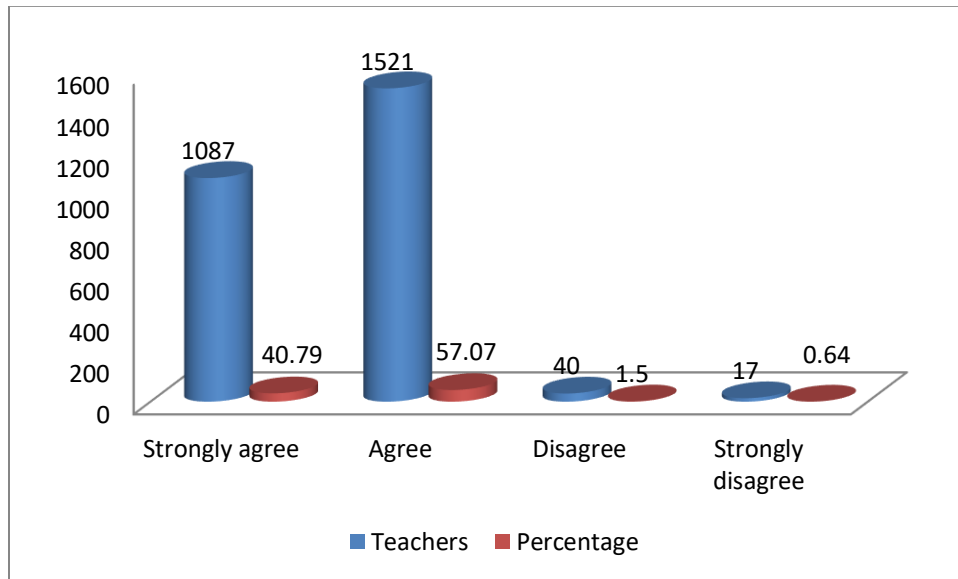


Figure 4.5.2.15 Percentage of teachers who said that the Writing Tasks are Suitable in terms of Accuracy

From the results of table 4.5.2.15 and the corresponding figure 4.5.2.15 it can be seen that 1087 (40.79%) teachers strongly agree, 1521 (57.07%) teachers agree and 40 (1.5%) teachers disagree with the question that the writing tasks are suitable in terms of accuracy. Whereas, 17 (0.64%) teachers strongly disagree with this question.

4.5.2.16 Percentage of teachers who said that the vocabulary items are appropriate for the students’ age group

Table 4.5.2.16 Percentage of teachers who said that the vocabulary items are appropriate for the students’ age group

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1109	1484	58	14
2.	41.61	55.68	2.18	0.53

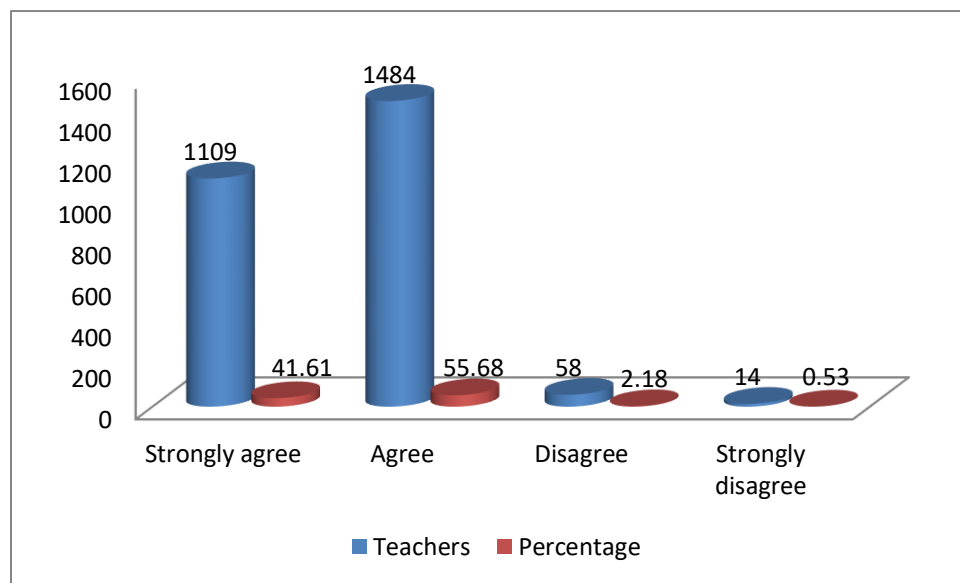


Figure 4.5.2.16 Percentage of teachers who said that the vocabulary items are appropriate for the students' age group

From the results of table 4.5.2.16 and the corresponding figure 4.5.2.16 it can be seen that 1109 (41.61%) teachers strongly agree, 1484(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.

4.5.2.17 Percentage of teachers who said that the vocabulary items are arranged from simple to complex

Table 4.5.2.17 Percentage of teachers who said that the vocabulary items are arranged from simple to complex

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1045	1541	61	18
2.	39.21	57.82	2.29	0.68

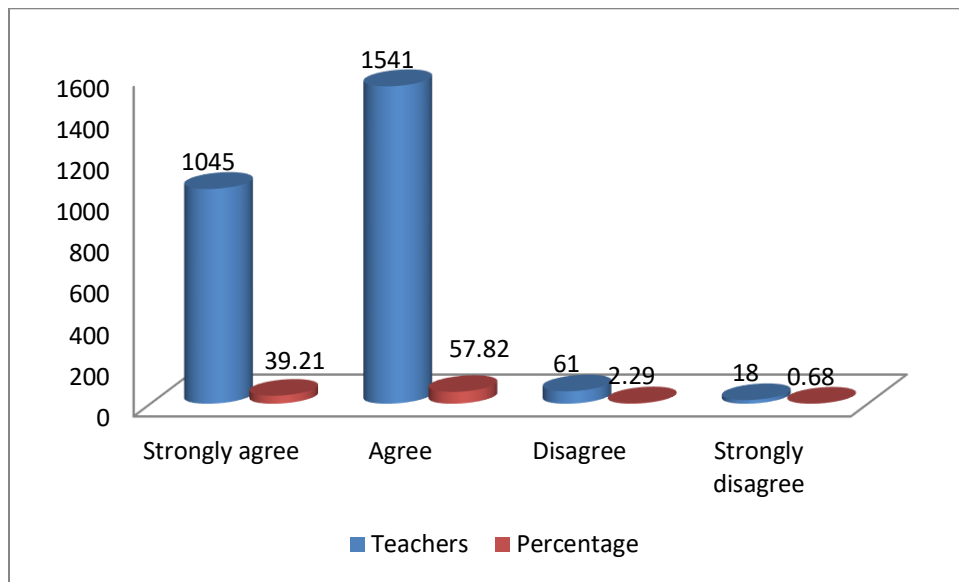


Figure 4.5.2.17 Percentage of teachers who said that the vocabulary items are arranged from simple to complex

According to the results of table 4.5.2.17 and the associated figure 4.5.2.17, 1045 (39.21%) teachers strongly agree that the vocabulary items are sorted from simple to complex, 1541

(57.82%) teachers agree, and 61 (2.29%) teachers disagree, while 18(0.68%) teachers strongly disagree with this question at all.

4.5.2.18 Percentage of teachers who said that the textbook incorporates sufficient materials for improving vocabulary

Table 4.5.2.18 Percentage of teachers who said that the textbook incorporates sufficient materials for improving vocabulary

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1042	1534	72	17
2.	39.10	57.56	2.70	0.64

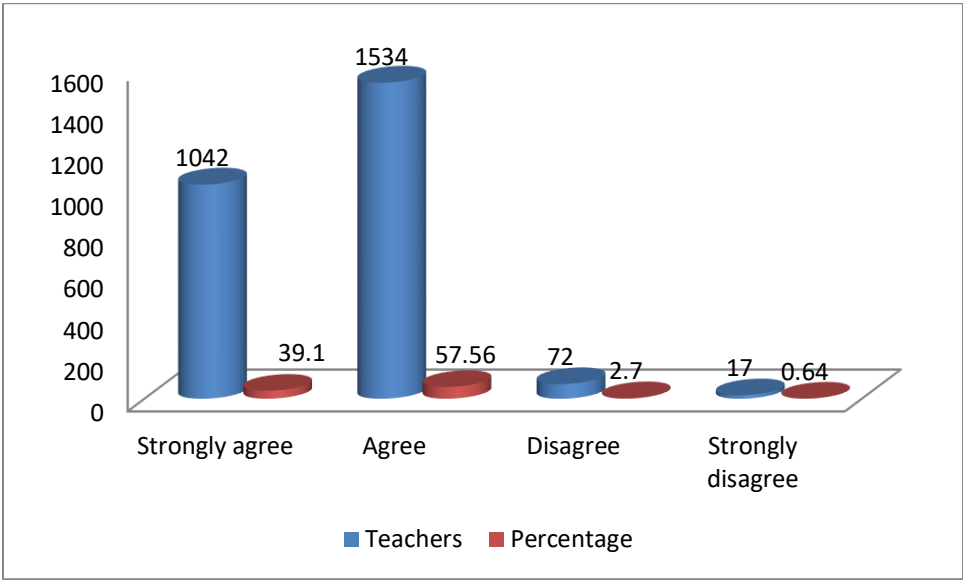


Figure 4.5.2.18 Percentage of teachers who said that the textbook incorporates sufficient materials for improving vocabulary

From the results of table 4.5.2.18 and the corresponding figure 4.5.2.18 it can be seen that 1042(39.1%) teachers strongly agree, 1534(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 4.5.2.19 Percentage of teachers who said that the materials for teaching grammar, vocabulary and pronunciation are graded in a suitable manner

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

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	995	1564	89	17
2.	37.34	58.69	3.34	0.64

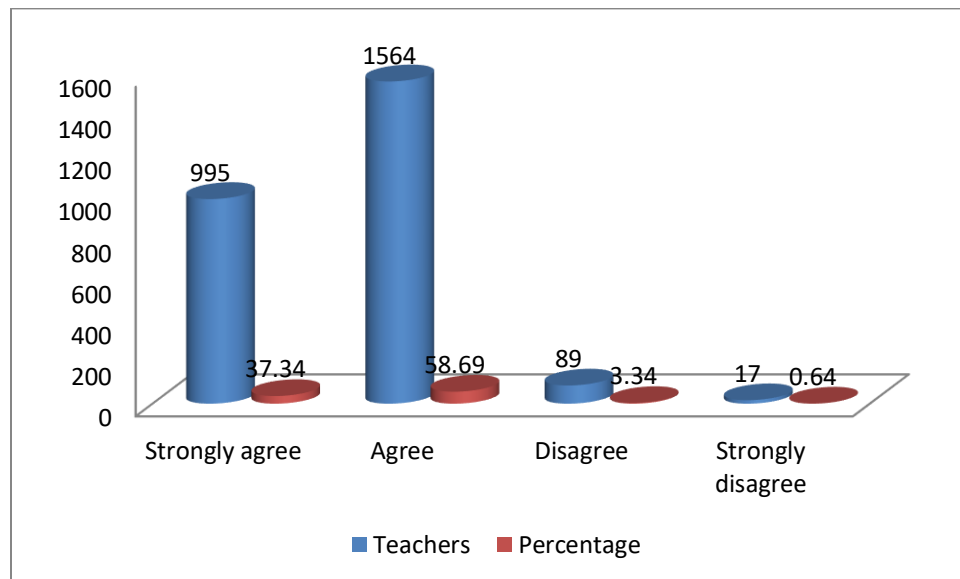


Figure 4.5.2.19 Percentage of teachers who said that the materials for teaching grammar, vocabulary and pronunciation are graded in a suitable manner

From the results of table 4.5.2.19 and the corresponding figure 4.5.2.19 it can be seen that 995(37.34%) teachers strongly agree, 1564(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.

4.5.2.20 Percentage of teachers who said that the grammar items in the textbook are appropriate for the students’ age group

Table 4.5.2.20 Percentage of teachers who said that the grammar items in the textbook are appropriate for the students’ age group

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1045	1541	64	15
2.	39.21	57.82	2.40	0.56

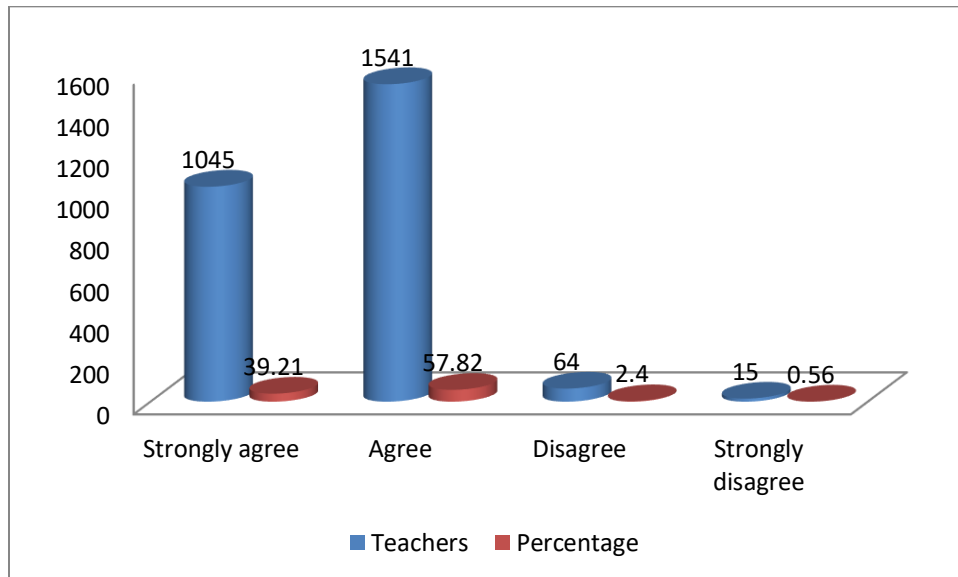


Figure 4.5.2.20 Percentage of teachers who said that the grammar items in the textbook are appropriate for the students’ age group

From the results of table 4.5.2.20 and the corresponding figure 4.5.2.20 it can be seen that 1045 (39.21%) teachers strongly agree, 1541 (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.

4.5.2.21 Percentage of teachers who said that the grammatical structures are presented inductively

Table 4.5.2.21 Percentage of teachers who said that the grammatical structures are presented inductively

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	978	1607	65	15
2.	36.70	60.30	2.44	0.56

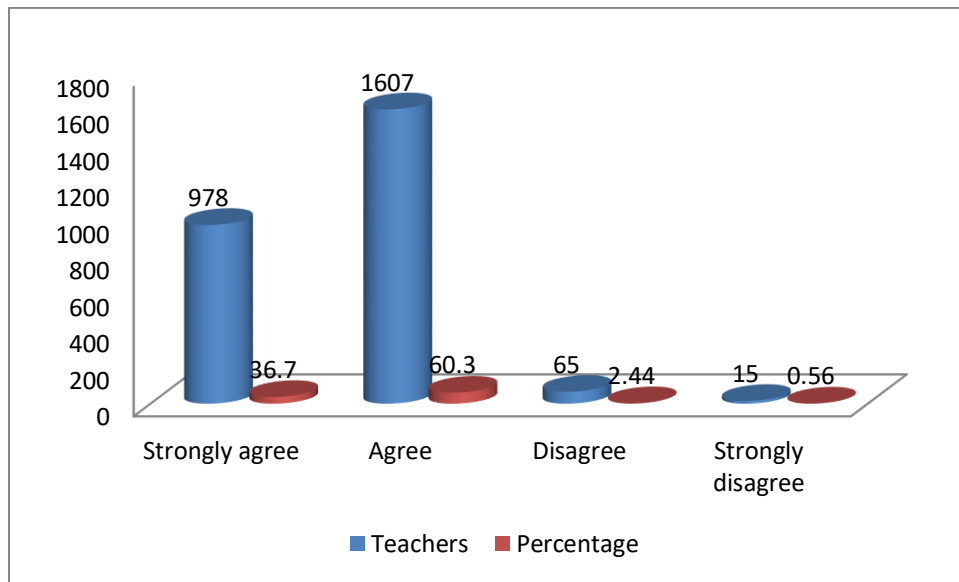


Figure 4.5.2.21 Percentage of teachers who said that the grammatical structures are presented inductively

From the results of table 4.5.2.21 and the corresponding figure 4.5.2.21 it can be seen that 978(36.7%) teachers strongly agree, 1607 (50.3%) teachers agree and 65 (2.44%) teachers disagree to the question that the grammatical structures are presented inductively. While 15 (0.56%) of the teachers strongly disagree with the question.

B. Numeracy

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

4.5.3.1 Percentage of teachers who said that the Visuals pictorial formats with local are provided to understand the numbers

Table 4.5.3.1 Percentage of teachers who said that the Visuals pictorial formats with local are provided to understand the numbers

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1.	1269	1364	19	13
2.	47.62	51.18	0.71	0.49

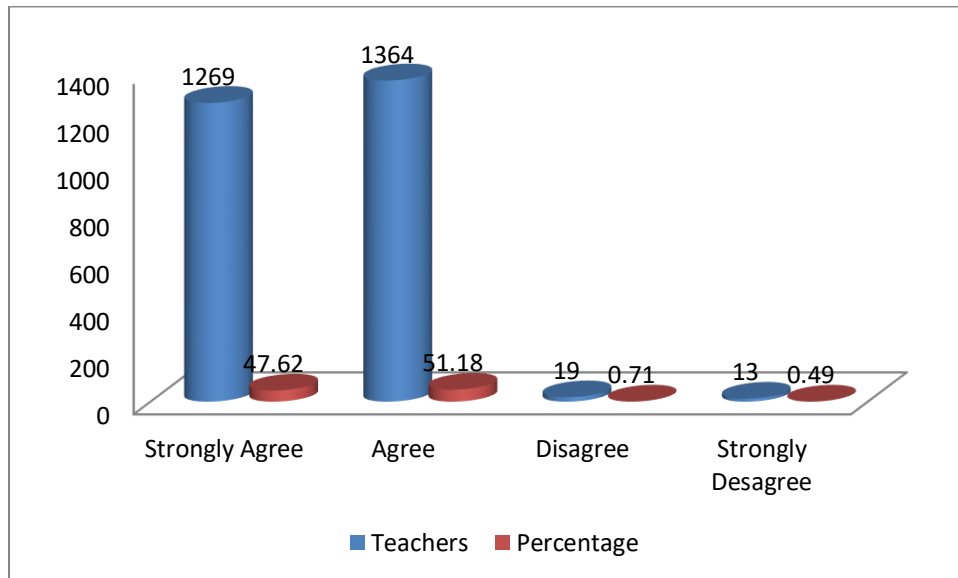


Figure 4.5.3.1 Percentage of teachers who said that the Visuals pictorial formats with local are provided to understand the numbers

From the results of table 4.5.3.1 and the corresponding figure 4.5.3.1 it can be seen that 1269(47.62%) teachers strongly agree, 1364 (51.18%) teachers agree and 19 (0.71%) teachers disagree to the question that Visuals pictorial formats with local are provided to understand the numbers. While 13 (0.49%) of the teachers strongly disagree with the question.

4.5.3.2 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

Table 4.5.3.2 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=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1201	1420	30	14
2	45.07	53.28	1.13	0.53

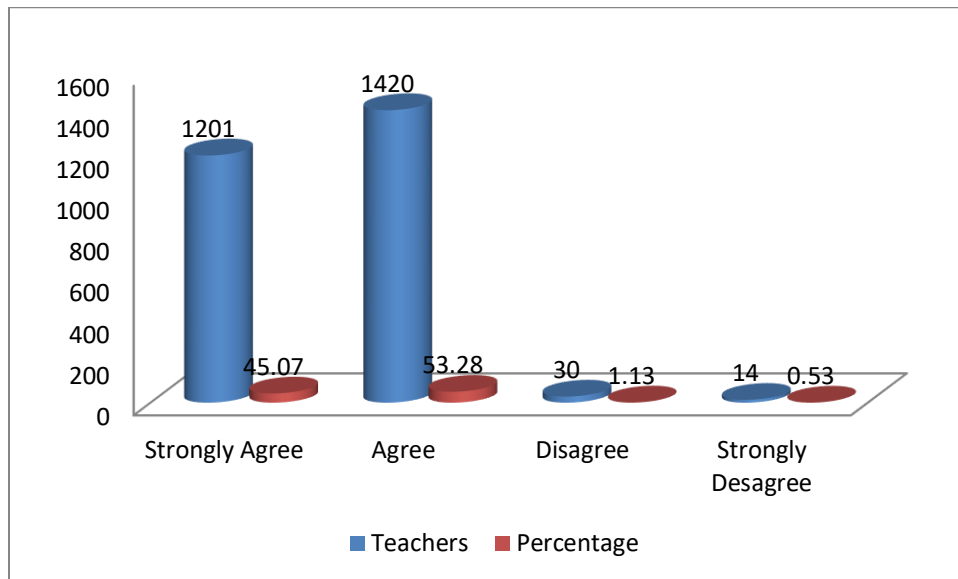


Figure 4.5.3.2 Percentage of teachers who said that Real objects, Visual examples, diagrams and figures are provided to develop fundamental operations of arithmetic at the beginning stage

From the results of table 4.5.3.2 and the corresponding figure 4.5.3.2 it can be seen that 1201(45.07%) teachers strongly agree, 1420 (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.

4.5.3.3 Percentage of teachers who said that Textbook activities/illustrations facilitate the understanding of numerals

Table 4.5.3.3 Percentage of teachers who said that Textbook activities/illustrations facilitate the understanding of numerals

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1259	1367	25	14
2	47.24	51.29	0.94	0.53

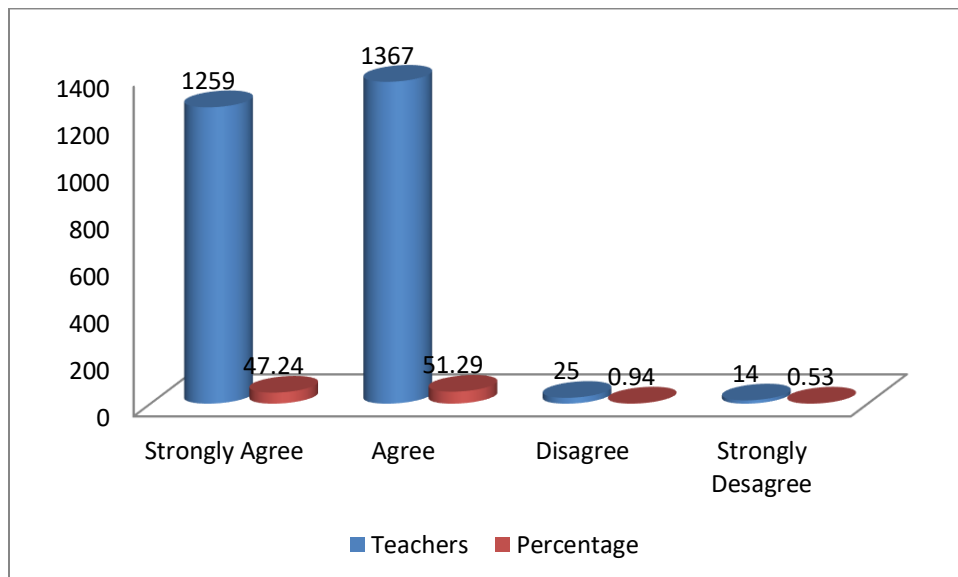


Figure 4.5.3.3 Percentage of teachers who said that Textbook activities/illustrations facilitate the understanding of numerals

From the results of table 4.5.3.3 and the corresponding figure 4.5.3.3 it can be seen that 1259(47.24%) teachers strongly agree, 1367 (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.

4.5.3.4 Percentage of teachers who said that Examples/illustrations from local/daily life are provided in the textbook

Table 4.5.3.4 Percentage of teachers who said that Examples/illustrations from local/daily life are provided in the textbook

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1180	1433	36	16
2	44.28	53.77	1.35	0.60

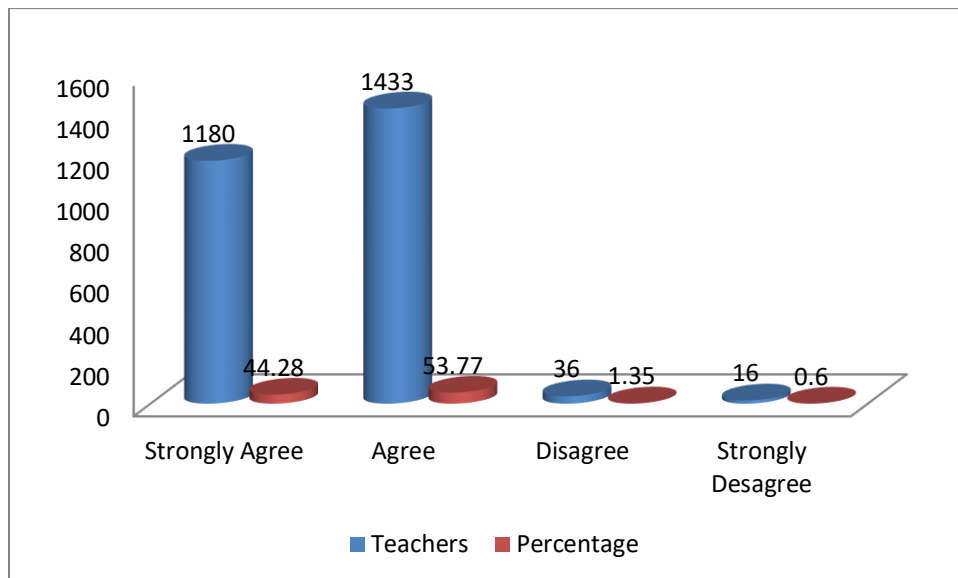


Figure 4.5.3.4 Percentage of teachers who said that Examples/illustrations from local/daily life are provided in the textbook

From the results of table 4.5.3.4 and the corresponding figure 4.5.3.4 it can be seen that 1180(44.28%) teachers strongly agree, 1433 (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.

4.5.3.5 Percentage of teachers who said that Classification of items/objects according to numbers and shapes is facilitated through textbook activities

Table 4.5.3.5 Percentage of teachers who said that Classification of items/objects according to numbers and shapes is facilitated through textbook activities

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1146	1461	41	17
2	43.00	54.82	1.54	0.64

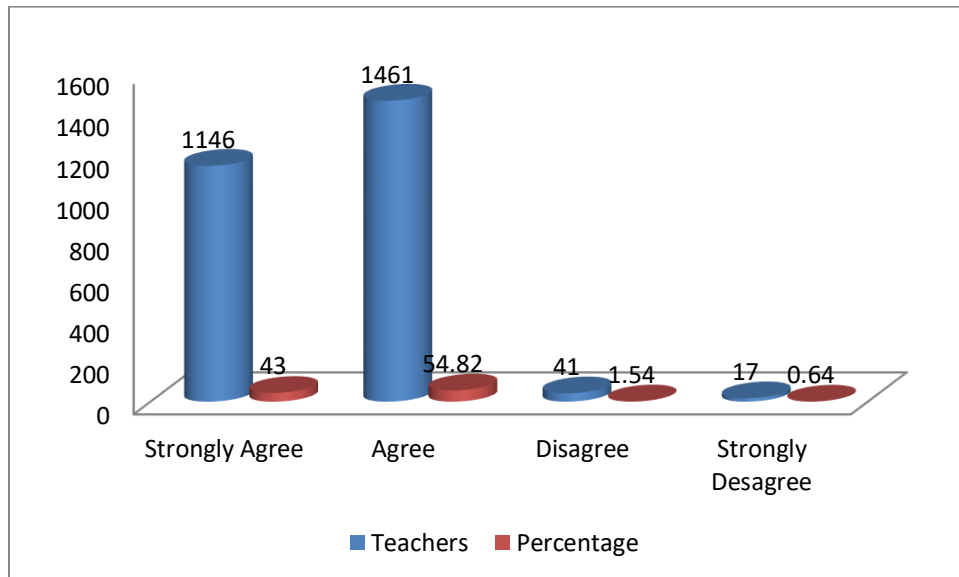


Figure 4.5.3.5 Percentage of teachers who said that Classification of items/objects according to numbers and shapes is facilitated through textbook activities

From the results of table 4.5.3.5 and the corresponding figure 4.5.3.5 it can be seen that 1146(43.00%) teachers strongly agree, 1461 (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.

4.5.3.6 Percentage of teachers who said that Data handling skill has been promoted in the textbook through visuals and numerical activities

Table 4.5.3.6 Percentage of teachers who said that Data handling skill has been promoted in the textbook through visuals and numerical activities

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1067	1545	33	16
2	40.04	57.97	1.24	0.60

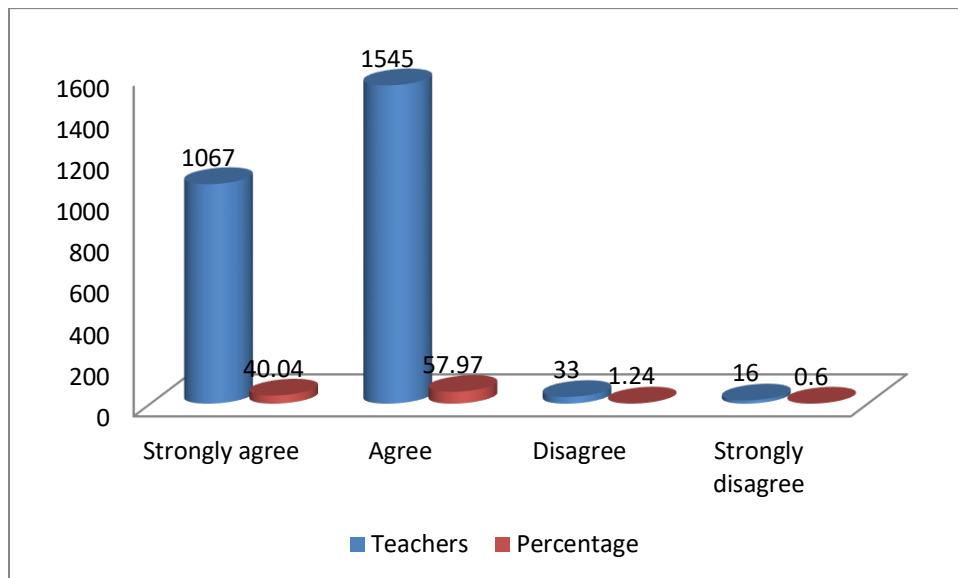


Figure 4.5.3.6 Percentage of teachers who said that Data handling skill has been promoted in the textbook through visuals and numerical activities

From the results of table 4.5.3.6 and the corresponding figure 4.5.3.6 it can be seen that 1067(40.04%) teachers strongly agree, 1545 (57.97%) teachers agree and 33 (1.24%) teachers disagree to the question that the data handling skill has been promoted in the textbook through visuals and numerical activities. While 16 (0.6%) of the teachers strongly disagree with the question.

4.5.3.7 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

Table 4.5.3.7 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=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1055	1539	36	15
2	39.59	57.75	1.35	0.56

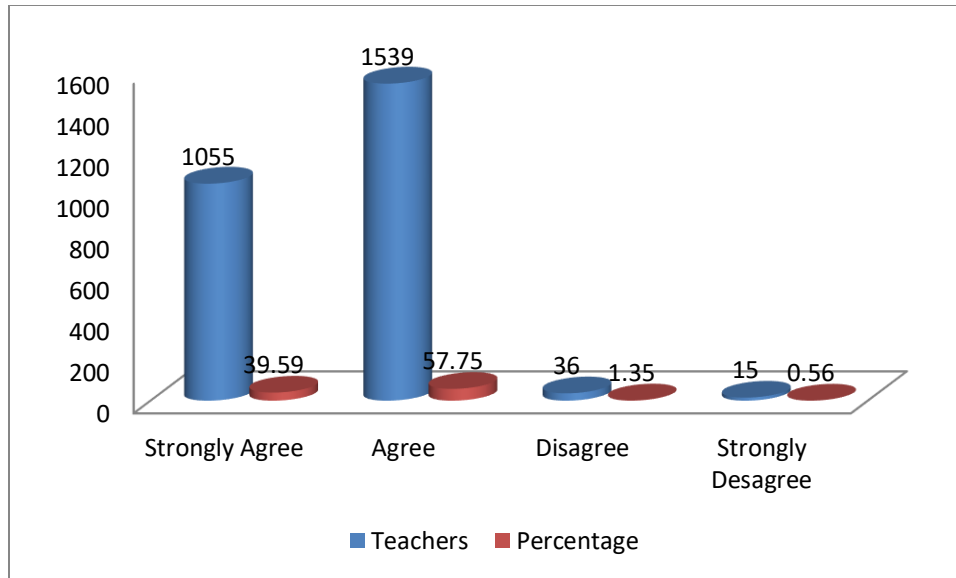


Figure 4.5.3.7 Percentage of teachers who said that Concept and understanding of measurement, mass, volume and temperature is handled with the help of daily life examples from the locale

From the results of table 4.5.3.7 and the corresponding figure 4.5.3.7 it can be seen that 1055(39.59%) teachers strongly agree, 1539 (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.

4.5.3.8 Percentage of teachers who said that Mathematical language used in the textbook is according to the students' age and culture

Table 4.5.3.8 Percentage of teachers who said that Mathematical language used in the textbook is according to the students' age and culture

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1068	1540	41	16
2	40.08	57.79	1.54	0.60

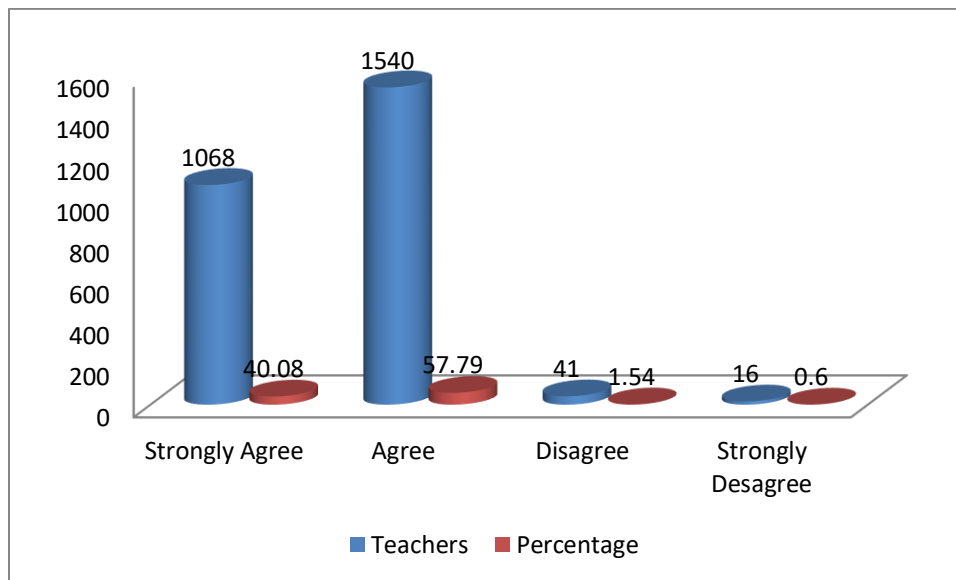


Figure 4.5.3.8 Percentage of teachers who said that Mathematical language used in the textbook is according to the students' age and culture

From the results of table 4.5.3.8 and the corresponding figure 4.5.3.8 it can be seen that 1068(40.08%) teachers strongly agree, 1540(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 (0.6%) of the teachers strongly disagree with the question.

4.5.3.9 Percentage of teachers who said that Difficulty level of mathematical concepts and operations are progressively increased within and between classes

Table 4.5.3.9 Percentage of teachers who said that Difficulty level of mathematical concepts and operations are progressively increased within and between classes

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1050	1560	38	17
2	39.40	58.54	1.43	0.64

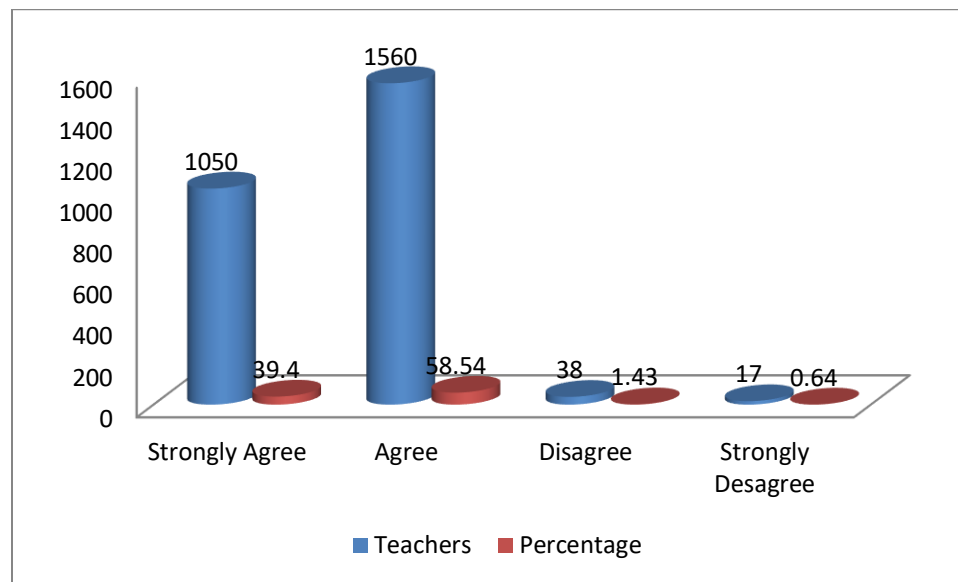


Figure 4.5.3.9 Percentage of teachers who said that Difficulty level of mathematical concepts and operations are progressively increased within and between classes

From the results of table 4.5.3.9 and the corresponding figure 4.5.3.9 it can be seen that 1050(39.4%) teachers strongly agree, 1560 (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.

4.5.3.10 Percentage of teachers who said that Basic life skills are dealt through mathematical operations

Table 4.5.3.10 Percentage of teachers who said that Basic life skills are dealt through mathematical operations

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1083	1534	29	19
2	40.64	57.56	1.09	0.71

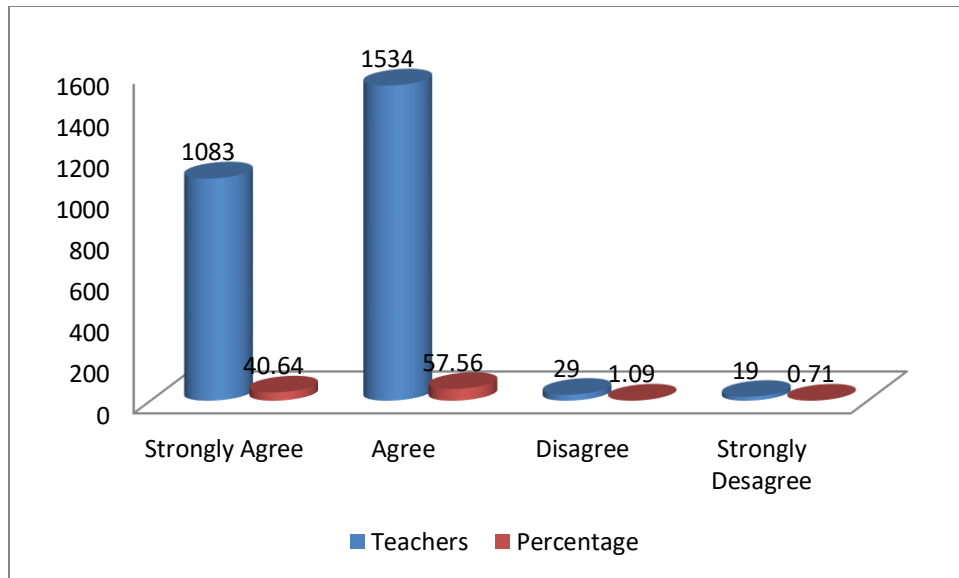


Figure 4.5.3.10 Percentage of teachers who said that Basic life skills are dealt through mathematical operations

From the results of table 4.5.3.10 and the corresponding figure 4.5.3.10 it can be seen that 1083 (40.64%) teachers strongly agree, 1534 (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.

4.5.3.11 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

Table 4.5.3.11 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=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1072	1531	46	16
2	40.23	57.45	1.73	0.60

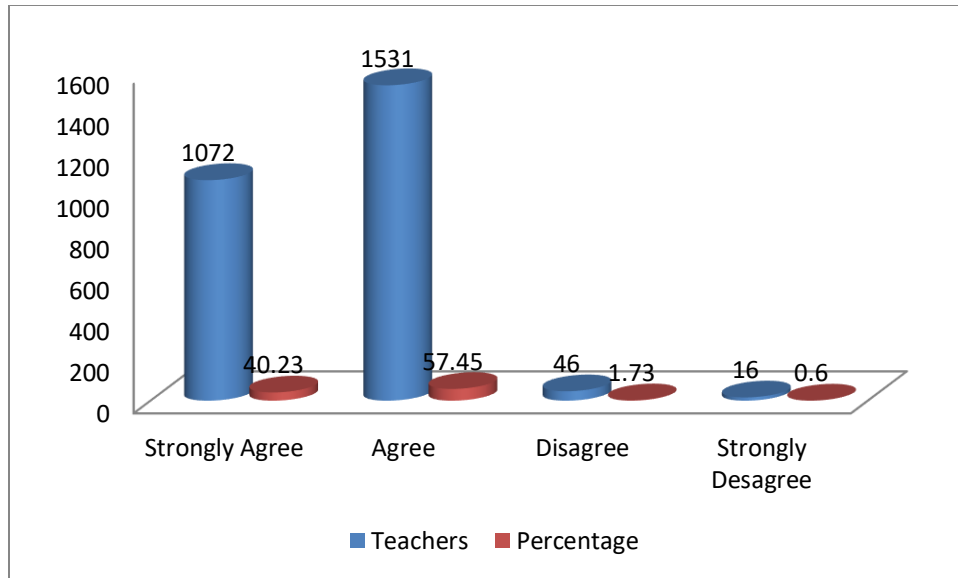


Figure 4.5.3.11 Percentage of teachers who said that Textbook activities motivate in the development of basic life skills like handling money, communication, cooperation, dealing with individuals, etc

From the results of table 4.5.3.11 and the corresponding figure 4.5.3.11 it can be seen that 1072(40.23%) teachers strongly agree, 1531(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(0.6%) teachers strongly disagree with the question.

4.5.3.12 Percentage of teachers who said that the Items/activities help in the development of 21st century skills

Table 4.5.3.12 Percentage of teachers who said that the Items/activities help in the development of 21st century skills

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1026	1571	52	16
2	38.50	58.95	1.95	0.60

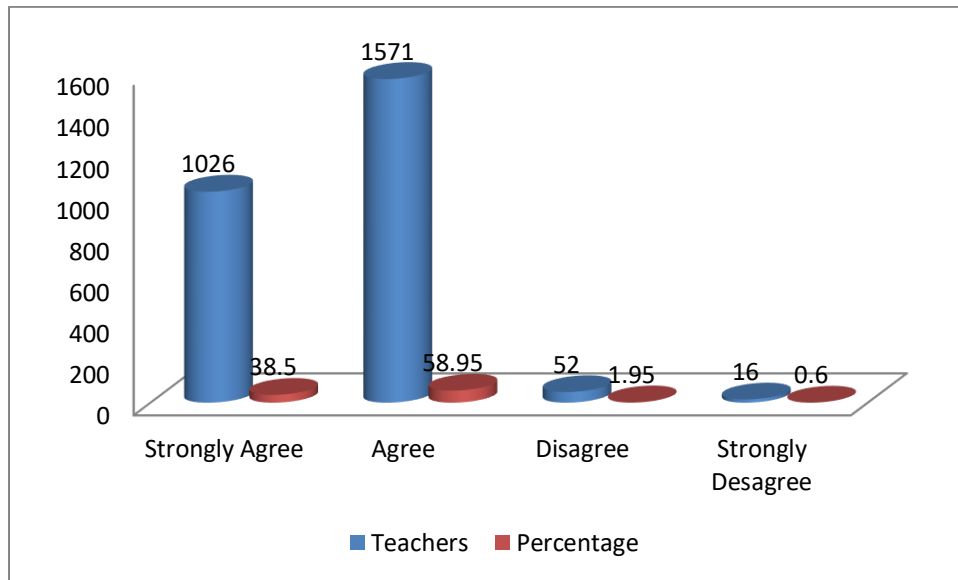


Figure 4.5.3.12 Percentage of teachers who said that the Items/activities help in the development of 21st century skills

From the results of table 4.5.3.12 and the corresponding figure 4.5.3.12 it can be seen that 1026 (38.5%) teachers strongly agree, 1571 (58.95%) teachers agree and 52 (1.95%) teachers disagree with the question that the Items/activities help in the development of 21st century skills. While 16 (0.6%) of the teachers strongly disagree with the question.

4.5.3.13 Percentage of teachers who said that the Reading and writing of numbers is according to students' age group

Table 4.5.3.13 Percentage of teachers who said that the Reading and writing of numbers is according to students' age group

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1167	1454	29	15
2	43.79	54.56	1.09	0.56

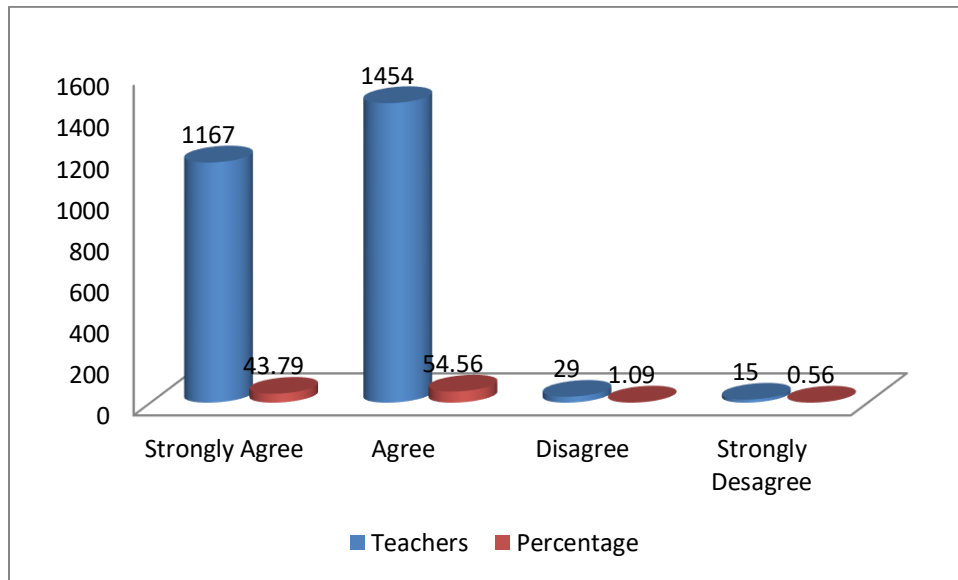


Figure 4.5.3.13 Percentage of teachers who said that the Reading and writing of numbers is according to students' age group

From the results of table 4.5.3.13 and the corresponding figure 4.5.3.13 it can be seen that 1167 (43.79%) teachers strongly agree, 1454 (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.

4.5.3.14 Percentage of teachers who said that the Activities, exercises given in the textbook are helpful in recognizing/ developing numbers

Table 4.5.3.14 Percentage of teachers who said that the Activities, exercises given in the textbook are helpful in recognizing/ developing numbers

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1107	1514	28	16
2	41.54	56.81	1.05	0.60

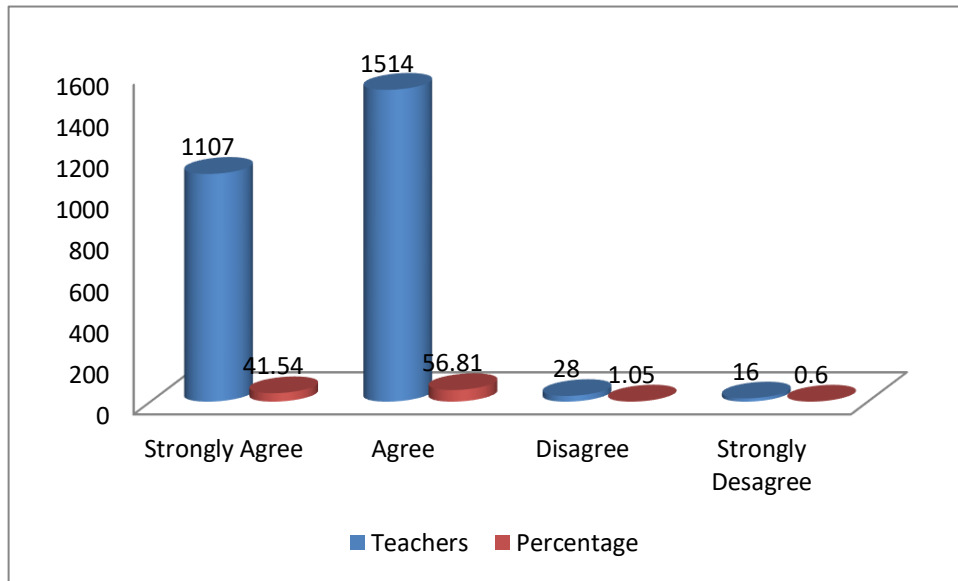


Figure 4.5.3.14 Percentage of teachers who said that the Activities, exercises given in the textbook are helpful in recognizing/ developing numbers

From the results of table 4.5.3.14 and the corresponding figure 4.5.3.14 it can be seen that 1107 (41.54%) teachers strongly agree, 1514 (56.81%) teachers agree and 28 (1.05%) teachers disagree with the question that the activities, exercises given in the textbook are helpful in recognizing/ developing numbers. While 16 (0.60%) of the teachers strongly disagree with the question.

4.6 Pedagogical Approaches

This section relates to analysis and interpretation of data pertaining to objective number 3 of the study that reads, ‘To study the pedagogical approaches utilized for transaction of content in the textbooks’, and seeks to answer the research question, ‘What pedagogical approaches are used in the transaction of content in the textbooks, and how effective are they in facilitating student learning?’. The data for objective 3 was collected through a questionnaire developed on a five point scale by the investigators. This section on content appropriateness is divided into sub parts and the data collected is presented under different sections.

4.6.1 To what extent is the organisation of textbook effective

4.6.1.1 Percentage of teachers who said that the content is linked to the previous knowledge. (Advance organizer approach)

Table 4.6.1.1 Percentage of teachers who said that the content is linked to the previous knowledge. (Advance organizer approach)

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1118	1499	35	13
2	41.95	56.25	1.31	0.49

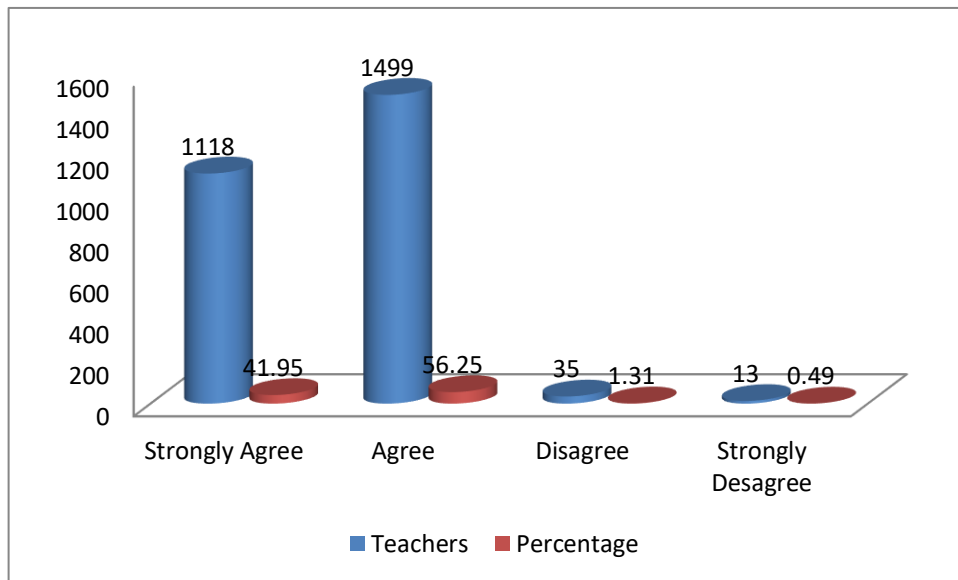


Figure 4.6.1.1 Percentage of teachers who said that the content is linked to the previous knowledge. (Advance organizer approach)

From the results of table 4.6.1.1 and the corresponding figure 4.6.1.1 it can be seen that 1118 (41.95%) teachers strongly agree, 1499 (56.25%) teachers agree and 35 (1.31%) teachers

disagree with the question that the content is linked to the previous knowledge.(Advance organizer approach). While 13 (0.49%) of the teachers strongly disagree with the question.

4.6.1.2 Percentage of teachers who said that the Chapters/ Units are interrelated with each other

Table 4.6.1.2 Percentage of teachers who said that the Chapters/ Units are interrelated with each other

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1102	1511	39	13
2	41.35	56.70	1.46	0.49

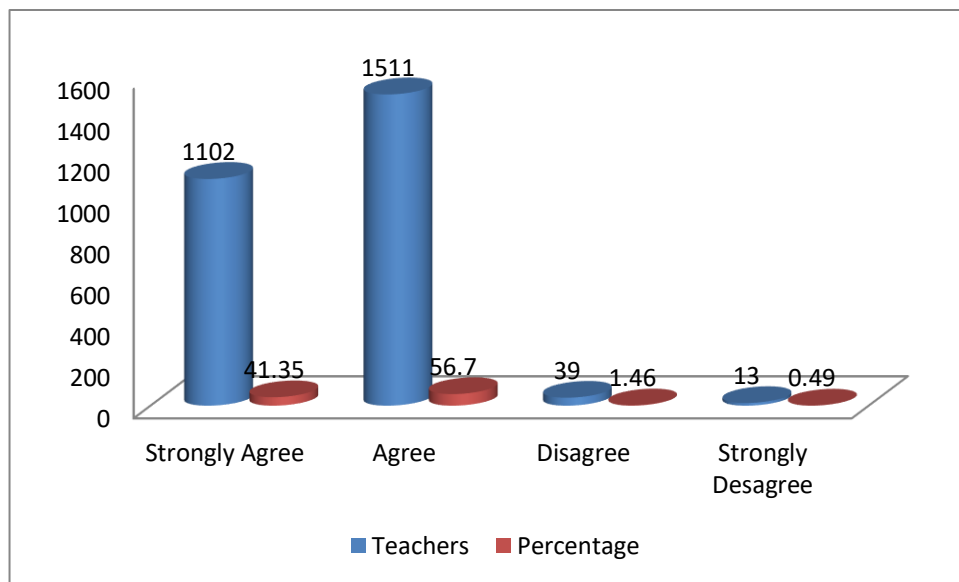


Figure 4.6.1.2 Percentage of teachers who said that the Chapters/ Units are interrelated with each other

From the results of table 4.6.1.2 and the corresponding figure 4.6.1.2 it can be seen that 1102 (41.35%) teachers strongly agree, 1511 (56.7%) teachers agree and 39 (1.46%) teachers disagree with the question that the Chapters/ Units are interrelated with each other. While 13 (0.49%) of the teachers strongly disagree with the question.

4.6.1.3 Percentage of teachers who said that the Content is logically organised. (Simple to Complex)

Table 4.6.1.3 Percentage of teachers who said that the Content is logically organised. (Simple to Complex)

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1072	1538	41	14
2	40.23	57.71	1.54	0.53

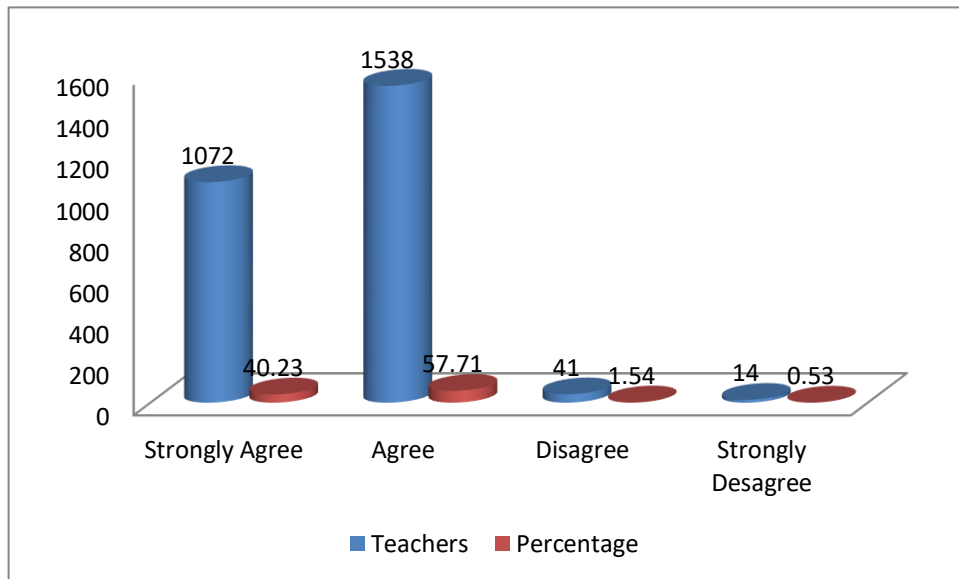


Figure 4.6.1.3 Percentage of teachers who said that the Content is logically organised. (Simple to Complex)

From the results of table **4.6.1.3** and the corresponding figure **4.6.1.3** it can be seen that 1072 (40.23%) teachers strongly agree, 1538 (57.71%) teachers agree and 41 (1.54%) teachers disagree with the question that the Content is logically organized (Simple to Complex). While 14 (0.53%) of the teachers strongly disagree with the question.

4.6.2 Are the exercises and the activities relevant to the students?

4.6.2.1 Percentage of teachers who said that the exercises in the textbook are relevant to the students' interests

Table 4.6.2.1 Percentage of teachers who said that the exercises in the textbook are relevant to the students' interests

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1104	1522	30	9
2	41.43	57.11	1.13	0.34

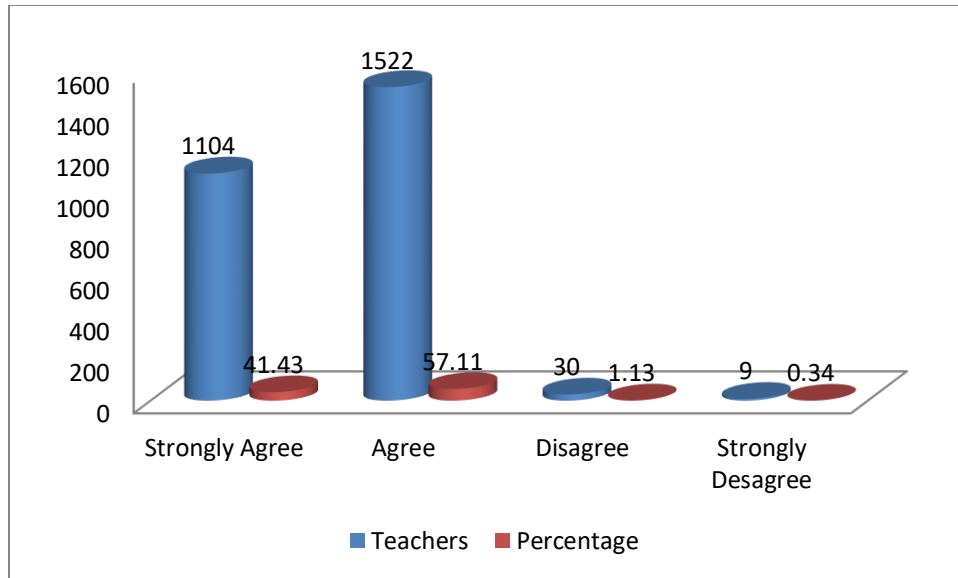


Figure 4.6.2.1 Percentage of teachers who said that the exercises in the textbook are relevant to the students' interests

From the results of table 4.6.2.1 and the corresponding figure 4.6.2.1 it can be seen that 1104 (41.43%) teachers strongly agree, 1522(57.11%) teachers agree and 30 (1.13%) teachers disagree with the question that the exercises in the textbook are relevant to the students' interests; While 9(0.34%) teachers strongly disagree with the question.

4.6.2.2 Percentage of teachers who said that the exercises promote meaningful communication by referring to realistic situations

Table 4.6.2.2 Percentage of teachers who said that the exercises promote meaningful communication by referring to realistic situations

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	974	1619	60	12
2	36.55	60.75	2.25	0.45

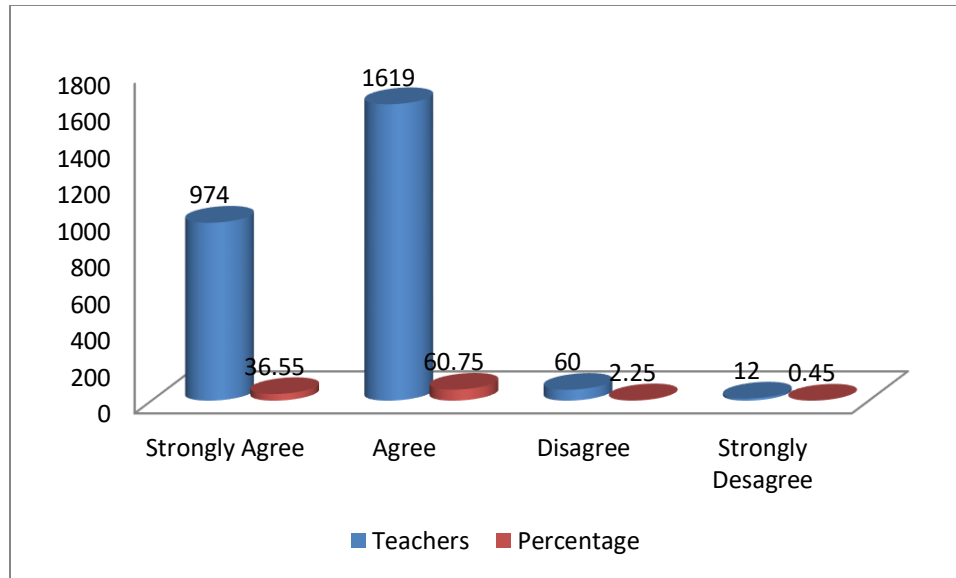


Figure 4.6.2.2 Percentage of teachers who said that the exercises promote meaningful communication by referring to realistic situations

From the results of table 4.6.2.2 and the corresponding figure 4.6.2.2 it can be seen that 974 (36.55%) teachers strongly agree, 1619(60.75%) teachers agree and 60 (2.25%) teachers disagree with the question that the exercises promote meaningful communication by referring to realistic situations. While 12(0.45%) teachers strongly disagree with the question.

4.6.2.3 Percentage of teachers who said that the activities encourage learning and implementing integrated use of skills for purposeful communication

Table 4.6.2.3 Percentage of teachers who said that the activities encourage learning and implementing integrated use of skills for purposeful communication

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1023	1593	37	12
2	38.39	59.77	1.39	0.45

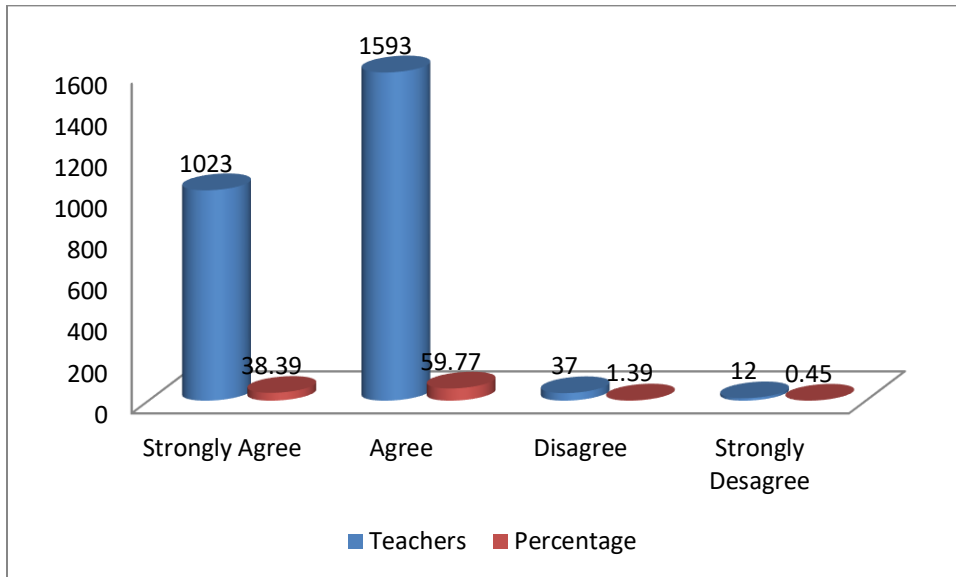


Figure 4.6.2.3 Percentage of teachers who said that the activities encourage learning and implementing integrated use of skills for purposeful communication

From the results of table 4.6.2.3 and the corresponding figure 4.6.2.3 it can be seen that 1023 (38.39%) teachers strongly agree, 1593 (59.77%) teachers agree and 37 (1.39%) teachers disagree with the question that the activities encourage learning and implementing integrated use of skills for purposeful communication; While 12 (0.45%) teachers strongly disagree with the question.

4.6.2.4 Percentage of teachers who said that the activities in the textbook help the students to use English as a means of communication

Table 4.6.2.4 Percentage of teachers who said that the activities in the textbook help the students to use English as a means of communication

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1003	1607	45	10
2	37.64	60.30	1.69	0.38

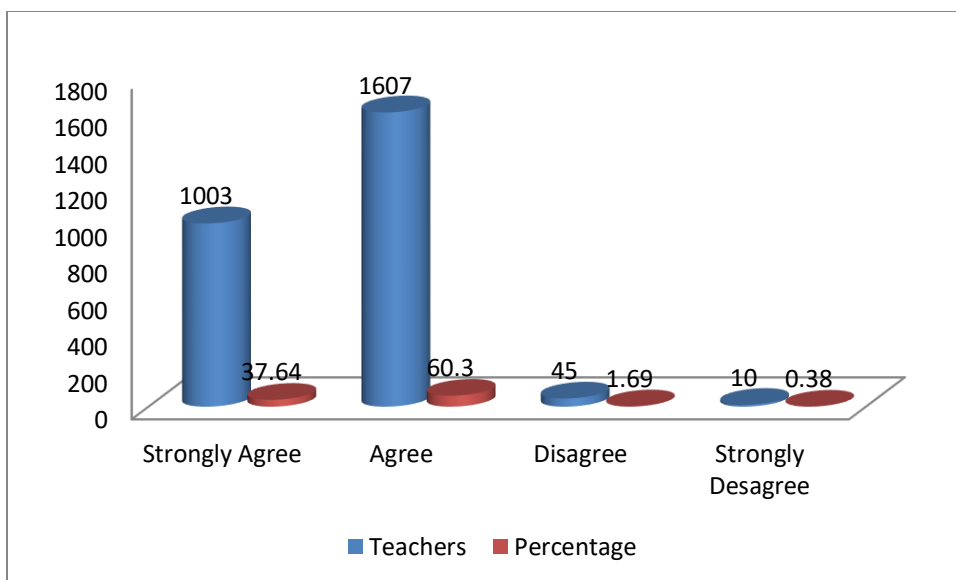


Figure 4.6.2.4 Percentage of teachers who said that the activities in the textbook help the students to use English as a means of communication

From the results of table 4.6.2.4 and the corresponding figure 4.6.2.4 it can be seen that 1003 (37.64%) teachers strongly agree, 1607(50.3%) teachers agree and 45 (1.69%) teachers disagree with the question that the activities in the textbook help the students to use English as a means of communication. While 10 (0.38%) teachers strongly disagree with the question.

4.6.2.5 Percentage of teachers who said that the units in the textbook provide students coverage of the four main skills and other sub-skills (vocabulary and grammar

Table 4.6.2.5 Percentage of teachers who said that the units in the textbook provide students coverage of the four main skills and other sub-skills (vocabulary and grammar

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1038	1571	45	11
2	38.95	58.95	1.69	0.41

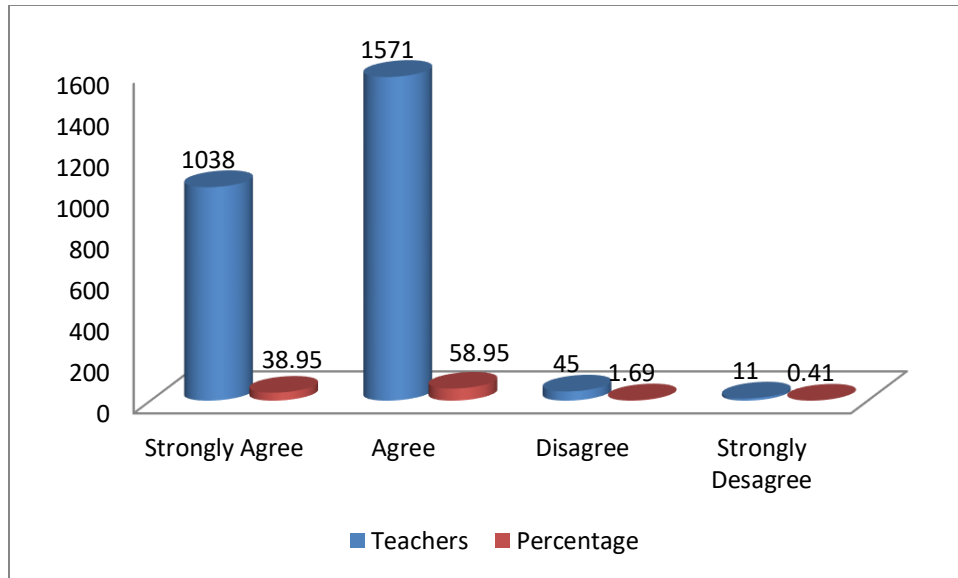


Figure 4.6.2.5 Percentage of teachers who said that the units in the textbook provide students coverage of the four main skills and other sub-skills (vocabulary and grammar)

From the results of table 4.6.2.5 and the corresponding figure 4.6.2.5 it can be seen that 1038 (38.95%) teachers strongly agree, 1571(58.95%) teachers agree and 45 (1.69%) teachers disagree with the question that the units in the textbook provide students coverage of the four main skills and other sub-skills (vocabulary and grammar), while 11 (0.41%) teachers strongly disagree with the question.

4.6.3 To what extent are the distinctive local cultures presented in the textbook?

4.6.3.1 Percentage of teachers who said that the activities, exercises given in the textbook include local language to help the students.

Table 4.6.3.1 Percentage of teachers who said that the activities, exercises given in the textbook include local language to help the students.

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1024	1525	99	17
2.	38.42	57.22	3.71	0.64

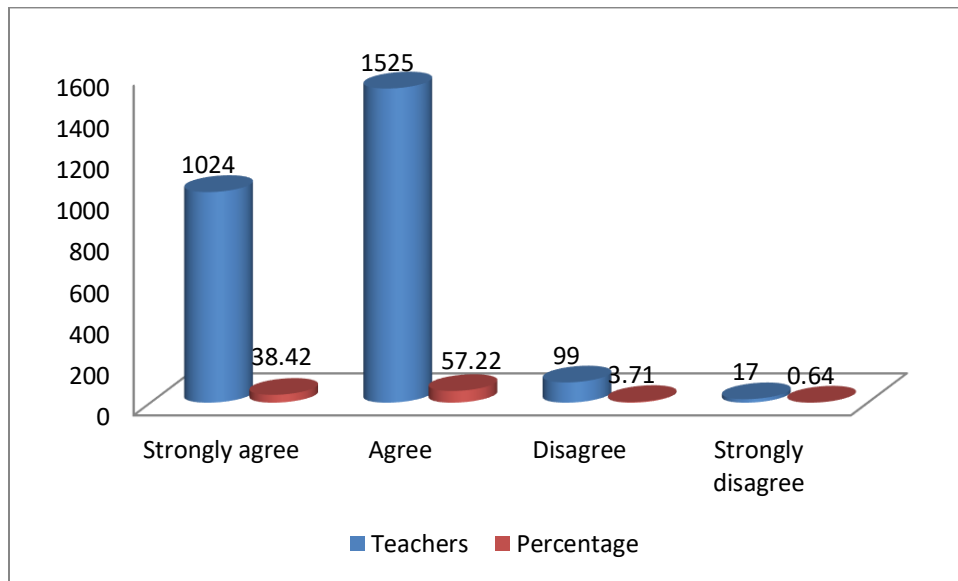


Figure 4.6.3.1 Percentage of teachers who said that the activities, exercises given in the textbook include local language to help the students.

From the results of table 4.6.3.1 and the corresponding figure 4.6.3.1 it can be seen that 1024 (38.42%) teachers strongly agree, 1525(57.22%) teachers agree and 99 (3.71%) teachers disagree with the question that the activities, exercises given in the textbook includes local language to help the students. While17 (0.64%) teachers strongly disagree with the question.

4.6.3.2 Percentage of teachers who said that the illustrations are taken from local situations

Table 4.6.3.2 Percentage of teachers who said that the illustrations are taken from local situations

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1053	1525	74	13
2.	39.51	57.22	2.78	0.49

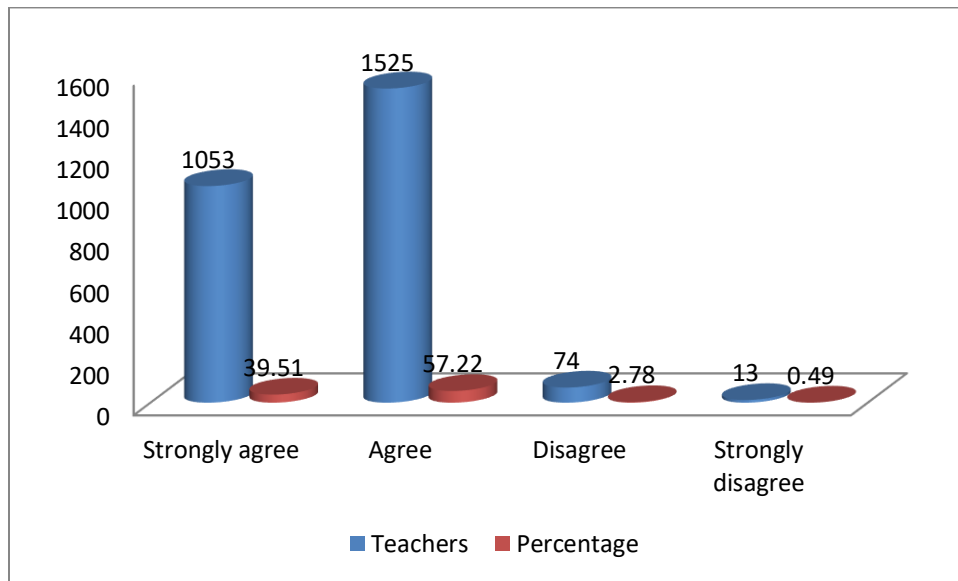


Figure 4.6.3.2 Percentage of teachers who said that the illustrations are taken from local situations

From the results of table 4.6.3.2 and the corresponding figure 4.6.3.2 it can be seen that 1053 (39.51%) teachers strongly agree, 1525(57.22%) teachers agree and 74 (2.78%) teachers disagree with the question that the illustrations are taken from local situations, while 13 (0.49%) teachers strongly disagree with the question.

4.6.4 To what extent is the textbook effective in terms of the language teaching methods?

4.6.4.1 Percentage of teachers who said that the textbook adopts an eclectic approach (i.e. It includes features of distinctive methods)

Table 4.6.4.1 Percentage of teachers who said that the textbook adopts an eclectic approach (i.e. It includes features of distinctive methods)

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1041	1583	31	10
2.	39.06	59.40	1.16	0.38

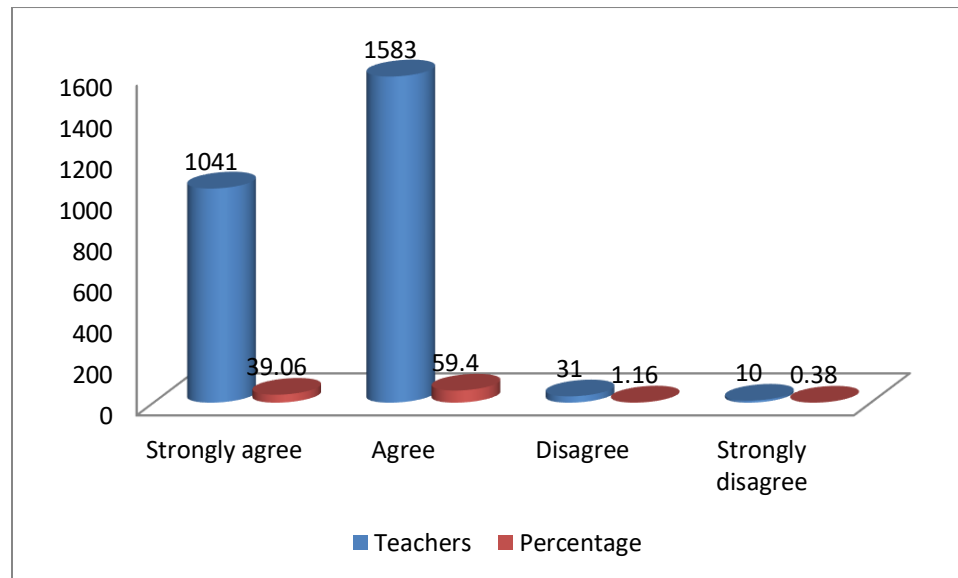


Figure 4.6.4.1 Percentage of teachers who said that the textbook adopts an eclectic approach (i.e. It includes features of distinctive methods)

From the results of table 4.6.4.1 and the corresponding figure 4.6.4.1 it can be seen that 1041 (39.06%) teachers strongly agree, 1583(59.4%) teachers agree and 31 (1.16%) teachers disagree with the question that the textbook adopts an eclectic approach. (i.e. It includes features of distinctive methods). While 10 (0.38%) teachers strongly disagree with the question.

4.6.4.2 Percentage of teachers who said that Student centered methods like play-way, discovery and activities are given place

Table 4.6.4.2 Percentage of teachers who said that Student centered methods like play-way, discovery and activities are given place

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1100	1526	29	10
2.	41.28	57.26	1.09	0.38

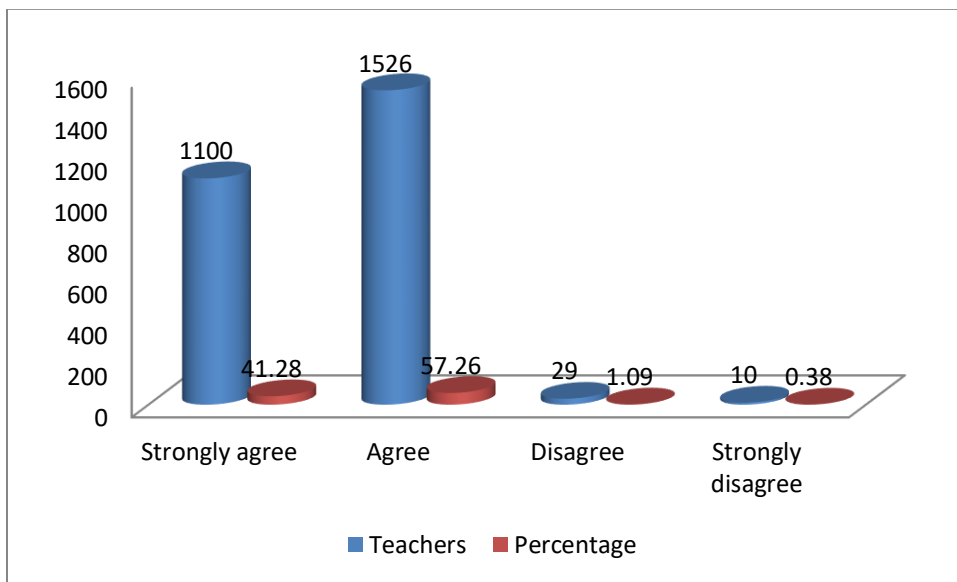


Figure 4.6.4.2 Percentage of teachers who said that Student centered methods like play-way, discovery and activities are given place

From the results of table 4.6.4.2 and the corresponding figure 4.6.4.2 it can be seen that 1100 (41.28%) teachers strongly agree, 1526(57.26%) teachers agree and 29 (1.09%) teachers disagree with the question that Student centered methods like play-way, discovery and activities are given place, while 10 (0.38%) teachers strongly disagree with the question.

4.6.4.3 Percentage of teachers who said that Difficult concepts are made easier through the integration of Arts

Table 4.6.4.3 Percentage of teachers who said that Difficult concepts are made easier through the integration of Arts

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1068	1545	41	11
2.	40.08	57.97	1.54	0.41

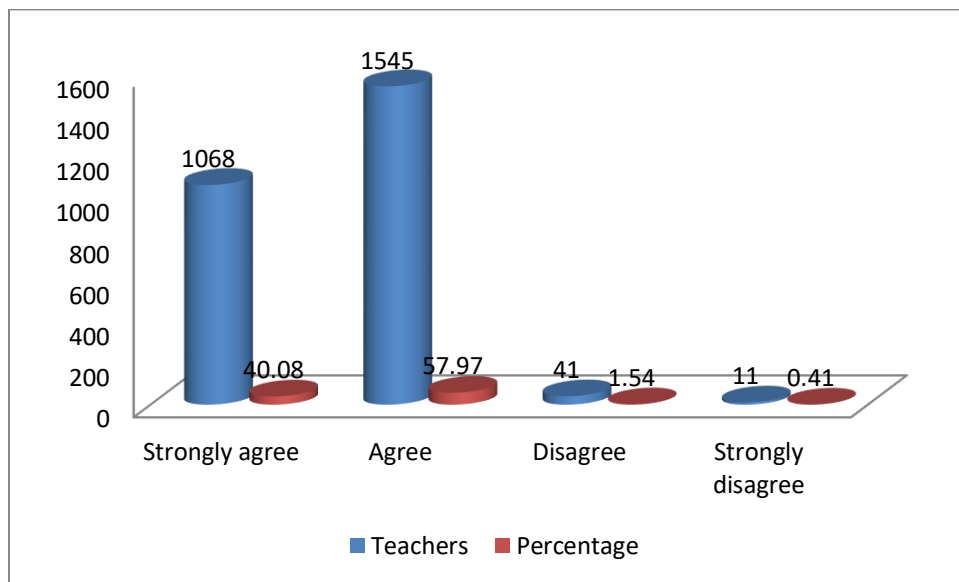


Figure 4.6.4.3 Percentage of teachers who said that Difficult concepts are made easier through the integration of Arts

From the results of table 4.6.4.3 and the corresponding figure 4.6.4.3 it can be seen that 1068 (40.08%) teachers strongly agree, 1545 (57.97%) teachers agree and 41 (1.54%) teachers

disagree with the question that the difficult concepts are made easier through the integration of arts, while 11 (0.41%) teachers strongly disagree with the question.

4.6.4.4 Percentage of teachers who said that Digital learning methods ET/ ICT have been used to promote learning

Table 4.6.4.4 Percentage of teachers who said that Digital learning methods ET/ ICT have been used to promote learning

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	998	1576	76	15
2.	37.45	59.14	2.85	0.56

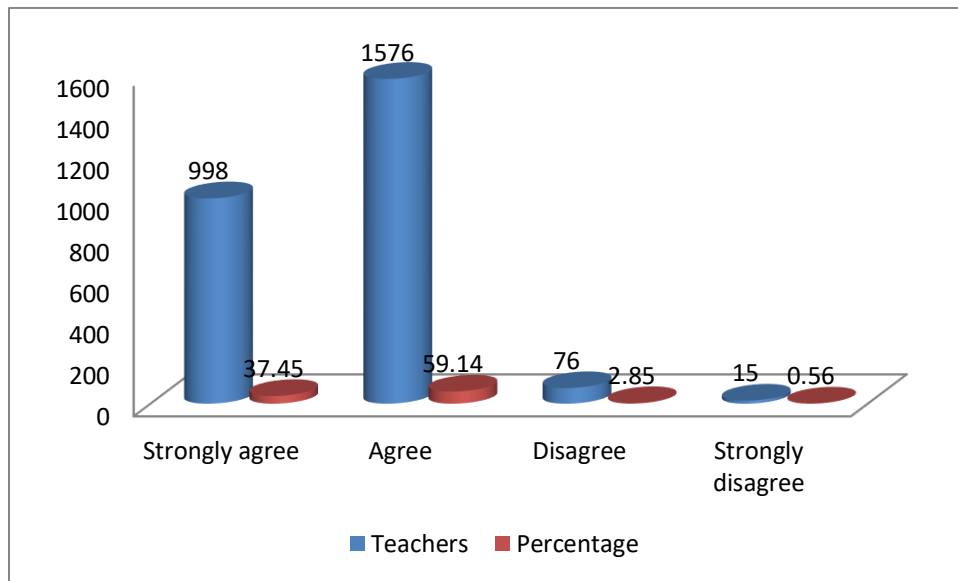


Figure 4.6.4.4 Percentage of teachers who said that Digital learning methods ET/ ICT have been used to promote learning

From the results of table 4.6.4.4 and the corresponding figure 4.6.4.4 it can be seen that 998 (37.45%) teachers strongly agree, 1576 (59.14%) teachers agree and 76 (2.85%) teachers disagree

the with question that the Digital learning methods ET/ ICT have been used to promote learning, while 15 (0.56%) teachers strongly disagree to the question.

4.6.4.5 Percentage of teachers who said that the methods employed encourage students to speak

Table 4.6.4.5 Percentage of teachers who said that the methods employed encourage students to speak

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	1032	1593	29	11
2.	38.72	59.77	1.09	0.41

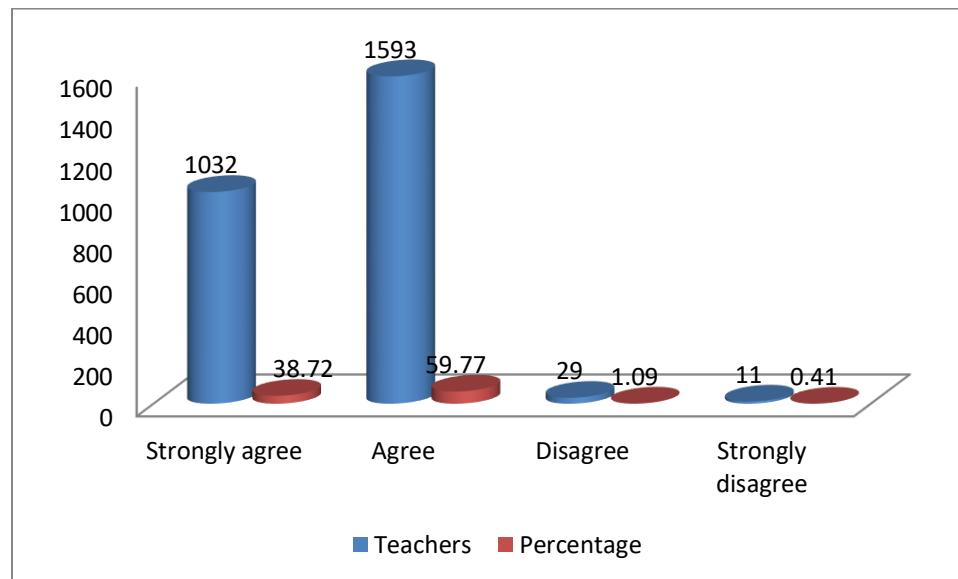


Figure 4.6.4.5 Percentage of teachers who said that the methods employed encourage students to speak

From the results of table 4.6.4.5 and the corresponding figure 4.6.4.5 it can be seen that 1032 (38.72%) teachers strongly agree, 1593 (59.77%) teachers agree and 29 (1.09%) teachers disagree the with question that the methods employed encourage students to speak. While 11 (0.41%) teachers strongly disagree to the question.

4.6.4.6 Percentage of teachers who said that The innovative methods - peer tutoring, community services, book club, library etc. find place in the textbook

Table 4.6.4.6 Percentage of teachers who said that The innovative methods - peer tutoring, community services, book club, library etc. find place in the textbook

N=2665

S.N.	Strongly agree	Agree	Disagree	Strongly disagree
1.	938	1648	68	11
2.	35.20	61.84	2.55	0.41

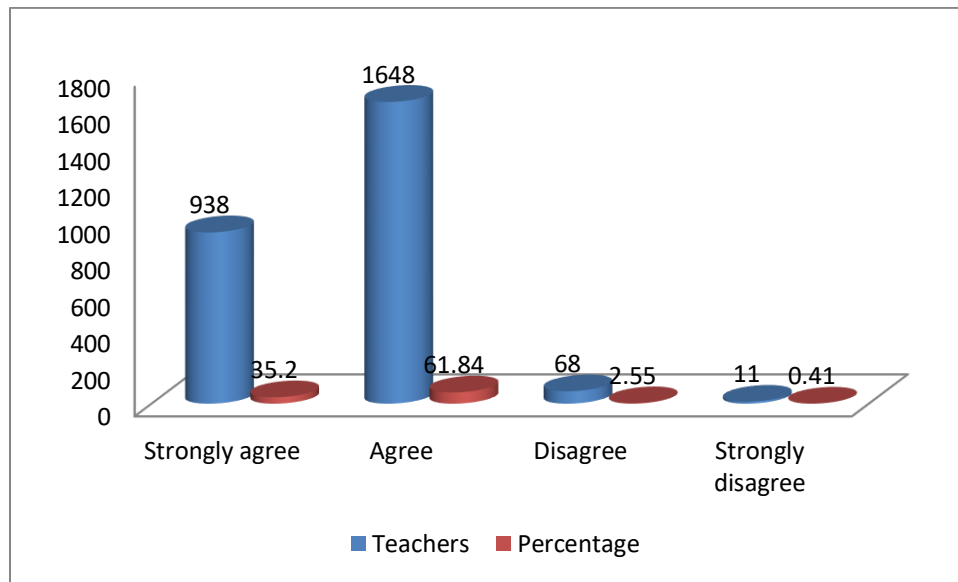


Figure 4.6.4.6 Percentage of teachers who said that The innovative methods - peer tutoring, community services, book club, library etc. find place in the textbook

From the results of table 4.6.4.6 and the corresponding figure 4.6.4.6 it can be seen that 938 (35.2%) teachers strongly agree, 1648 (61.84%) teachers agree and 68 (2.55%) teachers disagree the with question that the innovative methods - peer tutoring, community services, book club, library etc. find place in the textbook, while 11(0.41%) teachers strongly disagree with the question.

4.6.5 To what extent does assessment find its place in the textbook?

4.6.5.1 Percentage of teachers who said that Assessment is given place at regular intervals

Table 4.6.5.1 Percentage of teachers who said that Assessment is given place at regular intervals

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1031	1581	43	10
2	38.69	59.32	1.61	0.38

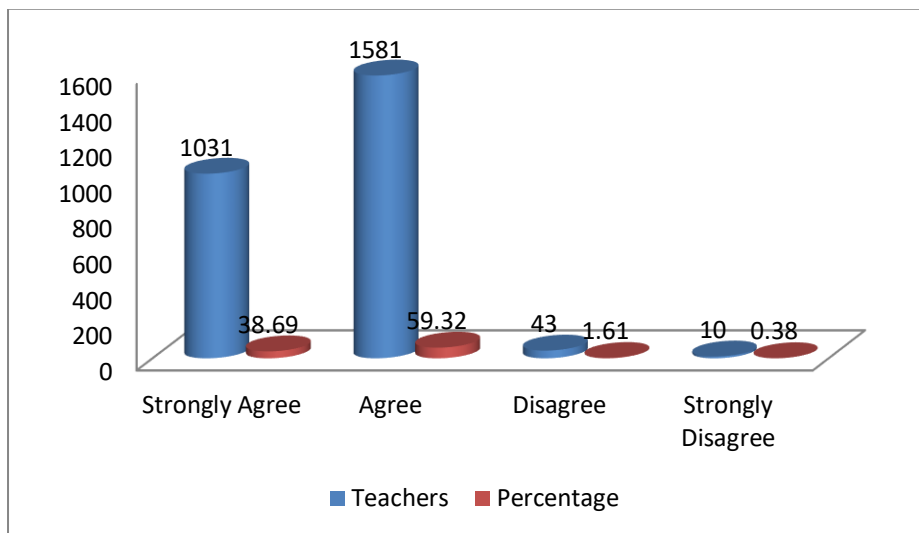


Figure 4.6.5.1 Percentage of teachers who said that Assessment is given place at regular intervals

From the results of table 4.6.5.1 and the corresponding figure 4.6.5.1 it can be seen that 1031 (38.69%) teachers strongly agree, 1581 (59.32%) teachers agree and 43 (1.61%) teachers disagree the with question that Assessment is given place at regular intervals, while 10 (0.38%) teachers strongly disagree with the question.

4.6.5.2 Percentage of teachers who said that Simple methods like quizzes, puzzles, local songs etc. are used to assess learning

Table 4.6.5.2 Percentage of teachers who said that Simple methods like quizzes, puzzles, local songs etc. are used to assess learning

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1031	1579	43	12
2	38.69	59.25	1.61	0.45

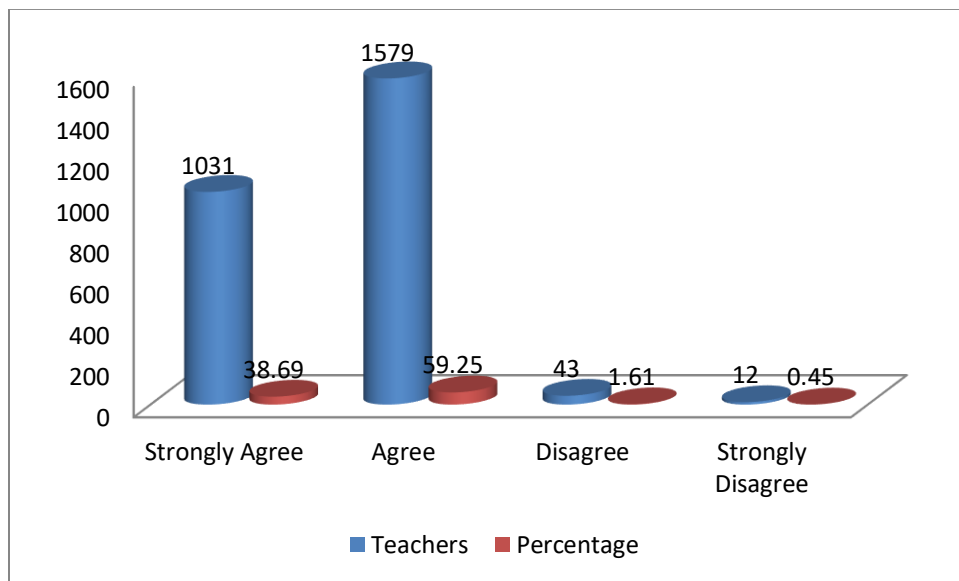


Figure 4.6.5.2 Percentage of teachers who said that Simple methods like quizzes, puzzles, local songs etc. are used to assess learning

From the results of table 4.6.5.2 and the corresponding figure 4.6.5.2 it can be seen that 1031 (38.69%) teachers strongly agree, 1579 (59.25%) teachers agree and 43 (1.61%) teachers disagree the with question that Simple methods like quizzes, puzzles, local songs etc. are used to assess learning. While 12 (0.45%) teachers strongly disagree with the question.

4.6.5.3 Percentage of teachers who said that the methods employed for assessment provide opportunities to know about the status of learning and find out gaps in learning

Table 4.6.5.3 Percentage of teachers who said that the methods employed for assessment provide opportunities to know about the status of learning and find out gaps in learning

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	969	1636	50	10
2	36.36	61.39	1.88	0.38

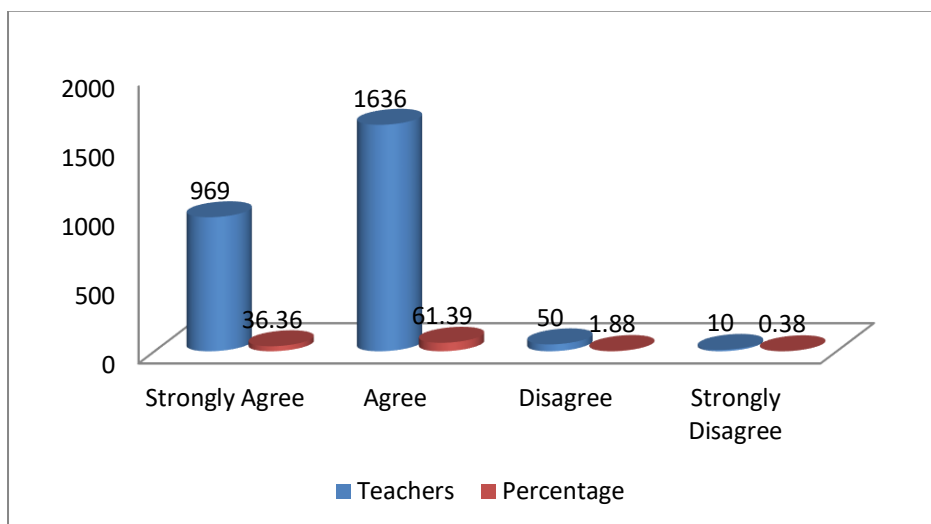


Figure 4.6.5.3 Percentage of teachers who said that the methods employed for assessment provide opportunities to know about the status of learning and find out gaps in learning

From the results of table 4.6.5.3 and the corresponding figure 4.6.5.3 it can be seen that 969 (36.36%) teachers strongly agree, 1636 (61.39%) teachers agree and 50 (1.88%) teachers disagree with the question that the methods employed for assessment provide opportunities to know about the status of learning and find out gaps in learning, while 10 (0.38%) teachers strongly disagree with the question.

4.6.6 Are the accompanying materials helpful?

4.6.6.1 Percentage of teachers who said that the accompanying materials (digital learning corners, teachers guide, workbook, etc.) are available and easily accessible

Table 4.6.6.1 Percentage of teachers who said that the accompanying materials (digital learning corners, teachers guide, workbook, etc.) are available and easily accessible

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	1003	1522	127	13
2	37.64	57.11	4.77	0.49

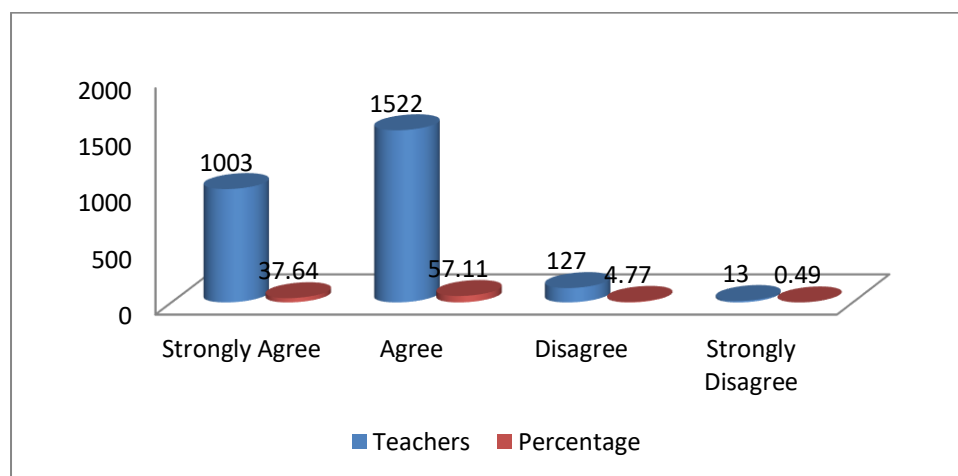


Figure 4.6.6.1 Percentage of teachers who said that the accompanying materials (digital learning corners, teachers guide, workbook, etc.) are available and easily accessible

From the results of table 4.6.6.1 and the corresponding figure 4.6.6.1 it can be seen that 1003 (37.64%) teachers strongly agree, 1522 (57.11%) teachers agree and 127 (4.77%) teachers disagree with question that the accompanying materials (digital learning corners, teachers guide, workbook, etc.) are available and easily accessible; while 13 (0.49%) teachers strongly disagree with the question.

4.6.6.2 Percentage of teachers who said that the accompanying materials (digital learning corners, teachers guide, workbook, etc.) are suitable for students

Table 4.6.6.2 Percentage of teachers who said that the accompanying materials (digital learning corners, teachers guide, workbook, etc.) are suitable for students

N=2665

S.NO.	Strongly Agree	Agree	Disagree	Strongly Disagree
1	976	1579	98	12
2	36.62	59.25	3.68	0.45

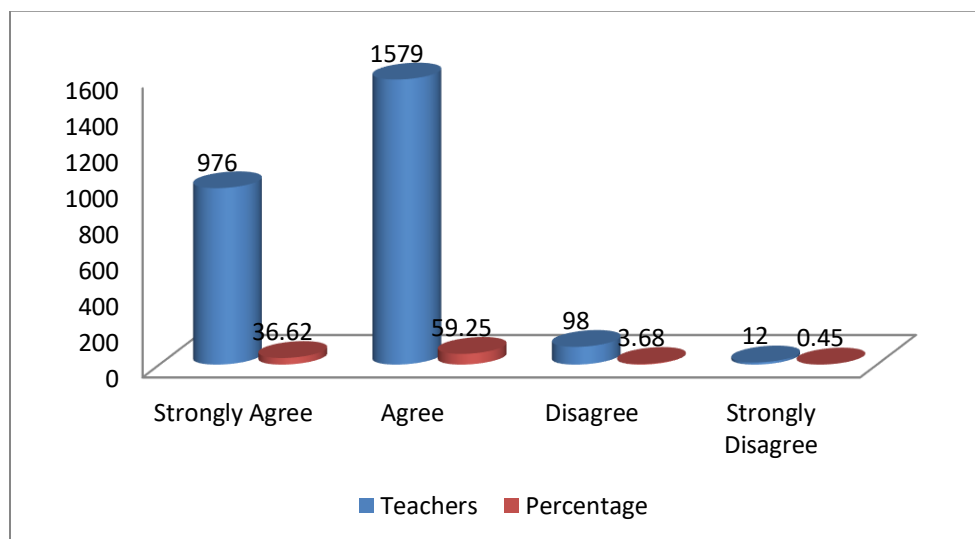


Figure 4.6.6.2 Percentage of teachers who said that the accompanying materials (digital learning corners, teachers guide, workbook, etc.) are suitable for students

From the results of table **4.6.6.2** and the corresponding figure **4.6.6.2** it can be seen that 976 (36.62%) teachers strongly agree, 1579 (59.25%) teachers agree and 98 (3.68%) teachers disagree with the question that the accompanying materials (digital learning corners, teachers guide, workbook, etc.) are suitable for students, while 12 (0.45%) teachers strongly disagree with the question.

4.7 Findings

1. 1476 (55.38%) teachers strongly agree, 1160 (43.53%) teachers agree, 4 (0.15%) teachers disagree while 25 (0.94%) teachers strongly disagree with the question that the cover of the textbook is attractive.
2. 1313 (49.27%) teachers strongly agree, 1309 (49.12%) teachers agree and 20 (0.75%) teachers disagree while 23(0.86%) of the teachers strongly disagree with the question that the cover page of the book reflects the subject matter.
3. 1445 (54.22%) teachers strongly agree, 1161 (43.56%) teachers agree, 34 (1.28%) teachers disagree and 25 (0.94%) teachers strongly disagree to the question that printing of the book is legible.
4. 1493 (56.02%) teachers strongly agree, 1113 (41.76%) teachers agree, 28 (1.05%) teachers disagree, while 31 (1.16%) teachers strongly disagree with the question that the font size of the book is suitable for the class and age.
5. 1212 (45.48%) teachers strongly agree, 1389 (52.12%) teachers agree and 41 (1.54%) teachers disagree, while 23 (0.86%) teachers strongly disagree to the question that textbook has a complete and detailed table of contents.
6. 6.1364 (51.18%) teachers strongly agree, 1254 (47.05%) teachers agree and 23 (0.86%) teachers disagree, while 24 (0.90%) teachers strongly disagree to the question that the main headings and subheadings in the textbook are well organized.
7. 1307 (49.04%) teachers strongly agree, 1301 (48.82%) teachers agree and 28 (1.05%) teachers disagree, while 29 (1.09%) teachers strongly disagree to the question that instructions in the textbook help to grasp the content well.

8. 1172 (43.98%) teachers strongly agree, 1440 (54.03%) teachers agree and 36 (1.35%) teachers disagree, while 17 (1.64%) teachers strongly disagree to the question that the content is organized according to the students language needs
9. 1165 (43.71%) teachers strongly agree, 1429 (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 (0.6%) teachers strongly disagree with the question.
10. 1146 (43%) teachers strongly agree, 1456 (54.63%) teachers agree and 46 (1.73%) teachers disagree with the question that the topics of units are interesting for students, while 17(0.64%) teachers strongly disagree.
11. 1239(46.49%) teachers strongly agree, 1384(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.
12. 994 (37.3%) teachers strongly agree, 1562 (58.61%) teachers agree and 91 (3.14%) - teachers disagree to the question that listening materials are well-recorded. While 18 (0.68%) teachers strongly disagree to the question that Listening materials are well-recorded.
13. 998 (37.45%) teachers strongly agree, 1575(59.1%) teachers agree and 71 (2.66%) - teachers disagree to the question that the listening materials use Standard English language. While 21(0.79%) teachers strongly disagree to the question that the listening materials use standard English language
14. 959(35.98%) teachers strongly agree, 1593(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 to the question that the textbook materials offer a great range of listening texts.
15. 1093 teachers strongly agree, 1515(56.85%) teachers agree and 41 (1.54%) teachers disagree to the question that Textbook activities can help students to improve their listening skills. While 16(0.6%) teachers strongly disagree to the question that Textbook activities can help students to improve their listening skills.
16. 1073(40.26%) teachers strongly agree, 1531(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.

17. 951 (35.68%) teachers strongly agree, 1605(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.
18. 1057(39.66%) teachers strongly agree, 1537(57.67%) teachers agree and 56 (2.1%) - teachers disagree to the question that reading tasks are appropriate for improving students' reading skills. While 15 (0.56%) teachers strongly disagree to the question that the reading tasks are appropriate for improving students' reading skills.
19. 1081(40.56%) teachers strongly agree, 1527(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 that the Reading activities can motivate students.
20. 1084(40.68%) teachers strongly agree, 1517(56.92%) teachers agree and 48 (1.8%) - teachers disagree to the question that Reading activities can help learners become effective readers. While 16 (0.6%) teachers strongly disagree to the question that the reading activities can help learners become effective readers.
21. 1137(42.66%) teachers strongly agree, 1466(55.01%) teachers agree and 46 (1.73%) - teachers disagree to the question that there is a variety of reading material (eg. Prose, poetry, etc.); while 16 (0.6%) teachers strongly disagree to the question that the there is a variety of reading material (eg. Prose, poetry, etc.).
22. 1098(41.2%) teachers strongly agree, 1505(56.47%) teachers agree and 46 (1.73%) - teachers disagree to the question that reading materials help learners to use English language in daily life, while 16 (0.6%) teachers strongly disagree to the question that the reading materials help learners to use English language in daily life.
23. 1160 (43.53%) teachers strongly agree, 1454 (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.
24. 1018 (38.2%) teachers strongly agree, 1551 (58.2%) teachers agree and 81(3.04%) - teachers disagree to the question that the writing tasks are appropriate for improving

students' grammar and composition. While 15 (0.56%) teachers strongly disagree to the question that the writing tasks are appropriate for improving students' grammar and composition.

25. 1050 (39.4%) teachers strongly agree, 1550 (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 disagree profoundly with the question.
26. 1087 (40.79%) teachers strongly agree, 1521 (57.07%) teachers agree and 40 (1.5%) teachers disagree with the question that the writing tasks are suitable in terms of accuracy. Whereas, 17 (0.64%) teachers strongly disagree with this question.
27. 1109 (41.61%) teachers strongly agree, 1484(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.
28. 1045 (39.21%) teachers strongly agree that the vocabulary items are sorted from simple to complex, 1541 (57.82%) teachers agree, and 61 (2.29%) teachers disagree, while 18(0.68%) teachers strongly disagree with this question at all.
29. 1042(39.1%) teachers strongly agree, 1534(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.
30. 995(37.34%) teachers strongly agree, 1564(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.
31. 1045 (39.21%) teachers strongly agree, 1541 (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.
32. 978(36.7%) teachers strongly agree, 1607 (50.3%) teachers agree and 65 (2.44%) - teachers disagree to the question that the grammatical structures are presented inductively. While 15 (0.56%) of the teachers strongly disagree with the question.

33. 1269(47.62%) teachers strongly agree, 1364 (51.18%) teachers agree and 19 (0.71%) - teachers disagree to the question that Visuals pictorial formats with local are provided to understand the numbers. While 13 (0.49%) of the teachers strongly disagree with the question.
34. 1201(45.07%) teachers strongly agree, 1420 (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.
35. 1259(47.24%) teachers strongly agree, 1367 (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.
36. 1180(44.28%) teachers strongly agree, 1433 (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.
37. 1146(43.00%) teachers strongly agree, 1461 (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.
38. 1067(40.04%) teachers strongly agree, 1545 (57.97%) teachers agree and 33 (1.24%) - teachers disagree to the question that the data handling skill has been promoted in the textbook through visuals and numerical activities. While 16 (0.6%) of the teachers strongly disagree with the question.
39. 1055(39.59%) teachers strongly agree, 1539 (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.
40. 1068(40.08%) teachers strongly agree, 1540(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 (0.6%) of the teachers strongly disagree with the question.

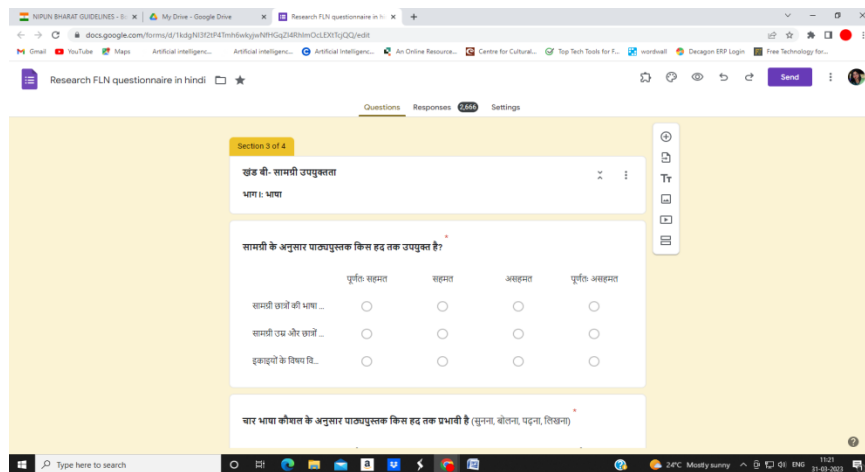
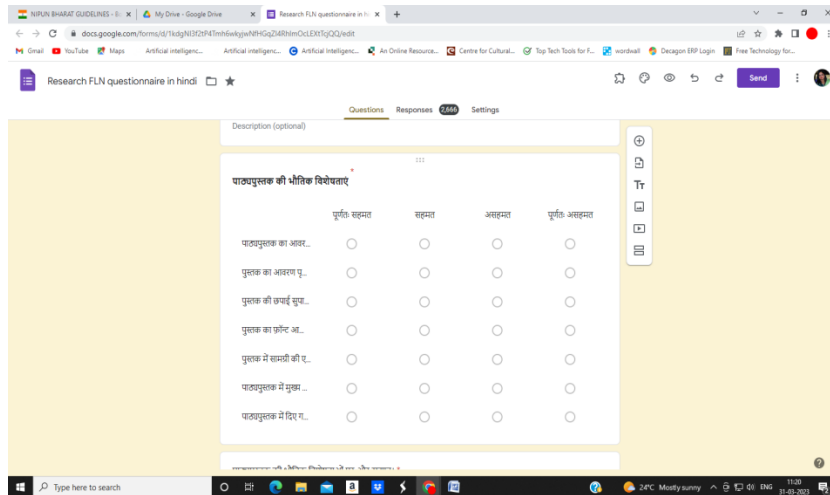
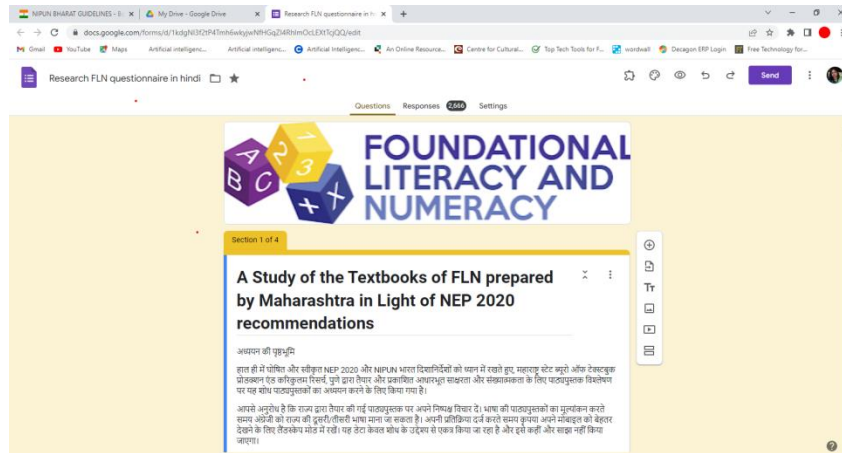
41. 1050(39.4%) teachers strongly agree, 1560 (58.54%) teachers agree and 38 (1.43%) - teachers disagree with the question that difficulty level of mathematical concepts and operations are progressively increased within and between classes. While 17 (0.64%) of the teachers strongly disagree with the question.
42. 1083 (40.64%) teachers strongly agree, 1534 (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.
43. 1072(40.23%) teachers strongly agree, 1531(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(0.6%) teachers strongly disagree with the question.
44. 1026 (38.5%) teachers strongly agree, 1571 (58.95%) teachers agree and 52 (1.95%) - teachers disagree with the question that the Items/activities help in the development of 21st century skills. While 16 (0.6%) of the teachers strongly disagree with the question.
45. 1167 (43.79%) teachers strongly agree, 1454 (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.
46. 1107 (41.54%) teachers strongly agree, 1514 (56.81%) teachers agree and 28 (1.05%) - teachers disagree with the question that the activities, exercises given in the textbook are helpful in recognizing/ developing numbers. While 16 (0.60%) of the teachers strongly disagree with the question.
47. 1118 (41.95%) teachers strongly agree, 1499 (56.25%) teachers agree and 35 (1.31%) - teachers disagree with the question that the content is linked to the previous knowledge.(Advance organizer approach). While 13 (0.49%) of the teachers strongly disagree with the question.

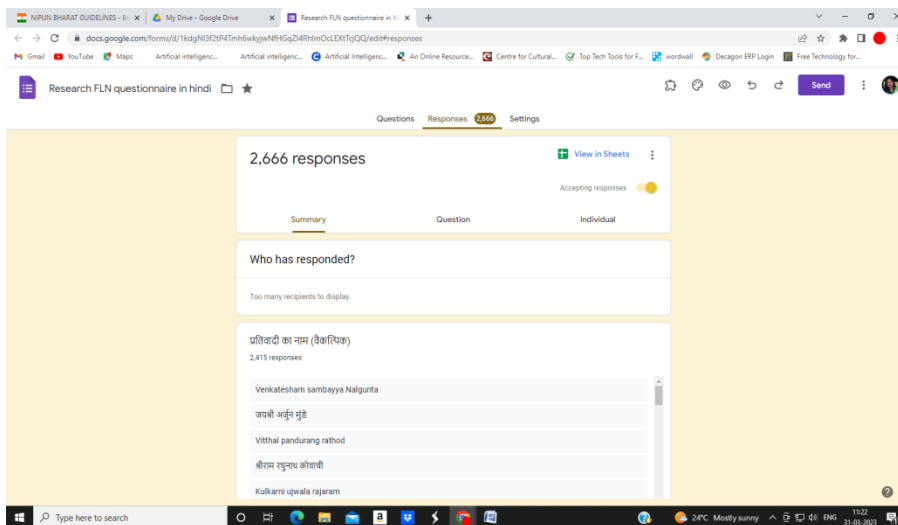
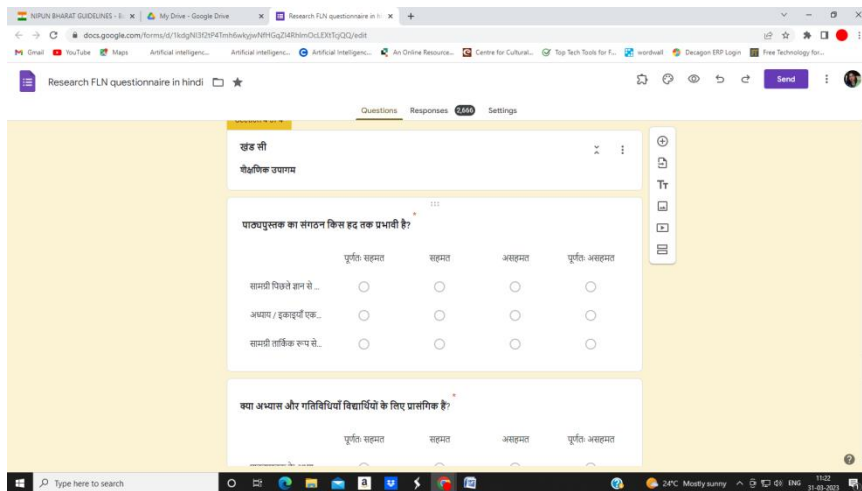
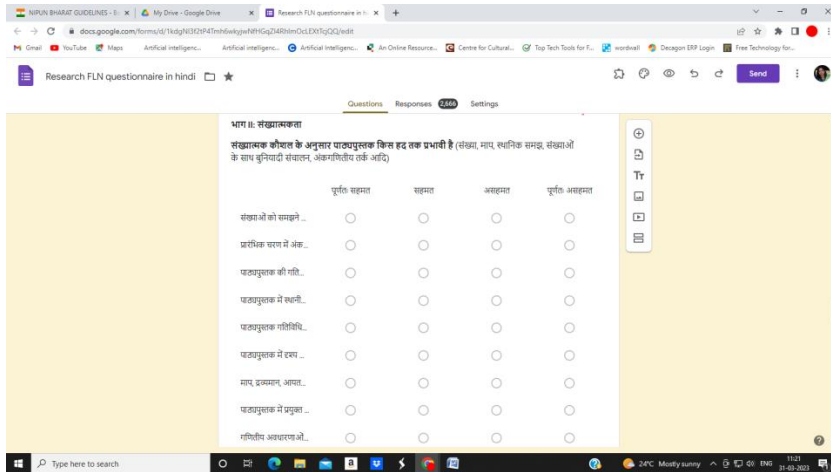
48. 1102 (41.35%) teachers strongly agree, 1511 (56.7%) teachers agree and 39 (1.46%) - teachers disagree with the question that the Chapters/ Units are interrelated with each other. While 13 (0.49%) of the teachers strongly disagree with the question.
49. 1072 (40.23%) teachers strongly agree, 1538 (57.71%) teachers agree and 41 (1.54%) - teachers disagree with the question that the Content is logically organized (Simple to Complex). While 14 (0.53%) of the teachers strongly disagree with the question.
50. 1104 (41.43%) teachers strongly agree, 1522(57.11%) teachers agree and 30 (1.13%) teachers disagree with the question that the exercises in the textbook are relevant to the students' interests; While 9(0.34%) teachers strongly disagree with the question.
51. 974 (36.55%) teachers strongly agree, 1619(60.75%) teachers agree and 60 (2.25%) teachers disagree with the question that the exercises promote meaningful communication by referring to realistic situations. While 12(0.45%) teachers strongly disagree with the question.
52. 1023 (38.39%) teachers strongly agree, 1593(59.77%) teachers agree and 37 (1.39%) teachers disagree with the question that the activities encourage learning and implementing integrated use of skills for purposeful communication; While 12 (0.45%) teachers strongly disagree with the question.
53. 1003 (37.64%) teachers strongly agree, 1607(50.3%) teachers agree and 45 (1.69%) teachers disagree with the question that the activities in the textbook help the students to use English as a means of communication. While 10 (0.38%) teachers strongly disagree with the question.
54. 1038 (38.95%) teachers strongly agree, 1571(58.95%) teachers agree and 45 (1.69%) teachers disagree with the question that the units in the textbook provide students coverage of the four main skills and other sub-skills (vocabulary and grammar), while 11 (0.41%) teachers strongly disagree with the question.
55. 1024 (38.42%) teachers strongly agree, 1525(57.22%) teachers agree and 99 (3.71%) teachers disagree with the question that the activities, exercises given in the textbook includes local language to help the students. While 17 (0.64%) teachers strongly disagree with the question.

56. 1053 (39.51%) teachers strongly agree, 1525(57.22%) teachers agree and 74 (2.78%) teachers disagree with the question that the illustrations are taken from local situations, while 13 (0.49%) teachers strongly disagree with the question.
57. 1041 (39.06%) teachers strongly agree, 1583(59.4%) teachers agree and 31 (1.16%) teachers disagree with the question that the textbook adopts an eclectic approach. (i.e. It includes features of distinctive methods). While 10 (0.38%) teachers strongly disagree with the question.
58. 1100 (41.28%) teachers strongly agree, 1526(57.26%) teachers agree and 29 (1.09%) teachers disagree with the question that Student centered methods like play-way, discovery and activities are given place, while 10 (0.38%) teachers strongly disagree with the question.
59. 1068 (40.08%) teachers strongly agree, 1545 (57.97%) teachers agree and 41 (1.54%) teachers disagree with the question that the difficult concepts are made easier through the integration of arts, while 11 (0.41%) teachers strongly disagree with the question.
60. 998 (37.45%) teachers strongly agree, 1576(59.14%) teachers agree and 76 (2.85%) - teachers disagree with the question that the Digital learning methods ET/ ICT have been used to promote learning, while 15 (0.56%) teachers strongly disagree to the question.
61. 1032 (38.72%) teachers strongly agree, 1593(59.77%) teachers agree and 29 (1.09%) - teachers disagree the with question that the methods employed encourage students to speak. While 11 (0.41%) teachers strongly disagree to the question.
62. 938 (35.2%) teachers strongly agree, 1648 (61.84%) teachers agree and 68 (2.55%) - teachers disagree the with question that the innovative methods - peer tutoring, community services, book club, library etc. find place in the textbook, while 11(0.41%) teachers strongly disagree with the question.
63. 1031 (38.69%) teachers strongly agree, 1581 (59.32%) teachers agree and 43 (1.61%) - teachers disagree the with question that Assessment is given place at regular intervals, while 10 (0.38%) teachers strongly disagree with the question.
64. 1031 (38.69%) teachers strongly agree, 1579 (59.25%) teachers agree and 43 (1.61%) teachers disagree the with question that Simple methods like quizzes, puzzles, local songs etc. are used to assess learning. While 12 (0.45%) teachers strongly disagree with the question.

65. 969 (36.36%) teachers strongly agree, 1636 (61.39%) teachers agree and 50 (1.88%) teachers disagree with the question that the methods employed for assessment provide opportunities to know about the status of learning and find out gaps in learning, while 10 (0.38%) teachers strongly disagree with the question.
66. 1003 (37.64%) teachers strongly agree, 1522 (57.11%) teachers agree and 127 (4.77%) teachers disagree with the question that the accompanying materials (digital learning corners, teachers guide, workbook, etc.) are available and easily accessible; while 13 (0.49%) teachers strongly disagree with the question.
67. 976 (36.62%) teachers strongly agree, 1579 (59.25%) teachers agree and 98 (3.68%) teachers disagree with the question that the accompanying materials (digital learning corners, teachers guide, workbook, etc.) are suitable for students, while 12 (0.45%) teachers strongly disagree with the question.

Pictures of Data Collection





Chapter 5- Summary

5.0 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 it as they go in their education.

At this early stage of learning, textbooks are essential. They give a well-organized 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 a crucial teaching resource as well. 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 own 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 move between 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.

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.

5.1 Need and Justification of the problem

Foundational Literacy and numeracy is 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 with both these aspects will essentially do well when they will be required to connect new knowledge with already existing knowledge. The present study is based on the mandate of the NEP 2020 which suggests primary focus on foundational literacy and numeracy. The NEP 2020 clearly states the following in Part I (point number 2 and 4) of the document-

2. Foundational Literacy and Numeracy: An Urgent & 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 foundational literacy and numeracy, i.e., the ability to read and comprehend basic text and the ability to carry out basic addition and subtraction with Indian numerals.

2.4. On the curricular side, there will be an increased focus on foundational literacy and numeracy - 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 individualize and ensure each student's learning. Specific hours daily - and regular events over the year-on activities 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 foundational literacy and numeracy

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

States will prepare their own curricula (which may be based on the 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 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

5.2 Objectives of the Study

The objectives of the study are-

1. To study the physical features of the textbooks of Foundational Literacy and Numeracy prepared by State Council of Educational Research and Training, Pune, Maharashtra.
2. To analyse the Content Appropriateness of the textbooks as per National Education Policy 2020 and NIPUN Bharat guidelines.
3. To study the pedagogical approaches utilized for transaction of content in the textbooks.

5.3 Research Questions

1. What are the physical features of the textbooks of Foundational Literacy and Numeracy developed by the State Council of Educational Research and Training, Pune, Maharashtra?
2. How does the content of the textbooks align with the guidelines set by National Education Policy 2020 and NIPUN Bharat in terms of appropriateness?

3. What pedagogical approaches are used in the transaction of content in the textbooks, and how effective are they in facilitating student learning?

5.4 Method of the Research

The emphasis of this research is on gaining insight and looking into the textbooks for the Foundational stage prepared by the state of Maharashtra and whether these textbooks have been developed keeping in mind the goals and standards as set by the NEP 2020. To ascertain more about the range of perspectives, questionnaires with questions covering various dimensions were given to teachers teaching at the Foundational stage in the state of Maharashtra. Questionnaires are an efficient and effective means of achieving insight into a number of factors and viewpoints, potentially discovering patterns and contrasts. The Questionnaire was designed using a four point scale. The statements were formulated based on the research questions themselves and ideas which had developed from reading relevant literature relating in goals and identity. They dealt with the physical structure of the textbooks, content appropriateness and pedagogical processes adopted for transaction of content. Most statements required respondents to select one of four categories from strongly agree to strongly disagree. Space was available after each set of questions for further elaboration and suggestion. Questions to provide an understanding of the demographic setup were also asked, the aim of which was to investigate potential factors affecting teachers' beliefs. The present study is a mixed method research bringing in together the essential elements of both qualitative and quantitative research.

5.5 Data collection and analysis

The tool for data collection was developed in the workshop for tool development where eminent educationists were invited. The questions in the questionnaire were based on three factors of the textbooks which align with the objectives and research questions of the study, viz- physical structure, content appropriateness and pedagogical processes.

However, due to constraint of time and funds it was decided to integrate new age methods and technologies for data collection. The questionnaire was converted into a Google form and the link for the same was sent to the officials of MSCERT, who in turn shared it with teachers teaching at the foundational stage in the rural and urban schools of Maharashtra. A massive

response of 2665 was received from the teachers who shared their views on the areas mentioned in the Google form. Further suggestions on various dimensions were also invited in the form of open ended questions for any point that was not covered in the questionnaire. The identity of the respondents was also kept optional so that they could answer questions without any inhibition.

The responses received were analyzed, wherein the quantitative data received was converted into percentages and the responses to open questions were put together and analysed.

5.6 Major Findings and Conclusion

1. 1476 (55.38%) teachers strongly agree, 1160 (43.53%) teachers agree, 4 (0.15%) teachers disagree while 25 (0.94%) teachers strongly disagree with the question that the cover of the textbook is attractive.
2. 1313 (49.27%) teachers strongly agree, 1309 (49.12%) teachers agree and 20 (0.75%) teachers disagree while 23(0.86%) of the teachers strongly disagree with the question that the cover page of the book reflects the subject matter.
3. 1445 (54.22%) teachers strongly agree, 1161 (43.56%) teachers agree, 34 (1.28%) teachers disagree and 25 (0.94%) teachers strongly disagree to the question that printing of the book is legible.
4. 1493 (56.02%) teachers strongly agree, 1113 (41.76%) teachers agree, 28 (1.05%) teachers disagree, while 31 (1.16%) teachers strongly disagree with the question that the font size of the book is suitable for the class and age.
5. 1212 (45.48%) teachers strongly agree, 1389 (52.12%) teachers agree and 41 (1.54%) teachers disagree, while 23 (0.86%) teachers strongly disagree to the question that textbook has a complete and detailed table of contents.
6. 6.1364 (51.18%) teachers strongly agree, 1254 (47.05%) teachers agree and 23 (0.86%) teachers disagree, while 24 (0.90%) teachers strongly disagree to the question that the main headings and subheadings in the textbook are well organized.
7. 1307 (49.04%) teachers strongly agree, 1301 (48.82%) teachers agree and 28 (1.05%) teachers disagree, while 29 (1.09%) teachers strongly disagree to the question that instructions in the textbook help to grasp the content well.

8. 1172 (43.98%) teachers strongly agree, 1440 (54.03%) teachers agree and 36 (1.35%) teachers disagree, while 17 (1.64%) teachers strongly disagree to the question that the content is organized according to the students language needs
9. 1165 (43.71%) teachers strongly agree, 1429 (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 (0.6%) teachers strongly disagree with the question.
10. 1146 (43%) teachers strongly agree, 1456 (54.63%) teachers agree and 46 (1.73%) teachers disagree with the question that the topics of units are interesting for students, while 17(0.64%) teachers strongly disagree.
11. 1239(46.49%) teachers strongly agree, 1384(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.
12. 994 (37.3%) teachers strongly agree, 1562 (58.61%) teachers agree and 91 (3.14%) - teachers disagree to the question that listening materials are well-recorded. While 18 (0.68%) teachers strongly disagree to the question that Listening materials are well-recorded.
13. 998 (37.45%) teachers strongly agree, 1575(59.1%) teachers agree and 71 (2.66%) - teachers disagree to the question that the listening materials use Standard English language. While 21(0.79%) teachers strongly disagree to the question that the listening materials use standard English language
14. 959(35.98%) teachers strongly agree, 1593(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 to the question that the textbook materials offer a great range of listening texts.
15. 1093 teachers strongly agree, 1515(56.85%) teachers agree and 41 (1.54%) teachers disagree to the question that Textbook activities can help students to improve their listening skills. While 16(0.6%) teachers strongly disagree to the question that Textbook activities can help students to improve their listening skills.
16. 1073(40.26%) teachers strongly agree, 1531(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.

17. 951 (35.68%) teachers strongly agree, 1605(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.
18. 1057(39.66%) teachers strongly agree, 1537(57.67%) teachers agree and 56 (2.1%) - teachers disagree to the question that reading tasks are appropriate for improving students' reading skills. While 15 (0.56%) teachers strongly disagree to the question that the reading tasks are appropriate for improving students' reading skills.
19. 1081(40.56%) teachers strongly agree, 1527(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 that the Reading activities can motivate students.
20. 1084(40.68%) teachers strongly agree, 1517(56.92%) teachers agree and 48 (1.8%) - teachers disagree to the question that Reading activities can help learners become effective readers. While 16 (0.6%) teachers strongly disagree to the question that the reading activities can help learners become effective readers.
21. 1137(42.66%) teachers strongly agree, 1466(55.01%) teachers agree and 46 (1.73%) - teachers disagree to the question that there is a variety of reading material (eg. Prose, poetry, etc.); while 16 (0.6%) teachers strongly disagree to the question that the there is a variety of reading material (eg. Prose, poetry, etc.).
22. 1098(41.2%) teachers strongly agree, 1505(56.47%) teachers agree and 46 (1.73%) - teachers disagree to the question that reading materials help learners to use English language in daily life, while 16 (0.6%) teachers strongly disagree to the question that the reading materials help learners to use English language in daily life.
23. 1160 (43.53%) teachers strongly agree, 1454 (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.

24. 1018 (38.2%) teachers strongly agree, 1551 (58.2%) teachers agree and 81(3.04%) - teachers disagree to the question that the writing tasks are appropriate for improving students' grammar and composition. While 15 (0.56%) teachers strongly disagree to the question that the writing tasks are appropriate for improving students' grammar and composition.
25. 1050 (39.4%) teachers strongly agree, 1550 (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 disagree profoundly with the question.
26. 1087 (40.79%) teachers strongly agree, 1521 (57.07%) teachers agree and 40 (1.5%) teachers disagree with the question that the writing tasks are suitable in terms of accuracy. Whereas, 17 (0.64%) teachers strongly disagree with this question.
27. 1109 (41.61%) teachers strongly agree, 1484(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.
28. 1045 (39.21%) teachers strongly agree that the vocabulary items are sorted from simple to complex, 1541 (57.82%) teachers agree, and 61 (2.29%) teachers disagree, while 18(0.68%) teachers strongly disagree with this question at all.
29. 1042(39.1%) teachers strongly agree, 1534(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.
30. 995(37.34%) teachers strongly agree, 1564(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.
31. 1045 (39.21%) teachers strongly agree, 1541 (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.
32. 978(36.7%) teachers strongly agree, 1607 (50.3%) teachers agree and 65 (2.44%) - teachers disagree to the question that the grammatical structures are presented inductively. While 15 (0.56%) of the teachers strongly disagree with the question.

33. 1269(47.62%) teachers strongly agree, 1364 (51.18%) teachers agree and 19 (0.71%) - teachers disagree to the question that Visuals pictorial formats with local are provided to understand the numbers. While 13 (0.49%) of the teachers strongly disagree with the question.
34. 1201(45.07%) teachers strongly agree, 1420 (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.
35. 1259(47.24%) teachers strongly agree, 1367 (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.
36. 1180(44.28%) teachers strongly agree, 1433 (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.
37. 1146(43.00%) teachers strongly agree, 1461 (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.
38. 1067(40.04%) teachers strongly agree, 1545 (57.97%) teachers agree and 33 (1.24%) - teachers disagree to the question that the data handling skill has been promoted in the textbook through visuals and numerical activities. While 16 (0.6%) of the teachers strongly disagree with the question.
39. 1055(39.59%) teachers strongly agree, 1539 (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.

40. 1068(40.08%) teachers strongly agree, 1540(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 (0.6%) of the teachers strongly disagree with the question.
41. 1050(39.4%) teachers strongly agree, 1560 (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.
42. 1083 (40.64%) teachers strongly agree, 1534 (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.
43. 1072(40.23%) teachers strongly agree, 1531(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(0.6%) teachers strongly disagree with the question.
44. 1026 (38.5%) teachers strongly agree, 1571 (58.95%) teachers agree and 52 (1.95%) - teachers disagree with the question that the Items/activities help in the development of 21st century skills. While 16 (0.6%) of the teachers strongly disagree with the question.
45. 1167 (43.79%) teachers strongly agree, 1454 (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.
46. 1107 (41.54%) teachers strongly agree, 1514 (56.81%) teachers agree and 28 (1.05%) - teachers disagree with the question that the activities, exercises given in the textbook are helpful in recognizing/ developing numbers. While 16 (0.60%) of the teachers strongly disagree with the question.
47. 1118 (41.95%) teachers strongly agree, 1499 (56.25%) teachers agree and 35 (1.31%) - teachers disagree with the question that the content is linked to the previous

knowledge.(Advance organizer approach). While 13 (0.49%) of the teachers strongly disagree with the question.

48. 1102 (41.35%) teachers strongly agree, 1511 (56.7%) teachers agree and 39 (1.46%) - teachers disagree with the question that the Chapters/ Units are interrelated with each other. While 13 (0.49%) of the teachers strongly disagree with the question.

49. 1072 (40.23%) teachers strongly agree, 1538 (57.71%) teachers agree and 41 (1.54%) - teachers disagree with the question that the Content is logically organized (Simple to Complex). While 14 (0.53%) of the teachers strongly disagree with the question.

50. 1104 (41.43%) teachers strongly agree, 1522(57.11%) teachers agree and 30 (1.13%) teachers disagree with the question that the exercises in the textbook are relevant to the students' interests; While 9(0.34%) teachers strongly disagree with the question.

51. 974 (36.55%) teachers strongly agree, 1619(60.75%) teachers agree and 60 (2.25%) teachers disagree with the question that the exercises promote meaningful communication by referring to realistic situations. While 12(0.45%) teachers strongly disagree with the question.

52. 1023 (38.39%) teachers strongly agree, 1593(59.77%) teachers agree and 37 (1.39%) teachers disagree with the question that the activities encourage learning and implementing integrated use of skills for purposeful communication; While 12 (0.45%) teachers strongly disagree with the question.

53. 1003 (37.64%) teachers strongly agree, 1607(50.3%) teachers agree and 45 (1.69%) teachers disagree with the question that the activities in the textbook help the students to use English as a means of communication. While 10 (0.38%) teachers strongly disagree with the question.

54. 1038 (38.95%) teachers strongly agree, 1571(58.95%) teachers agree and 45 (1.69%) teachers disagree with the question that the units in the textbook provide students coverage of the four main skills and other sub-skills (vocabulary and grammar), while 11 (0.41%) teachers strongly disagree with the question.

55. 1024 (38.42%) teachers strongly agree, 1525(57.22%) teachers agree and 99 (3.71%) teachers disagree with the question that the activities, exercises given in the textbook includes local language to help the students. While 17 (0.64%) teachers strongly disagree with the question.

56. 1053 (39.51%) teachers strongly agree, 1525(57.22%) teachers agree and 74 (2.78%) teachers disagree with the question that the illustrations are taken from local situations, while 13 (0.49%) teachers strongly disagree with the question.
57. 1041 (39.06%) teachers strongly agree, 1583(59.4%) teachers agree and 31 (1.16%) teachers disagree with the question that the textbook adopts an eclectic approach. (i.e. It includes features of distinctive methods). While 10 (0.38%) teachers strongly disagree with the question.
58. 1100 (41.28%) teachers strongly agree, 1526(57.26%) teachers agree and 29 (1.09%) teachers disagree with the question that Student centered methods like play-way, discovery and activities are given place, while 10 (0.38%) teachers strongly disagree with the question.
59. 1068 (40.08%) teachers strongly agree, 1545 (57.97%) teachers agree and 41 (1.54%) teachers disagree with the question that the difficult concepts are made easier through the integration of arts, while 11 (0.41%) teachers strongly disagree with the question.
60. 998 (37.45%) teachers strongly agree, 1576(59.14%) teachers agree and 76 (2.85%) - teachers disagree with the question that the Digital learning methods ET/ ICT have been used to promote learning, while 15 (0.56%) teachers strongly disagree to the question.
61. 1032 (38.72%) teachers strongly agree, 1593(59.77%) teachers agree and 29 (1.09%) - teachers disagree the with question that the methods employed encourage students to speak. While 11 (0.41%) teachers strongly disagree to the question.
62. 938 (35.2%) teachers strongly agree, 1648 (61.84%) teachers agree and 68 (2.55%) - teachers disagree the with question that the innovative methods - peer tutoring, community services, book club, library etc. find place in the textbook, while 11(0.41%) teachers strongly disagree with the question.
63. 1031 (38.69%) teachers strongly agree, 1581 (59.32%) teachers agree and 43 (1.61%) - teachers disagree the with question that Assessment is given place at regular intervals, while 10 (0.38%) teachers strongly disagree with the question.
64. 1031 (38.69%) teachers strongly agree, 1579 (59.25%) teachers agree and 43 (1.61%) teachers disagree the with question that Simple methods like quizzes, puzzles, local songs etc. are used to assess learning. While 12 (0.45%) teachers strongly disagree with the question.

65. 969 (36.36%) teachers strongly agree, 1636 (61.39%) teachers agree and 50 (1.88%) teachers disagree with the question that the methods employed for assessment provide opportunities to know about the status of learning and find out gaps in learning, while 10 (0.38%) teachers strongly disagree with the question.
66. 1003 (37.64%) teachers strongly agree, 1522 (57.11%) teachers agree and 127 (4.77%) teachers disagree with the question that the accompanying materials (digital learning corners, teachers guide, workbook, etc.) are available and easily accessible; while 13 (0.49%) teachers strongly disagree with the question.
67. 976 (36.62%) teachers strongly agree, 1579 (59.25%) teachers agree and 98 (3.68%) teachers disagree with the question that the accompanying materials (digital learning corners, teachers guide, workbook, etc.) are suitable for students, while 12 (0.45%) teachers strongly disagree with the question.

5.7 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. If 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/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 which 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 utilized.
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 matrix 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 to 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. There should be an early identification of disability and learning difficulty in students with special needs so that they are provided suitable guidance at an early stage.
16. 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.
17. In addition to emphasising the acquisition of knowledge, teaching and learning should also emphasise the development of values, life skills, and other skills.
- 18.** For pupils with learning challenges, specialised eLearning materials for FLN (Mathematics and Reading Literacy) should be developed.
19. Critical thinking, communication, collaboration, and creativity are essential 21st-century learning abilities that should be incorporated into pedagogy. Emphasis should be on diversity, flexibility, and quality.

20. 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.
21. For students to be able to develop proficiency in each subject, classroom interactions should be built around incorporating real-life scenarios while keeping inter/multidisciplinary learning in mind.
22. Activities and group work to improve and inform about Health, hygiene and sanitation should find place in the curriculum.
23. More interactive and easily accessible e-content should be developed for all classes.
24. Pictorial representations with local contexts should be provided for practising the skill of writing.
25. Language used in textbooks of numeracy should be simplified and should be of the level of students.
26. More bilingual/multilingual books should be developed.
27. 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.
28. Teachers should upgrade themselves professionally by learning new skills, so that they can keep pace with the demands of the time..

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Appendices

Annexure-IIB

Detailed programme proposal for 2022-23 Format for Developing Proposals for DAB/IAB

ABSTRACT

1.	Title of Programme	A Study of the Textbooks of FLN prepared by Maharashtra in light of NEP 2020 Recommendations	
2.	Type (Research/Development/Training/ Extension) (Please mention only one of the above mentioned types)	Research	
3.	Category (New/New Regular/On-going/Carried Over) (If new, give justification in brief; if on-going, mention the progress; if carried over, give reasons for extension)	New	
4.	Specific Objectives	<ol style="list-style-type: none"> 1. To study the textbooks of FLN prepared by Maharashtra. 2. To assess whether the textbooks are prepared in accordance with the Learning Outcomes and NIPUN Bharat guidelines. 3. To assess whether the textbooks have good/sufficient illustration, printing etc. to motivate young learners in reading them. 4. To suggest changes for the improvements of textbooks. 	
5.	Methodology	Analytical research (qualitative and quantitative) .	
6.	Key Performance Indicators	KPIs	Target Date of Completion
		In house planning meeting	May 2022
		Workshop for development and finalization of tools	May 2022
		Data Collection	July 2022
		Data Analysis	October 2022

		Submission of report	December 2022
7.	Workshops/ Meetings Proposed	1. In- house planning meeting 2. 3 days' workshop for development and finalization of tools 3. Field visit/ data collection 4. 3 days' workshop on data analysis 5. Submission of report	
	Title of Workshops/Meetings	Proposed Months	Estimated Budget
	1. In- house planning meeting	May 2022	-
	2. 3 days' workshop for development of tools	May 2022	86316
	3. Field visit/ data collection	July 2022	55000
	4. 3 days' workshop on data analysis	October 2022	86316
	5. Submission of report	December 2022	25000
8.	Total Budget	Rs. 4,52,632/-	
9.	Plans for utilization and dissemination of the end product (s)	As this is a state need findings and suggestions will be shared with the state of Maharashtra. Moreover, these findings and suggestions can be taken in consideration by other states when developing and reviewing their textbooks.	

'New' programme is proposed a fresh during the year.

New Regular (N-R) are programmes which are being conducted every year (such as journals, courses) but taken up every year.

'On-going' programme is one which is approved in the preceding PAC and spans for more than one year. Some part of the previously approved programme has to be taken up this year too.

'Carried Over' programme is one which is not completed as proposed and approved in the PAC and needs additional time and budget for completing it.

PROFORMA FOR PROGRAMME PROPOSALS

1.	Name of the NCERT Constituent/ Department/Div/Group	RIE, Bhopal
2.	Title of the Programme	A Study of the Textbooks of FLN prepared by Maharashtra in light of NEP 2020 Recommendations
3.	(a) Type of the Programme (Research/Development/Training/ Extension/) Please mention only one of the above mentioned types.	Research
	(b) Category of the Programme (New/New-Regular/On-going/Carried Over)	New
	(c) If the programme is on-going or	

	carried over mention the PAC Code No. and year of approval	
4.	Total Duration of the Programme as phased in Col. 10 (a) (Months)	10 months
	(a) Date on which programme commenced/ to be commenced	May 2022
	(b) Target date of completion	December 2022
5.	Target groups	
	(a) If the Programme is meant for a CWD, SC/ST, Minority, Girls etc.)	
	(b) Stage of education to which the programme is meant	Foundational
	(c) If programme is State/Region/ Agency specific, please specify	Maharashtra
6.	Beneficiaries	Teachers, Teacher Educators, students

7. Need and Justification

(If an on-going/carried over programme, please also state briefly the progress achieved by the end of the current financial year)

FLN refers to the ability among children to read with meaning and solve basic math problems by the end of Class 3. These are critical gateway skills that form the foundation for children — much as the terminology suggests — on which they build their lives. The successful acquisition of FLN helps children learn more meaningfully as they progress to higher classes, and equip them with 21st Century skills like critical thinking and problem solving which are imperative to succeed in the long run.

8. (a) Specific Objectives:

1. To study the textbooks of FLN prepared by Maharashtra.
2. To assess whether the textbooks are prepared in accordance with the Learning Outcomes (LOs) and NIPUN Bharat guidelines.
3. To assess whether the textbooks have good/sufficient illustration, printing etc. to motivate young learners in reading them.
4. To suggest changes for the improvements of textbooks.

(b) Methodology: Analytical research (both Qualitative and Quantitative study)

(b) Expected Outcomes:

The NEP 2020 has given specific importance to Foundational Literacy and Numeracy. FLN according to the vision of honourable Prime Minister will be taken as a national mission. FLN has a wider impact, as it affects the understanding of the content of other subjects as well. The research project will assess the effectiveness of the textbooks developed under FLN in the state of Maharashtra in light of ECCE and NEP 2020 recommendations. The

study will also develop some tools to see whether the textbooks will support in meeting the Learning Outcomes in the young learners. Besides, quantitative and qualitative study of the illustrations, font, printing etc. the textbook will also be done to see if they motivate the young learners to read the textbooks. It will help in better understanding of the various dimensions of textbooks and how they can help in the development of FLN. Moreover, through the assessment of textbooks the researchers will be able to provide the state functionaries the status and suggestions for further improvement. The findings and suggestions can also be taken up by other states when developing their own textbooks.

9. Collaboration Agencies (if, any) : Name of Agency Nature of Collaboration

- (a) NCERT Constituents
- (b) Outside Agency SCERT, Maharashtra

10.(a) Phasing of the programme with precise information on Activities proposed (including in- house activities involving expenditure)

S.No.	Activities proposed to be organized	Proposed Dates	Estimated Expenditure
1.	In- house planning meeting	May 2022	--
2.	3 days' workshop for development and finalization of tools of tools	May 2022	86316/-
3.	Field visit/ data collection	July 2022	55000/-
4.	3 days' workshop on data analysis	October 2022	86316/-
5.	Submission of Report	December 2022	25000/-

10. (b) Expenditure on Project Staff: (Please give work schedule of project staff proposed in terms of activities to be supported month-wise)

S.No.	Designation	Number	Monthly Remuneration	Duration	Expenditure
1.	JPF- for typing, editing of tools	1	25,000	May 2022 June 2022	25,000x2= 50,000
2.	JPF- for Data Collection	1	25,000	July 2022 August 2022 September 2022	25,000x3=75,000
3.	JPF- for Data entry and assistance in analysis	1	25,000	October 2022 November 2022	25,000x2= 50,000
4.	JPF-for typing and finalization	1	25,000	December 2022	25,000x1= 25,000

	of report				
	Total			25,000x8	2,00,000

10. (c) Total Expenditure (10 a + 10 b) =

Amount required in the proposed year Rs...452632/-

11. Details of each Budget Activity under Item No. 10 (a) (in the following format):

11.1 Activity No. 1

Title: 1-day in-house meeting for team members

Proposed Dates: May 2022

11.2 Activity No. 2

Title: 3 days' workshop for development and finalization of tools

Proposed Dates: May 2022

S.No.	Item of Expenditure	Estimated Expenditure	Remarks if any
i	TA/DA to RPs	50,000 /-	
ii	Honorarium	2500 x 3 x 3 = 22,500 /-	
iii	Working lunch, Dinner, breakfast, tea and snack	260 x 8 x 3 = 6200 /-	
iv	Stationary	75 x 8 = 600 /-	
v	Daily wager	512 x 3 = 1536 /-	
vi	Drinking water	20 x 8 x 3 = 480 /-	
vii	Miscellaneous	5000 /-	
	Total	86,316/-	

11.3 Activity No. 3

Title: Field visit/ data collection

Proposed Dates: July 2022

S.No.	Item of Expenditure	Estimated Expenditure	Remarks if any
ii	Travel expenses (TA/DA) of PI's and JPF	40000 /-	
iii	Photocopying, printing of tools and correspondence etc	10,000 /-	
iv	Contingency (stationery, postage, etc)	5,000 /-	
v	Total	55000/-	

11.4 Activity No. 4

Title: 3 days' workshop on data analysis

Proposed Dates: October 2022

S.No.	Item of Expenditure	Estimated Expenditure	Remarks if any
i	TA/DA to RPs	50,000 /-	
ii	Honorarium	2500 x 3 x 3 = 22,500 /-	
iii	Working lunch, Dinner, breakfast, tea and snack	260 x 8 x 3 = 6200 /-	
iv	Stationary	75 x 8 = 600 /-	

v	Daily wager	512 x 3 = 2560 /-	
vi	Drinking water	20 x 8 x 3 = 480 /-	
viii	Miscellaneous	5000 /-	
	Total	86,316/-	

11.4 Activity No. 5
Title: Submission of Report
Proposed Dates: December 2022

S.No.	Item of Expenditure	Estimated Expenditure	Remarks if any
i	Typing and Binding	25,000 /-	
	Total	25000	

12. Scheme of Evaluation: Feedback will be taken from all stakeholders during the research and from the state functionary.

13.

Sl.No.	Key Performance Indicators	Target date of completion
1	In- house planning meeting	May 2022
2	3 days' workshop for development and finalization of tools	May 2022
3	Field visit/ data collection	July 2022
4	3 days' workshop on data analysis	October 2022
5.	Submission of Report	December 2022

14. Dissemination of the findings: As this is a state need findings and suggestions will be shared with the state of Maharashtra. Moreover, these findings and suggestions can be taken in consideration by other states when developing and reviewing their textbooks.

15. Plans for follow up/feedback on utilization of the outcome:

16. (a) Name and designation of the Programme Coordinator (s)

1. Dr. Shrutitripathi,
Assistant Professor in English
RIE, Bhopal

2. Dr. Ganga Mahto
Assistant Professor in English
RIE, Bhopal

(c) Name and designation of other faculty members(s) involved

1. Prof.Nidhi Tiwari
Professor in English
RIE, Bhopal
2. Dr. Ashwini Garg
Associate Professor in Mathematics
RIE, Bhopal

Signature of the Head of Instt./Deptt.
Date:

Signature of the Programme Coordinator
Date:

A Study of the Textbooks of FLN prepared by Maharashtra in Light of NEP 2020 recommendations

Name of the Respondent-		
Name of the book evaluated-	Standard-	No. of pages
Name of the publisher-	Year of Publication and Edition-	

Background of the Study

The study on textbook analysis for Foundational Literacy and Numeracy is undertaken to study the textbooks prepared and Published by Maharashtra State Bureau of Textbook Production and Curriculum Research, Pune for developing Foundational Language Literacy and Numeracy keeping in mind the recently announced and approved NEP 2020 and NIPUN Bharat guidelines.

You are requested to provide your unbiased views on the textbook prepared by the State. While evaluating the textbooks of Language, English may be considered as second/third language of the State.

This analysis is broadly divided in three Sections

1. Physical features of the book
2. Content Appropriateness as per NEP 2020
3. Pedagogical processes suggested/included

Section A Physical Features of the Textbook

S.No.	Area	Strongly Agree	Agree	Disagree	Strongly Disagree
1.	The cover of the textbook is attractive.				
2.	The cover page of the book reflects the subject matter				
3.	The Printing of the book is legible				
4.	The font size of the book is suitable to the class and age.				
5.	The book has a complete and detailed table of contents				
6.	The main headings and subheadings in the textbook are well organized				

7.	The instructions in the textbook help to grasp the content well				
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Section B

Content Appropriateness

Part I : Language

To what extent is the textbook appropriate according to the content?

S.No.	Area	Strongly Agree	Agree	Disagree	Strongly Disagree
1.	The content is organised according to the students' language needs.				
2.	The content is suitable and relevant as per age and class of students				
3.	The topics of units are interesting for the students				

To what extent is the textbook effective according to the four language skills (Listening, Speaking, Reading, Writing)

S.No.	Area	Strongly Agree	Agree	Disagree	Strongly Disagree
1.	The listening activities can help students to develop speaking skills				
2.	Listening materials are well-recorded				
3.	Listening materials use standard English language				
4.	The textbook materials offer a great range of listening texts				
5.	Textbook activities can help students to improve their listening skills				
6.	The tasks/activities (e.g. dialogues, role-plays, etc). are appropriate for improving students' speaking skills				
7.	There are adequate materials for spoken English for example pronunciation and stress				
8.	The reading tasks are appropriate for improving students' reading skills				
9.	Reading activities can motivate students				
10.	Reading activities can help learners become effective readers				
11.	There is a variety of reading material (eg. Prose, poetry, etc.)				
12.	Reading materials help learners to use English language in daily life				
13.	The writing tasks are appropriate for				

	improving students' writing skills				
14.	The writing tasks are appropriate for improving students' grammar and composition				
15.	The textbook encourages the ability to express ideas in the written form				
16.	The writing tasks are suitable in terms of accuracy				
17.	The vocabulary items are appropriate for the students' age group				
18.	The vocabulary items are suitable for the students' age group				
19.	The vocabulary items are arranged from simple to complex				
20.	The textbook incorporates sufficient materials for improving vocabulary				
21.	The materials for teaching grammar, vocabulary and pronunciation are graded in a suitable manner				
22.	The grammar items in the textbook are appropriate for the students' age group				
23.	The grammatical structures are presented inductively				

Part II: Numeracy

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

S.No.	Area	Strongly Agree	Agree	Disagree	Strongly Disagree
1.	Visuals pictorial formats with local are provided to understand the numbers				
2.	Real objects, Visual examples, diagrams and figures are provided to develop fundamental operations of arithmetic at the beginning stage				
3.	Textbook activities/illustrations facilitate the understanding of numerals				
4.	Examples/illustrations from local/daily life are provided in the textbook				
5.	Classification of items/objects according to numbers and shapes is facilitated through textbook activities				
6.	Data handling skill has been promoted in the textbook through visuals and numerical activities				

7.	Concept and understanding of measurement, mass, volume and temperature is handled with the help of daily life examples from the locale				
8.	Mathematical language used in the textbook is according to the students' age and culture				
9.	Difficulty level of mathematical concepts and operations are progressively increased within and between classes				
10.	Basic life skills are dealt through mathematical operations				
11.	Textbook activities motivate in the development of basic life skills like handling money, communication, cooperation, dealing with individuals, etc				
12.	Items/activities help in the development of 21 st century skills				
13.	Reading and writing of numbers is according to students' age group				
14.	Activities, exercises given in the textbook are helpful in recognising/ developing numbers				

Section C
Pedagogical Approaches

To what extent is the organisation of textbook effective?

S.No.	Area	Strongly Agree	Agree	Disagree	Strongly Disagree
1.	The content is linked to the previous knowledge. (Advance organizer approach)				
2.	The Chapters/ Units are interrelated with each other				
3.	The Content is logically organised. (Simple to Complex)				

Are the exercises and the activities relevant to the students?

S.No.	Area	Strongly Agree	Agree	Disagree	Strongly Disagree
1.	The exercises in the textbook are				

	relevant to the students' interests				
2.	The exercises promote meaningful communication by referring to realistic situations				
3.	The activities encourage learning and implementing integrated use of skills for purposeful communication				
4.	The activities in the textbook help the students to use English as a means of communication				
5.	The units in the textbook provide students coverage of the four main skills and other sub-skills (vocabulary and grammar)				

To what extent are the distinctive local cultures presented in the textbook?

S.No.	Area	Strongly Agree	Agree	Disagree	Strongly Disagree
1.	The activities, exercises given in the textbook includes local language to help the students				
2.	The illustrations are taken from local situations				

To what extent is the textbook effective in terms of the language teaching methods?

S.No.	Area	Strongly Agree	Agree	Disagree	Strongly Disagree
1.	The textbook adopts an eclectic approach. (i.e. It includes features of distinctive methods).				
2.	Student centered methods like play-way,discovery and activities are given place				
3.	Difficult concepts are made easier through the integration of Arts				
4.	Digital learning methods ET/ ICT have beenused to promote learning				
5.	The methods employed encourage students to speak				
6.	The innovative methods - peer tutoring, community services, book club, library etc. find place in the textbook				

To what extent does assessment find its place in the textbook?

S.No.	Area	Strongly Agree	Agree	Disagree	Strongly Disagree
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1.	Assessment is given place at regular intervals				
2.	Simple methods like quizzes, puzzles, local songs etc. are used to assess learning				
3.	The methods employed for assessment provide opportunities to know about the status of learning and find out gaps in learning				

Are the accompanying materials helpful?

S.No.	Area	Strongly Agree	Agree	Disagree	Strongly Disagree
1.	The accompanying materials (digital learning corners, teachers' guide, workbook, etc.) are available and easily accessible				
2.	The accompanying materials (digital learning corners, teachers' guide, workbook, etc.) are suitable for the students				