Ministry of Education
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NCERT

PARAKH
Performance Assessment, Review, and Analysis of Knowledge for Holistic Development

# ESTABLISHING EQUIVALENCE ACROSS EDUCATION BOARDS

## Towards Empirically Grounded Guidelines for Implementation of NEP 2020

शिक्षा मंत्रालय
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# ESTABLISHING EQUIVALENCE ACROSS EDUCATION BOARDS

Towards Empirically Grounded Guidelines for Implementation of NEP 2020

**Shri Sanjay Kumar**
Secretary

Department of School
Education & Literacy,
**Ministry of Education**
Government of India

# MESSAGE

In India's diverse landscape, equivalence holds significant importance, ensuring fairness and uniformity across various contexts and backgrounds. Embracing equivalence fosters inclusivity and equal opportunities for everyone.

The NEP 2020 enhances the drive for educational equivalence by promoting a flexible system and empowering learners. It emphasises the necessity of a National Curriculum Framework for School Education (NCF-SE) and designates PARAKH as the National Assessment Centre to standardise learner assessment across school boards.

Regional Equivalence Workshops, jointly organised by PARAKH and regional education departments, addressed nationwide challenges regarding board quality, utilising an Equivalence Questionnaire and Question Paper Templates.

This report examines the achievement of equivalence in India's educational landscape, offering recommendations for administrative and pedagogical reforms aimed at fostering fairness.

These changes advocate for streamlined governance and a standardised curriculum, ensuring equal educational opportunities for all and empowering learners to excel, thereby advancing

educational equity nationwide. The recommendations align with best practices and standards. School boards must comply with these recommendations for effective implementation.

We anticipate that this research will serve as a guide in overcoming challenges, unlocking the potential of India's learners, and enriching societal contributions.

**Shri Anandrao V Patil**
Additional Secretary


Department of School
Education & Literacy,
**Ministry of Education**
Government of India

# MESSAGE

The National Education Policy (NEP) 2020 boosts the pursuit of equivalence by advocating for a flexible education system that empowers learners. It asserts the importance of a National Curriculum Framework for School Education (NCF-SE) and the establishment of PARAKH as the National Assessment Centre, aiming for uniform standards in assessing learner outcomes across all school boards.

Regional workshops on equivalence across school boards, jointly organised by PARAKH and regional education departments, addressed challenges arising from the varying quality of boards nationwide. These workshops gathered data through an Equivalence Questionnaire and Question Paper Templates, covering learner performance, syllabi, and assessments.

This study explores the imperative, challenges, and pathways to achieve equivalence in India's educational ecosystem. The recommendations for administrative and pedagogical reforms aim to promote equivalence among school boards, fostering a fairer educational environment. These changes, advocating streamlined governance and a standardised curriculum, ensure equal educational opportunities for all. This fosters consistency and empowers learners to excel, thus advancing educational parity nationwide.

We believe this research will help navigate challenges, ensuring the realisation of India's learners' potential and their invaluable contributions to society.

# FOREWORD

India's educational landscape comprises a diverse collection of educational boards, including State Boards, Central Boards, and International Boards. These boards are the cornerstone of the nation's scholastic framework, entrusted with the immense responsibility of overseeing a multitude of academic and administrative tasks at the primary and secondary education levels.

India's rich cultural and geographical diversity emphasises the need for equivalence which extends beyond uniformity to emphasise equitable and comparable education.

The pursuit of equivalence received a significant boost with the inception of the National Education Policy (NEP) in 2020. The NEP calls for a flexible, multidisciplinary education system, empowering learners to be the architects of their educational journeys and progress at their own pace. It advocates for the establishment of the National Curriculum Framework for School Education (NCF-SE) and the creation of PARAKH as the National Assessment Centre, setting the groundwork for uniform standards in assessing learners' learning outcomes across all educational boards.

A series of regional workshops on the Equivalence of Boards, jointly organised by PARAKH and regional educational departments, aimed to address the intricacies arising from the varying quality and standardisation of educational boards nationwide. These workshops utilised a comprehensive Equivalence Questionnaire and Question Paper Templates to gather data, encompassing aspects such as learners' performance, syllabi, and assessments.

This report comprehensively explores the imperative, challenges, and pathways to achieve equivalency within India's multifaceted educational ecosystem. It delves into the rich history and evolving dynamics of educational boards, highlighting the crucial role of equivalence in promoting equitable education across the country. Using an analytical lens focused on data collected with a self-report questionnaire developed by PARAKH, this report offers insights into the contemporary state of educational boards.

The recommendations outlined in the document for administrative and pedagogical changes are poised to foster equivalence among school boards. By advocating for administrative reforms that

streamline governance structures and enhance accountability, as well as pedagogical changes aimed at standardising curriculum frameworks and assessment methodologies, the document lays the groundwork for a more equitable educational landscape. These proposed changes ensure that all learners, regardless of their geographic location or socioeconomic background, have access to comparable educational opportunities. Embracing these recommendations will not only promote consistency and fairness but also empower learners to achieve their full potential, thus advancing the overarching goal of educational equivalence across the nation.

We hope that this research not only deciphers the imperative of equivalence but also navigates the challenges and illuminates the path forward, thereby contributing to the realisation of the boundless potential of India's learners and their invaluable contributions to society.

Prof. Dinesh Prasad Saklani,
Director, NCERT

# PREFACE

India's educational setup comprises a diverse range of 69 different school boards, including State, Central, and International ones. These boards play a fundamental role in managing various academic and administrative tasks at the primary and secondary education levels. Their nature has evolved significantly over time, transitioning from mere examination-conducting bodies to active participants in curriculum development and reform.

A pivotal aspect of this evolution is the pursuit of autonomy and equivalence among school boards. Recognizing the imperative of standardised and comparable education in a culturally and geographically diverse country like India, various reports and policies have emphasized the need for equipping learners with requisite knowledge and skills uniformly across boards.

The National Education Policy (NEP) 2020 continues this pursuit by advocating for a flexible education system and establishing PARAKH as a standard-setting body. PARAKH aims to ensure equivalence among learners across all school boards through collaboration, sharing best practices, and developing common assessment standards.

Regional workshops organised by PARAKH, in collaboration with school boards, have addressed challenges related to quality and standardization. These workshops utilised Question Paper Templates and an Equivalence Questionnaire to gather data on academic and administrative standings.

This research analyses the current state of school boards in India across various categories and is aligned with the recommendations of the NEP 2020 and the National Curriculum Framework for School Education (NCF-SE) 2023. It provides insights and recommendations for achieving equivalence across boards, thereby contributing to the enhancement of India's educational landscape.

The exercise of doing justice of the task of studying, analyzing, and finding a position of congruity amongst the 69 recognised school boards across the length and breadth of this vast land accounting for the distinctiveness, dissimilarities, keeping in view linguistic and social sentiments, was indeed a challenging endeavour.

It seemed daunting when the exercise commenced but having achieved a blueprint now, after deliberations with the Chairpersons and other officials of the school boards and presenting it before the august assemblage of the bureau heads of the MoE in a meeting chaired by the Secretary of School Education and Literacy of the Government of India and having been accepted on principal, one is suffused with a sense of fulfilment.

I would certainly like to put on record the unstinted support, assistance, help and encouragement that I and team PARAKH received from all the boards officials and their Chairpersons. It would not have been possible without the timely responses that was sought on numerous occasions and received with promptness and professional efficiency from every member, officials and the executives.

The enterprise was the brainchild of Shri Sanjay Kumar, Secretary, Department of School Education and Literacy (DSE&L), MoE, GoI, who guided the journey with his insightful ideas, evocations and suggestions that resulted in the crystallization of the concept and execution of the blueprint. Gratitude is also due to the Additional Secretaries and other officials of the MoE for the timely judicious counsels. The Director NCERT has been involved in the project all through and has always extended his support.

I bask in the warmth of the knowledge that I have the might of all the above from each corner of this blessed land for all our future undertakings.

Gratitude to all.

Prof. Indrani Bhaduri,
CEO & Head PARAKH, NCERT

# EXECUTIVE SUMMARY

## GENESIS OF EQUIVALENCE OF BOARDS

In a country with a population of 1.42 billion, approximately 30% are below the age of 15 (Statista 2024), highlighting the critical importance of focusing on school education to foster national growth and development. However, India's vast diversity presents significant challenges in ensuring equal access to quality education for all, regardless of factors like religion, caste, creed, gender, socioeconomic background or geographical location. To address these issues, standardising quality education across all school boards is imperative.

The aim of the National Education Policy (NEP) 2020 and the National Curriculum Framework-School Education (NCF-SE) 2023 is to establish quality and equity in education. NEP 2020 (section 4.41), proposed the establishment of PARAKH and one of its crucial mandates is to function as a standard-setting body for "*ensuring equivalence of academic standards among learners across all school boards.*" This report encapsulates insights regarding the current level of equivalence in assessment, curriculum, administration, infrastructure, and inclusiveness, which is based on data voluntarily reported by different boards of school education through tools developed by PARAKH namely Equivalence Questionnaire and Question Paper Analysis Template.

As part of the inquiry into equivalence, a pilot study on question paper analysis was conducted across 10 Education Boards, revealing differences in the types of items used by them, thinking skills, and content across subjects. The pilot questionnaire and feedback received helped to gain insights into the variation among school boards in terms of their establishment, structure, working, and nature of activities including infrastructure and opportunities available to learners. A meeting of all school boards was held on May 22nd, 2023, in New Delhi, where PARAKH shared the outcomes of the pilot study. Subsequently, a series of regional meetings with the boards was organised to engage with various stakeholders.

Equivalence in the context of school boards encompasses three areas:

(i) Board establishment, functioning, and membership.
(ii) Provision of facilities, opportunities and resources to learners.
(iii) Learner assessment and evaluation.

A pilot study was undertaken to assess the suitability of the two tools used, namely, the Equivalence Questionnaire and the Question Paper Analysis Template. The study encompassed a selection of question papers from any three years between 2018 and 2022, excluding the pandemic.

## PILOT STUDY ON QUESTION PAPER TEMPLATE

- 10 Education Boards
- Analysis of ~18K Grade 10 questions across four subject areas: Language, Mathematics, Science, Social Studies
- Results of pilot-informed design of a tool for the main study across all school boards

| | |
|---|---|
| English | 5,334 |
| Math | 3,168 |
| Social Science | 4,612 |
| Science | 4,733 |
| Total | 17,847 |

The objective of this exercise was to examine these papers thoroughly and gather feedback to make improvements to the tools through the analysis and assessment of approximately 18,000 questions across ten different school boards, details of which are depicted above.

The pilot study proved to be an effective endeavour, as it provided valuable insights and feedback on the existing question paper data collection templates. Based on the feedback received and its analysis, significant modifications to the template were made. These changes involved incorporating further features and add-ons to enhance the overall quality of the two tools.

Key improvements included:

- The inclusion of map and diagram-based questions to add to the reading comprehension-based questions.
- Schemas for rating the content categories and subcategories of items from Grade 10 Question Papers
- Adjustments aimed at improving the user experience when working with the tool.

The former process allowed for more nuanced data from the question papers of school boards that reflect learners' understanding and application of knowledge rather than rote memorisation. By broadening the range of question types, the aim was to capture the progress that boards were already making towards creating a more balanced and effective evaluation system.

By conducting this pilot study and implementing the suggested changes and modifications from an analysis perspective, the tools used were modified. The extensive analysis of a large number of questions from diverse school boards provided insights into the variability of key question paper characteristics across boards. These findings served as the foundation for the modifications made to the template, which ultimately benefited the study.

## REGIONAL WORKSHOPS AND TOOLS EMPLOYED

Regional workshops were conducted between June and August 2023, details of which are provided in Table 1 including the dates and participants involved. Notably, the study excludes Sanskrit schools/boards, Madrasas, and technical boards due to significant differences in their curricular frameworks. In the workshops, attendees received presentations on education reform

visions aligned with the NEP 2020, insights from keynote speakers representing each region, and an overview of PARAKH's role in guiding educational entities across India.

**Table 1. Regional Workshop Dates and Locations**

| Date | Venue | Region | Participating States/UTs |
|---|---|---|---|
| 28th June to 1st July, 2023 | Pune University, Pune, Maharashtra | Western | Chhattisgarh, Gujarat, Goa, Madhya Pradesh, Maharashtra |
| 10th to 13th July, 2023 | RIE, Ajmer, Rajasthan | Northern | Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab, Rajasthan, Uttar Pradesh, Uttarakhand |
| 17th to 20th July, 2023 | RIE, Bhubaneswar, Odisha | Eastern | Assam, Odisha, West Bengal |
| 24th to 27th July, 2023 | Kohima, Nagaland | North-Eastern | Arunachal Pradesh, Mizoram, Meghalaya, Sikkim, Tripura, CBSE, ICSE, NIOS |
| 22nd to 25th August, 2023 | Kochi, Kerala | Southern | Andhra Pradesh, Karnataka, Kerala, Manipur, Tamil Nadu, Telangana, Bihar, Jharkhand, DBSE |

**Table 2. Educational Board Representation at Regional Meetings**

| Total Boards | Total Boards who participated in the Regional Workshops | Total No. of Boards | Per cent Participation |
|---|---|---|---|
| Secondary boards only | 5 | 6 | 83.3% |
| Higher Secondary boards only | 4 | 6 | 66.6% |
| Common boards (Secondary and Higher secondary) | 18 | 25 | 72% |
| Sanskrit board | - | 7 | 0% |
| Madrasa board | - | 7 | 0% |
| Open school | 5 | 13 | 38.4% |
| Technical and vocational | - | 3 | 0% |
| **Total** | **32** | **69** | **46.3%** |

Deliberations with school boards were also held to work on policy recommendations. The following workshops were held between November 2023 and February 2024.

**Post-Analysis Deliberations with the School Boards**

| Date | Venue |
|---|---|
| 8th November & 9th November, 2023 | NCERT, Delhi |
| 9th November, 2023 | CBSE Office |
| 7th December, 2023 | NCERT, Delhi |
| 20th February, 2024 | NCERT, Delhi |

The workshops employed two key tools:

- A template for systematic classification and comparison of question paper content (referred to below as Question Paper Template, QPT) and
- An Equivalence Questionnaire (referred to below as EQQ).

The QPT involved a comprehensive evaluation of question papers used by school boards to assess their quality, relevance, and effectiveness in measuring learning standards. It aimed to gauge alignment with learning standards, question appropriateness and difficulty, the inclusion of choices, and the variance in cognitive demands, such as critical thinking and problem-solving skills. This analysis aimed to highlight differences and similarities among boards, aiding in the formulation of equivalence guidelines. The final analysis included an assessment of 10,305 questions across 32 educational boards that participated in the study.

The EQQ assessed the opportunities and facilities provided by school boards to ensure equivalence. It sought to determine the current state of school boards, considering guidelines from NEP 2020, NCF-SE 2023 and other relevant documents. The goal was to identify necessary changes to achieve educational equivalence. The survey aimed to collect both qualitative and quantitative data, regarding the state of educational boards in India. The questionnaire included a total of 58 survey questions.

These tools were valuable for assessing the present status of Education Boards in India.

## METHODOLOGY

As part of the research, an analysis of the questionnaire, which contained 58 survey questions, was conducted. The questionnaire was divided into five broad qualitative categories, namely:

- Administration,
- Curriculum,
- Assessment,
- Inclusiveness, and
- Infrastructure.

The different questions of the questionnaire were grouped according to their focus areas. Three types of boards were identified: Common Boards (for Class X as well as Class XII), Higher Secondary Boards (for Class XII only), and Secondary Boards (for Class X) only.

| Board | Administration | Curriculum | Assessment | Infrastructure | Inclusiveness | Total points |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| **Common Boards (Class X and XII)** | **38 Points** | **57 Points** | **25 Points** | **75 Points** | **28 Points** | **223 Points** |
| **Higher Secondary Boards (Class XII only)** | **36 Points** | **48 Points** | **25 Points** | **75 Points** | **28 Points** | **212 Points** |
| **Secondary Boards (Class X only)** | **36 Points** | **55 Points** | **25 Points** | **75 Points** | **28 Points** | **219 Points** |

The points allocated to the variables varied for each type of boards as per the applicability. Through the performances in the different categories, the present norms and conditions of the school boards were highlighted.

A qualitative analysis of the QPTs of Grade 10 and Grade 12 based on the parameters of item difficulty, item type, and nature of the item helped understand the board's approach towards question paper development. This analysis aided in locating shortcomings pertaining to equivalence and recommending suitable measures.

## ADMINISTRATION

While analysing the results of the periodic reviews conducted by the boards of their affiliated schools, it was found that 64% of the boards reviewed the school-based assessments and the internal assessment practices (Figure 1).

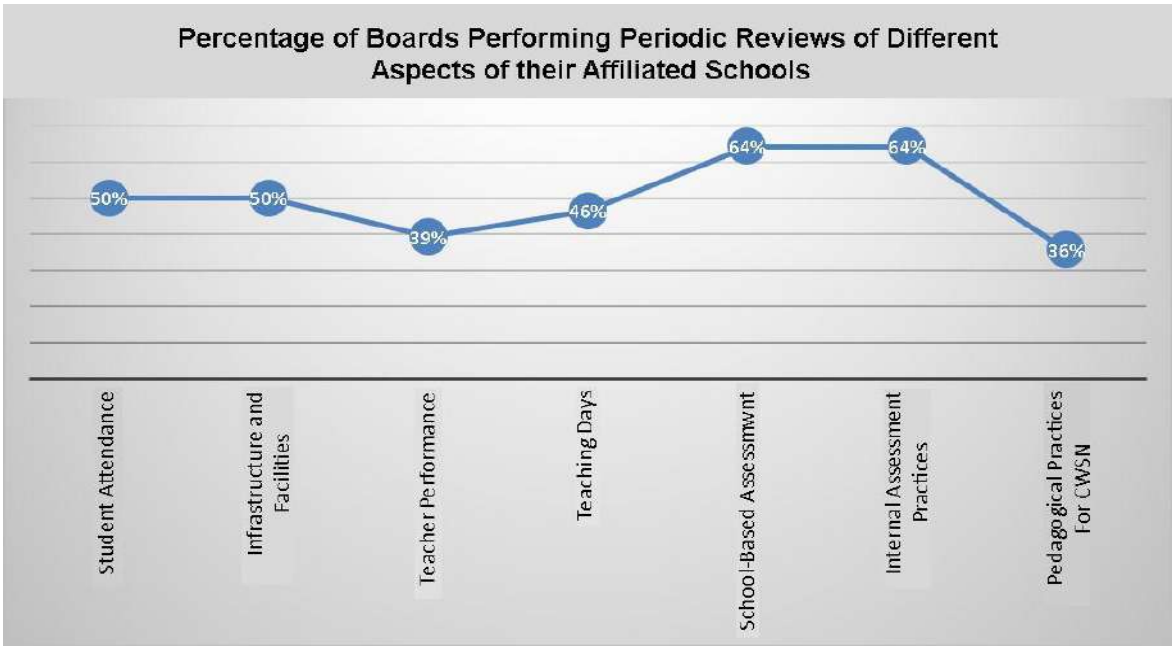



*Figure 1: Percentage of Boards Performing Periodic Reviews*

Only 39% of the boards reviewed teacher performance in their affiliated schools. Half of the boards (50%) indicated that they review learners' attendance, infrastructure and facilities periodically. Teaching days are reviewed by 46% of the boards, whereas only 36% of the boards review pedagogical practices for Children with Special Needs (CWSN).

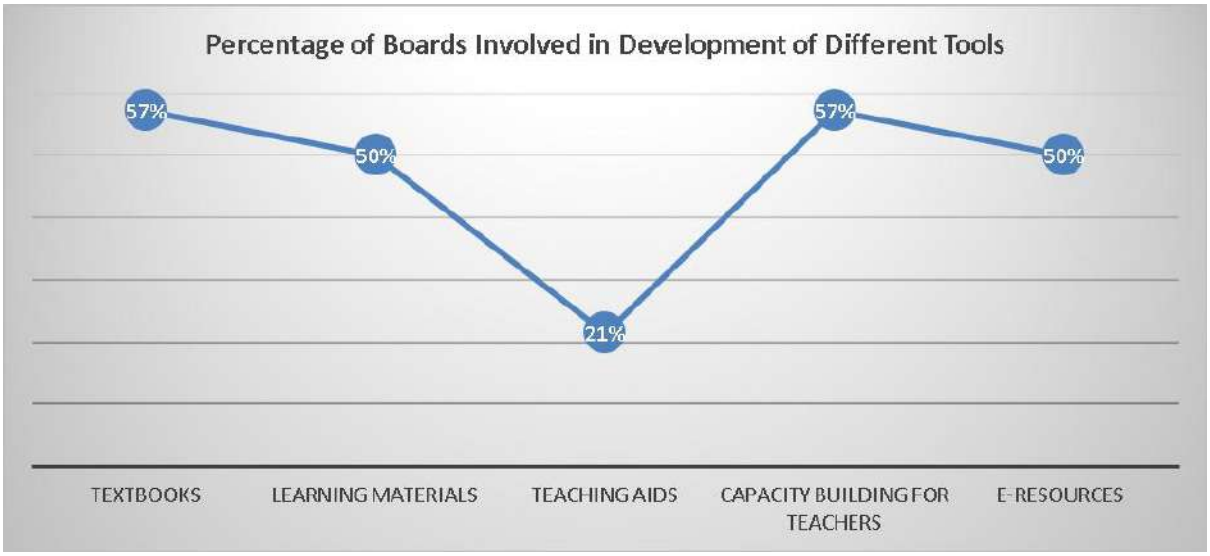



*Figure 2: Percentage of Boards Involved in Other Educational Practices*

The Remodeling of School Education Boards report by Amrik Singh clearly states that educational boards in India should aspire to not only be examination-conducting bodies. Rather, they should act as educational bodies as per international practices. In alignment with this idea, a question was asked about the involvement of boards in the development of different tools related to the curriculum and academic resources. It was observed that an average of 50%, i.e., half of the educational boards present for the survey took part in other "educational practices", such as the development of textbooks, learning materials, teaching aids, capacity building for teachers, and

e-resources, apart from conducting examinations. Notably, only 21% of the boards indicated that they were involved in the development of teaching aids. When asked if the boards have initiated capacity building of teachers to include preparation of professional online training modules and manuals/handbooks for undertaking *Assessment as Learning* and *Assessment for Learning*, only 57% of the boards said "Yes" showing a lack of emphasis regarding the topic whereas such capacity building of teachers is highly sought after according to the NCF-SE 2023.

## CURRICULUM

With regards to the curriculum, NEP 2020 and NCF-SE 2023 suggest major reforms in the nature of acquired knowledge. The overarching aim is to redesign assessments to encourage holistic learning and promote development. An analysis was made of the subjects being taught by the boards in addition to the primary subjects i.e., Mathematics, Language, Science, and Social Science.

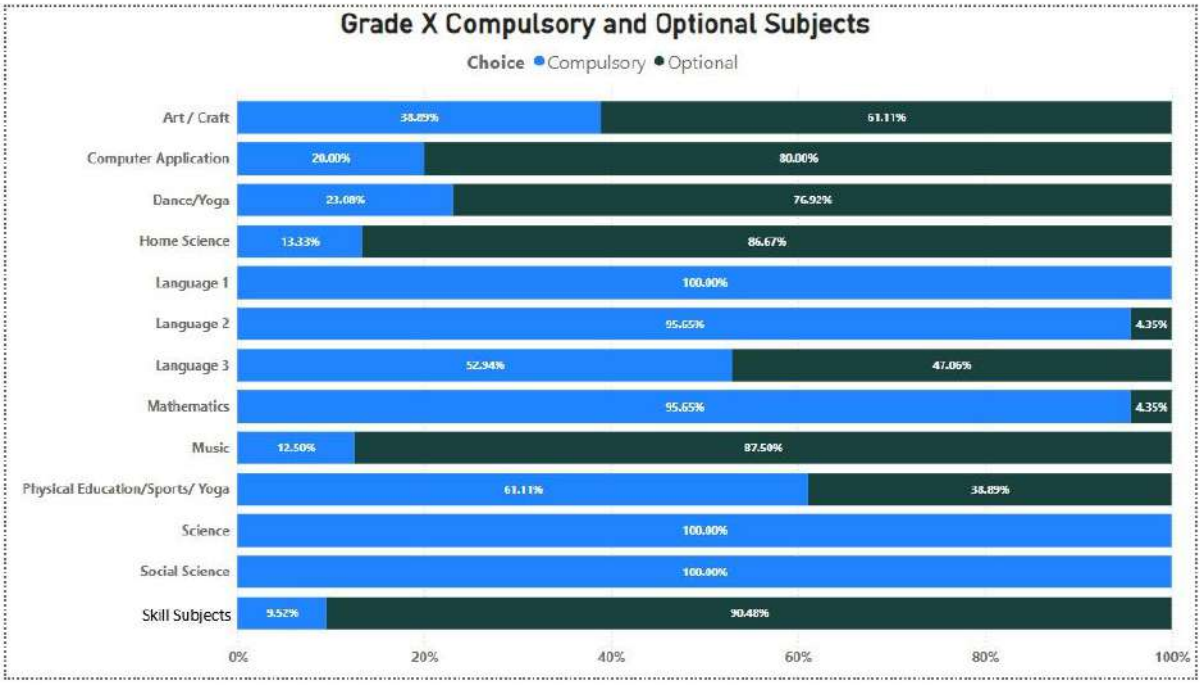



*Figure 3: Grade X Compulsory and Optional Subjects*

The data (illustrated in Figure 3) indicates that in Grade 10, 38.89% of the boards have Art/Craft as a compulsory subject in their curriculum, and 61.11% of the boards provide Physical Education/ Sports/ Yoga as a compulsory subject. Ninety per cent of the boards offer Skill Education as an optional subject in Grade 10, whereas 9.52 per cent of the boards have made the curricular area compulsory. At this juncture, it is prudent to consider what the NCF-SE 2023 documents state regarding Skill Education at the Secondary Stage of Education. It states that in Grade 9 and Grade 10, "learners will be given exposure to six vocations (two from each form of work) spread over two years. These will be at least equivalent to NSQF Levels 1 and 2, where relevant." (NCF-SE 9.3.2.3) It also mentions that "Vocational Education will also draw from and build on the competencies developed in other curricular areas." (NCF-SE 9.1) Thus,

interdependence is established among different curricular areas, making all the areas important for the holistic development of the learner. The NEP 2020 states,

> "Learners will be given increased flexibility and choice of subjects to study, particularly in secondary school - including subjects in physical education, the arts and crafts, and vocational skills – so that they can design their own paths of study and life plans. (NEP 2020, 4.9)"

Keeping the above NEP recommendations in perspective, it is apparent that a clear dissonance exists between the aspired educational standard and the current state of the school boards in this respect.

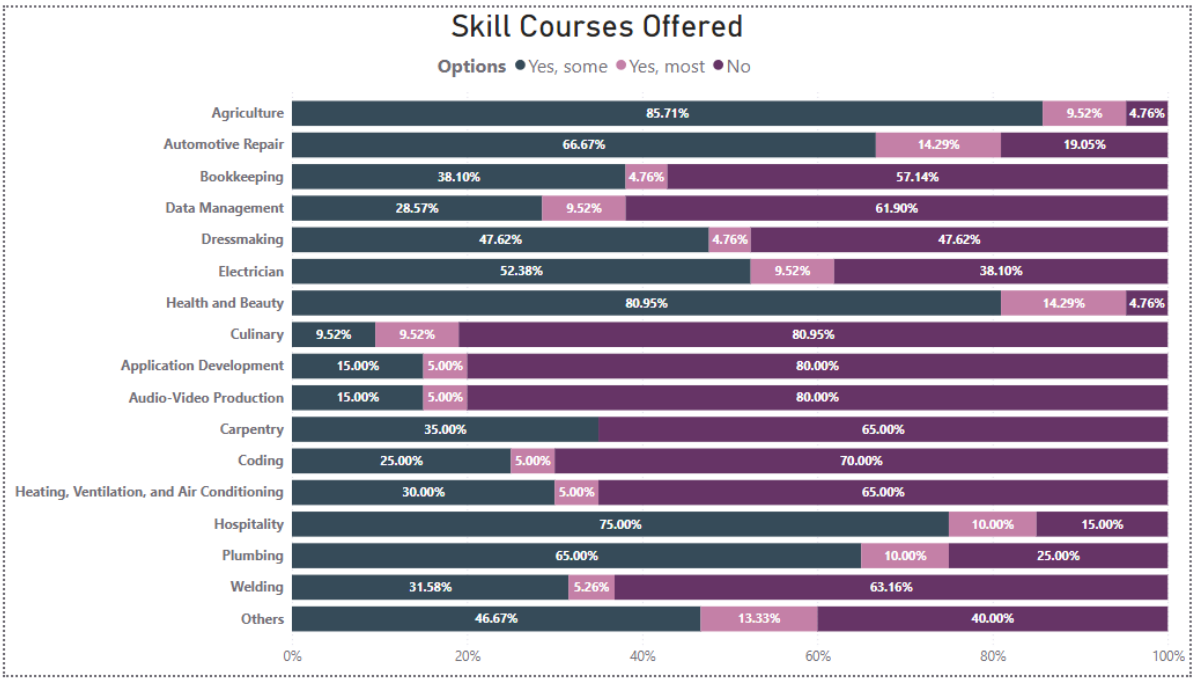



*Figure 4: Different Skill Programs provided by the Boards*

The schools affiliated with the boards are offering various Skill Courses. Figure 4 shows that more than 80% of the boards provide courses on Health and Beauty and Agriculture. Courses like Automobile Repair and Hospitality were also taught by a high percentage of the boards. On the other hand, courses like Coding, Application Development, and Audio-Video Production are taught by very few boards. In alignment with the present trends of exponential growth in technology, it is imperative that Skill courses pertaining to machine learning, artificial intelligence, data science, cybersecurity, blockchain technology, and cloud computing be inculcated for better future employability of the learners.


*Figure 5: Boards Offering Health and Wellness Courses*

Health and Wellness occupy an important position in the school curriculum, serving as the foundation for learners' overall well-being and academic success. Integrating Health and Wellness education helps learners develop healthy habits that can last a lifetime. It encompasses various aspects such as physical fitness, mental health, nutrition, and hygiene, ensuring that learners understand the importance of maintaining a balanced lifestyle. Lessons on nutrition educate learners about making healthier food choices, which can prevent lifestyle-related diseases.

It was found that about 82% of the boards offered Health and Wellness courses, encompassing courses involving nutrition, sex education, or physical activities, to the learners (Figure 5). This must be taken as a positive sign, but there is still room for improvement. Exposure to this aspect of Skill training will result in the learner's inclination towards health care which is acknowledged as a sunrise industry, especially given the greying of the population of the affluent countries.

## ASSESSMENT

In the category of Assessment, mechanisms vary widely among educational boards. On-demand examinations, a key feature of NEP 2020 and NCF-SE 2023, are rarely offered (7%), contributing to the high stakes attributed to the school-end board exams by the learners.

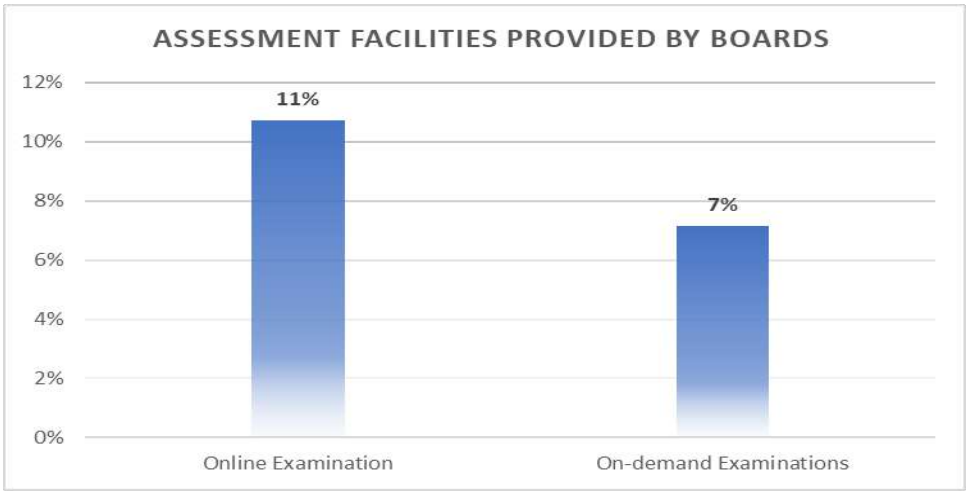


*Figure 6 Percentage of Boards Providing Assessment Facilities*

Both the NEP 2020 and the NCF-SE 2023 have continual allusions to the provision of on-demand examinations so that learners can "appear for a board examination in subjects they have completed and feel ready for" (NCF-SE 3.4.12.2d). According to the received data, about 93% of the Boards do not have the provision for on-demand examinations (Figure 6).

In accordance with the essential need to provide the learners with more opportunities to appear for the Board Examinations, NCF-SE 2023 states its two major challenges – "High Stakes" and giving "No Second Chances" (NCF-SE 3.4.12.1a), the provision for a greater number of Supplementary/Compartment Board Examinations will be in alignment with the aspirations of the NCF-SE 2023 and the NEP 2020. It can provide the learners with more chances to appear and qualify and thereby reduce the high stakes of board examinations.

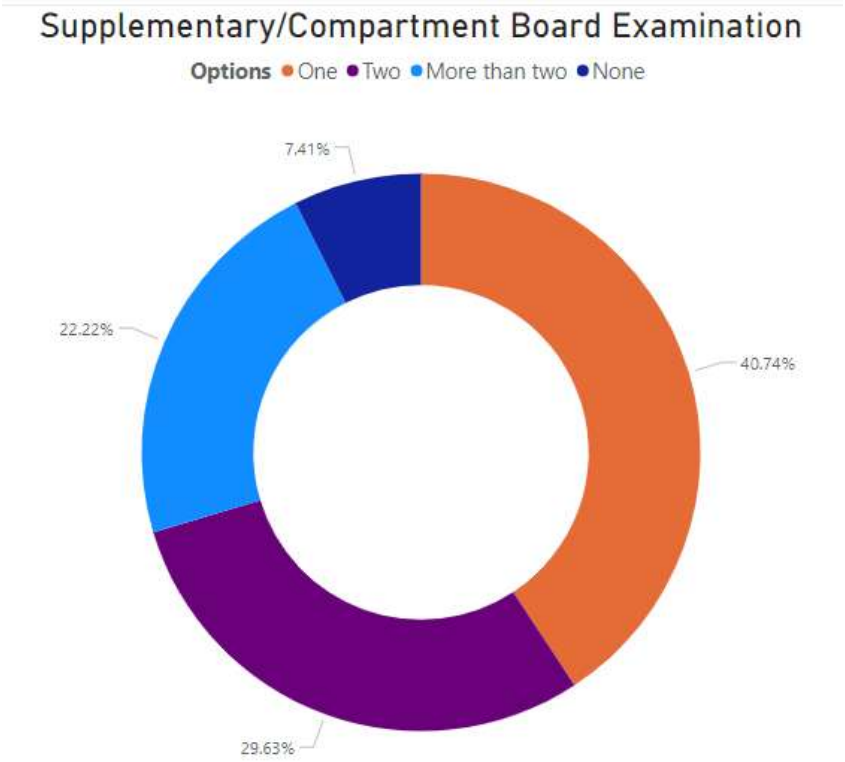



*Figure 7: Percentage of Boards Providing Supplementary/Compartment Board Examination Facilities*

From Figure 7, it is observed that 40.74% of the boards allow one Supplementary/ Compartment Board Examination to its learners and 29.63% allow two Supplementary/ Compartment Board Examinations. Nearly 22% of the boards allow more than two Supplementary/Compartment Board Examinations for their learners. However, there are 7.41 per cent of boards that do not allow any Supplementary/Compartment Board Examinations to their learners. These discrepancies between the boards amount to inequality amongst the learners of the same country and therefore merits addressing.

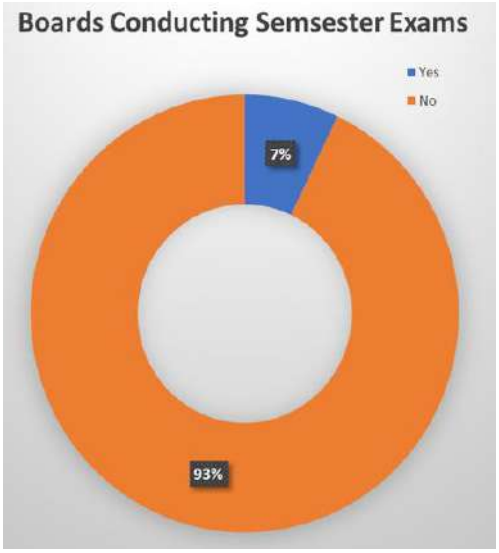



*Figure 8: Percentage of Boards Conducting Semester Exams*

The semester-wise system according to the NEP 2020 and the NCF-SE 2023 is a step in the journey towards on-demand examinations. The NCF-SE 2023 states that:

> "All Boards should change to semester or term-based systems, where learners can test in a subject as soon as they have completed the subject, which would further reduce the content load being tested in any one examination. (NCF-SE 3.4.12.2)"

There are recurrent mentions of the Holistic Progress Card in the NEP 2020 and the NCF-SE 2023. Section 3.4.10 of the National Curriculum Framework for School Education (NCF-SE) 2023, is dedicated solely to the Holistic Progress Card. It is mentioned here that the HPC is supposed to act as the "formal means of communication between the school and the home." As opposed to the comparison with others, the HPC will enable focus on the learner's progress. Thus, an emphasis is to be laid upon the piloting of HPC by all the educational boards.

PARAKH has developed the *Holistic Progress Cards* for the following stages:

1. Foundational
2. Preparatory
3. Middle
4. Secondary

Holistic Progress Cards incorporate multiple dimensions of learner growth, including academic performance, interpersonal skills, self-reflection, creativity, and emotional intelligence. This 360-degree assessment model aims to move beyond rote memorisation, encouraging a more holistic approach to learning and teaching. The cards include feedback from teachers, peers, and parents, ensuring a well-rounded perspective on the child's progress. By involving various stakeholders in the assessment process, the HPC aims to bridge the gap between home and school, making parents integral to the child's educational journey. These Holistic Progress Cards now need to be piloted by the boards and subsequently implemented.

## INFRASTRUCTURE

In the category of infrastructure, there is room for improvement in areas like the availability of potable water, updated libraries, and sports facilities to ensure the holistic development of learners.

From the procured data, it was found that a very low percentage of the boards have maintained basic infrastructure like running water, indoor plumbing, drinking fountains, sinks or handwashing stations, etc.

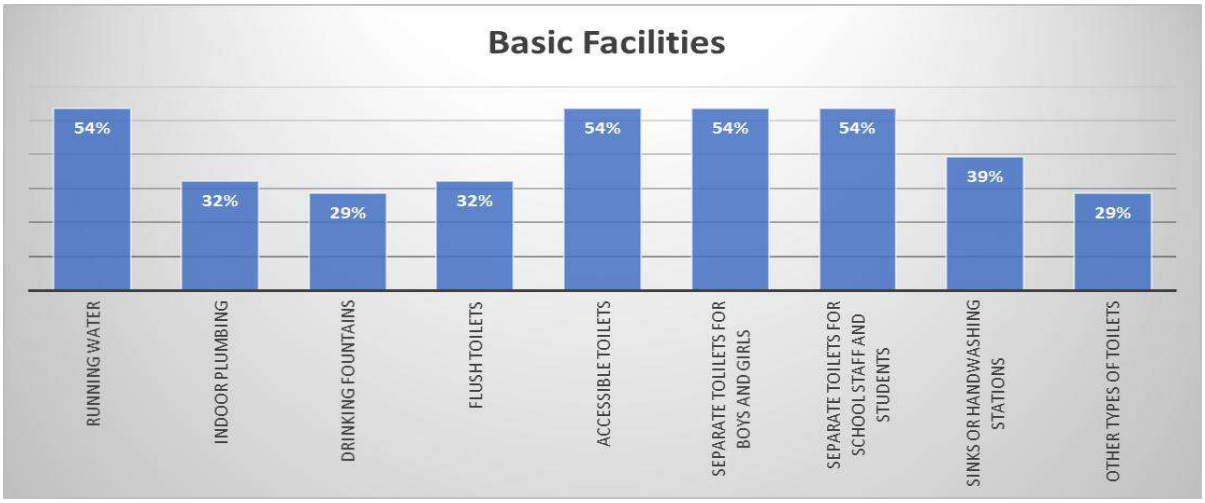



*Figure 9: Percentage of Basic Facilities provided by the Schools under Boards*

This could have hazardous consequences for both learners and school staff. A definite initiative is warranted to address deficiencies in this area. This aligns with the objectives of the Swachh Bharat Abhiyan, which aims to promote cleanliness, hygiene, and sanitation across India, including aspects of law and order, safety and reducing drop-out rates, especially for female learners. Ensuring clean and hygienic school environments is essential for the health and well-being of learners and supports the broader objective of creating a cleaner and healthier nation.

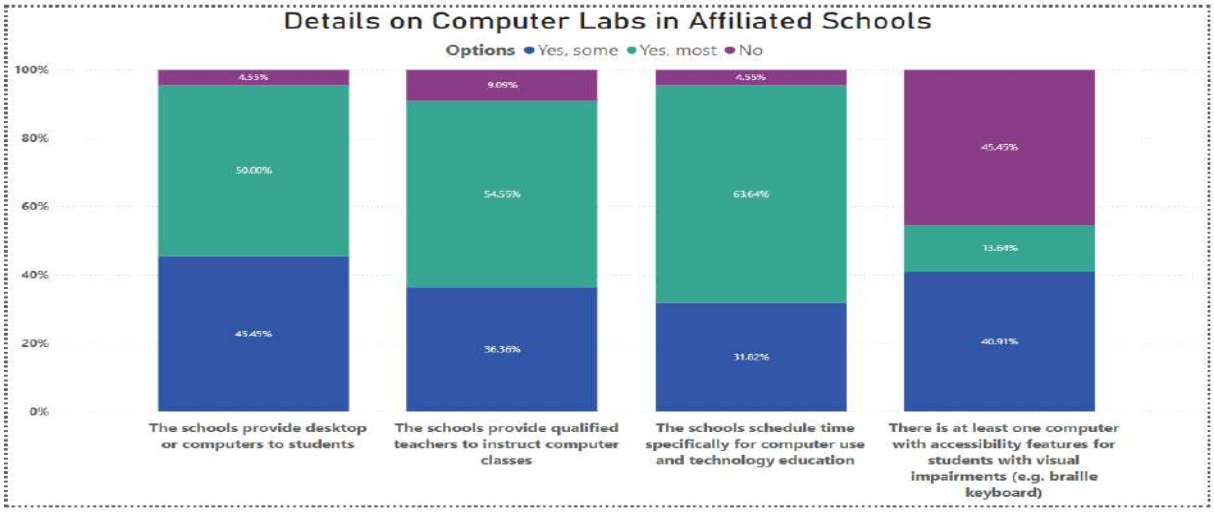



*Figure 10: Details on Computer Labs in Affiliated Schools*

Technology in education is emerging in India and can enhance test security, objectivity, transparency, and record transfer. However, some schools and learners lack access to facilities essential for their basic education needs, and many do not have access to electricity and the internet. At least 12 boards reported that only some of their schools are equipped with computers. Figure 10 showcases that more than 50% of the boards have most of their schools equipped with computer labs, while 45% have some schools with such facilities. This implies that a significant majority of schools have access to computer labs to some extent, but the facilities are neither uniform nor universal.

As the education system shifts towards competency-based learning and assessment, it is crucial to ensure that the technology gap does not widen further, thereby denying opportunities for many learners to benefit. Improvements can be made to paper examinations by incorporating features of digital tests through different item types. Boards can offer workshops and training on different item types that can be used to assess the range of learners' competencies and reduce the scoring burden for more complex item types.

The primary responsibility of the boards pertains to examinations. Therefore, it is crucial that examinations are conducted as per international standards to ensure fairness and accuracy in learner assessment. This involves not only preparing and administrating the exams but also maintaining the integrity and security of the examination process.

Figure 11 represents the data on the availability of various infrastructures required for examination as reported by the school boards. The facilities considered are Exam Halls, Lighting, Photocopying Facilities, Strong Rooms, and Ventilation. For Exam Halls, 22.22% of the boards reported that some of their affiliated schools have these halls, while 77.78% reported full availability across all their schools. Regarding lighting, 85.19% of the boards indicated full availability, whereas 14.81% reported a lack of adequate lighting. Photocopying Facilities were less available, with 44.44% of boards stating that some of their schools have these facilities, and 55.56% reporting full availability.

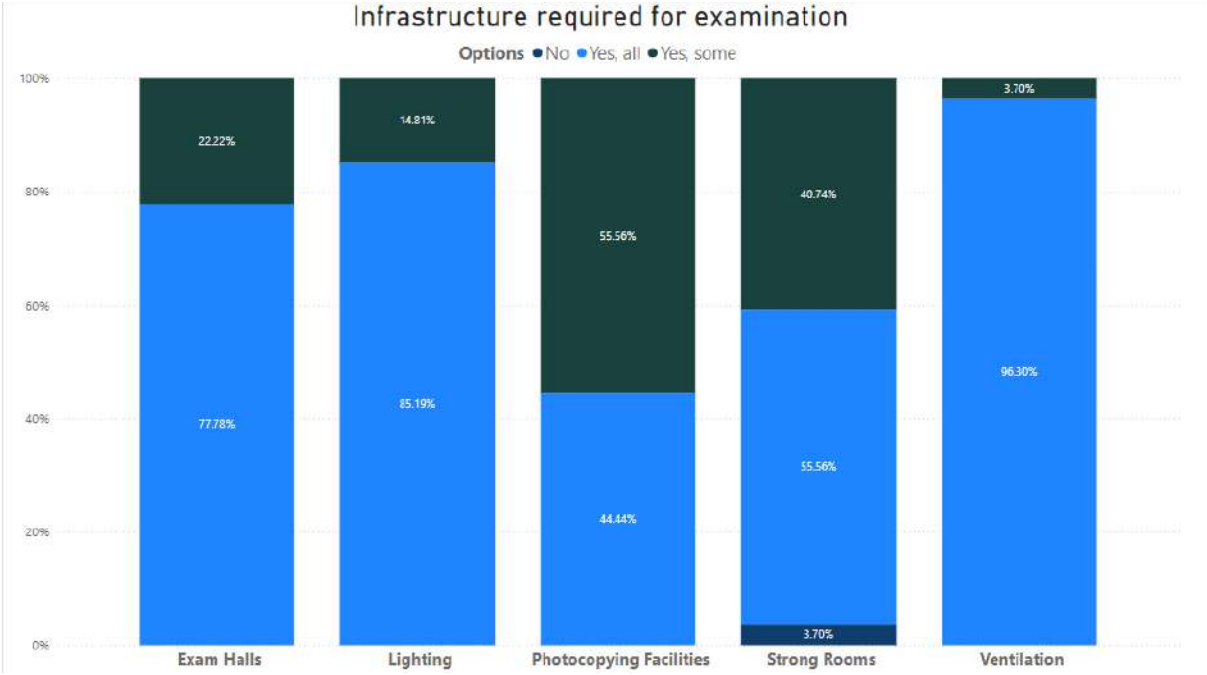



*Figure 11: Details on Infrastructures Required for Examination*

For Strong Rooms, 55.56% of the boards indicated that all their schools have strong rooms, while 40.74% reported partial availability, and 3.7% reported none. Ventilation was reported as highly available, with 96.30% of boards confirming full availability, and only 3.7% indicating a lack of adequate ventilation. Overall, it was observed that the School Boards have maintained these facilities well.

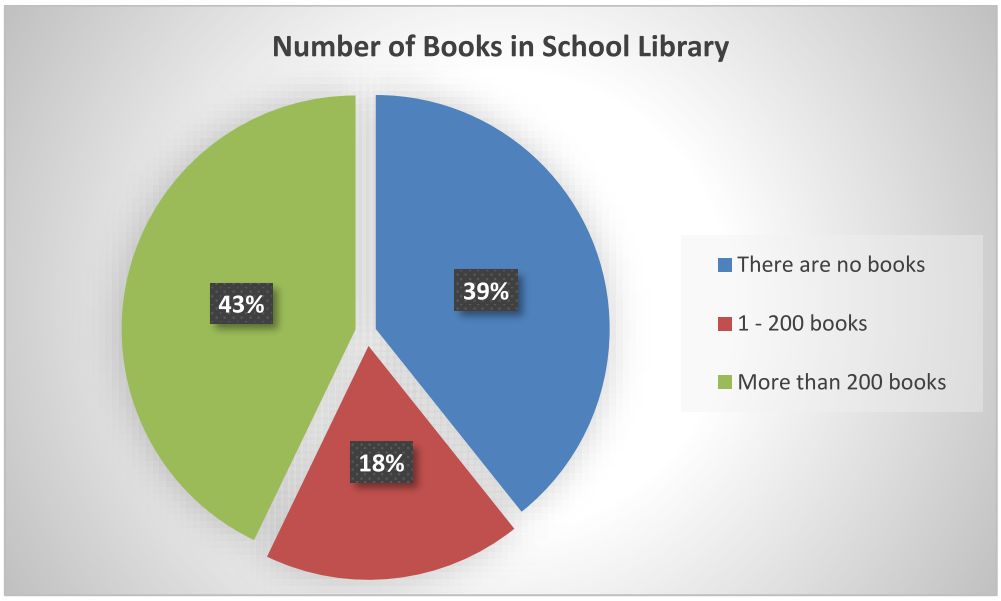



*Figure 12: Number of Books in School Library*

Libraries are considered essential for the growth and development of the learners. NCF-SE 2023 mentions “Library” in its recommended timetable up to the Middle Stage of Education. Post this, in the Secondary and the Higher Secondary levels, it states, “there is no separate Library time

built into the timetable - learners may use time from the AEP (Additional Enrichment Period) for this purpose." In this context, the figure above shows that about 39% of the boards indicated that their affiliated schools do not have any books in their libraries which is a matter of concern. Forty-three per cent of the boards have more than 200 books in most of their schools, which is commendable. Only 18% of the boards have 200 or fewer books in their affiliated schools.

**Table 1. Internet Connection and Board Exams Correlation**

| | **R** | | **N** | | **p-values** | |
|---|---|---|---|---|---|---|
| | Secondary | Higher Secondary | Secondary | Higher Secondary | Secondary | Higher Secondary |
| **Internet connection for learners not available** | -0.34 | -0.46 | 11 | 8 | 0.31 | 0.25 |
| **Internet connection for learners available with interruption** | -0.42 | -0.40 | 11 | 8 | 0.2 | 0.32 |
| **Internet connection for learners available without interruption** | 0.33 | -0.24 | 14 | 12 | 0.25 | 0.46 |
| **Internet connection for teachers not available** | -0.83 | -0.68 | 11 | 8 | 0* | 0.06 |
| **Internet connection for teachers available with interruption** | -0.76 | -0.69 | 11 | 8 | 0.01* | 0.06 |
| **Internet connection for teachers available without interruption** | 0.37 | 0.22 | 14 | 11 | 0.2 | 0.51 |
| **Internet connection for school administration staff not available** | -0.35 | -0.56 | 11 | 9 | 0.29 | 0.12 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Internet connection for school administration staff available with interruption** | -0.75 | -0.63 | 11 | 9 | 0.01* | 0.07 |
| **Internet connection for school administration staff available without interruption** | 0.52 | 0.18 | 14 | 12 | 0.06 | 0.58 |

The percentage of schools with no access to electricity was negatively correlated with higher secondary performance (r = -.85, n =6, p =.86 [n.s.]). In contrast, exam performance was positively correlated to the percentage of schools with electricity, either uninterrupted or interrupted (correlations ranged from .16 to .40, n = 10 to 13, p = .25 to .6 [n.s.]). The percentage of schools with internet access was also positively correlated with performance (ranging from .24 to .44, n = 10 to 13, p = .2 to .45 [n.s.]). Reliable Internet access for teachers and learners is positively related to performance, while non-availability or interrupted availability of internet for teachers and learners is negatively related to performance. It should be noted that the correlations mentioned in this section are exploratory in nature. They suggest areas in which studies could be designed to gather stronger evidence.

## INCLUSIVENESS

The measures adopted by school boards pertaining to Inclusiveness reveal gaps in policies for assessment of gifted children, gender sensitivity and children with special needs.

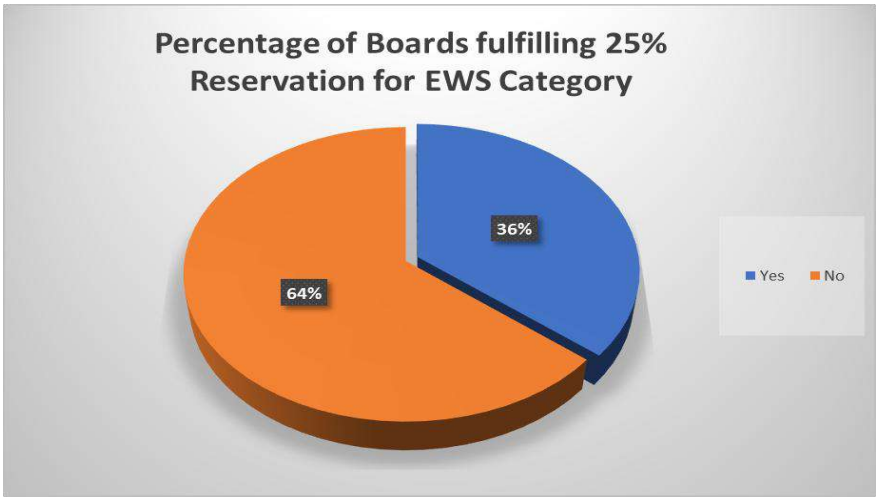



*Figure 13: Percentage of Boards fulfilling 25% Reservation for EWS Category*

While analysing the procured data, it was observed that only 36% of the boards implemented the 25% reservation policy for learners from the EWS category in their private schools. This statistic was considered significantly below the expected norm.

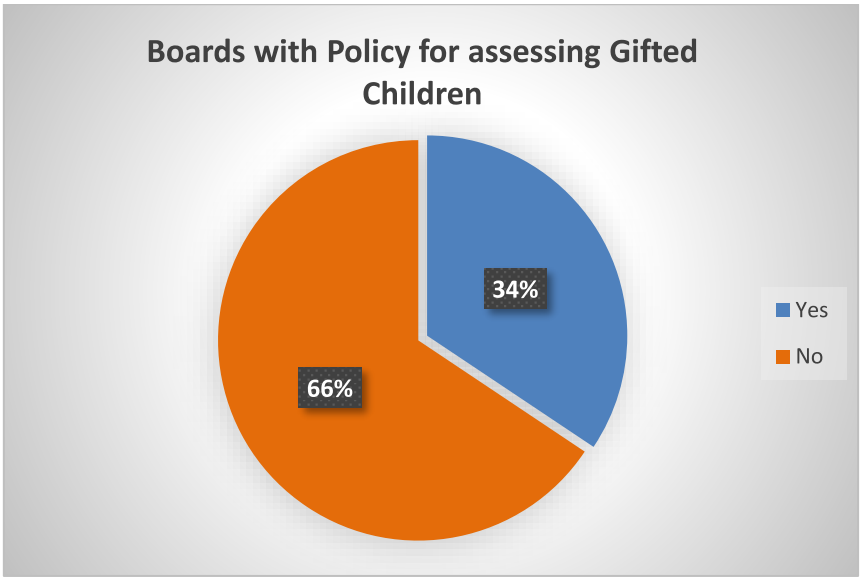



*Figure 14: Percentage of Boards with Policy for Assessing Gifted Children*

It was found that only 34.3% of the boards have a definite policy for assessing gifted children.

The study also reveals that 62.5% of the boards have positively responded to the question of including gender sensitivity and other constitutional values such as tolerance and empathy in their learning outcomes.

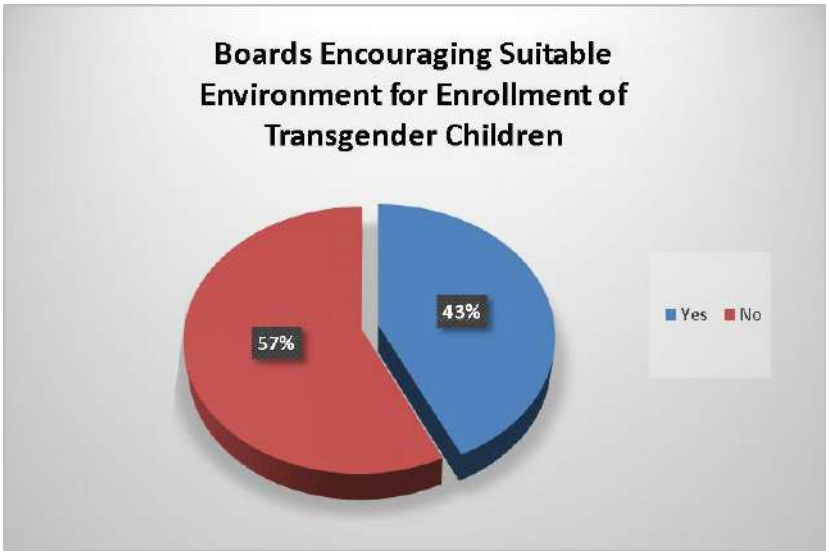



*Figure 15: Percentage of Boards Providing Suitable Environment for Transgender Children*

Approximately 43% of the boards reported encouraging affiliated schools to provide an inclusive environment for enrolling transgender children, through awareness and sensitisation among learners and staff. Such initiatives to facilitate learner inclusiveness are imperative to create

awareness among learners and inculcate a sense of understanding and tolerance towards diversity.

## RESULTS AND OBSERVATIONS: KEY FINDINGS FROM THE QPT ANALYSIS

It is observed that some of the boards place a significant emphasis on Remember/Recall-based questions in different subject domains.

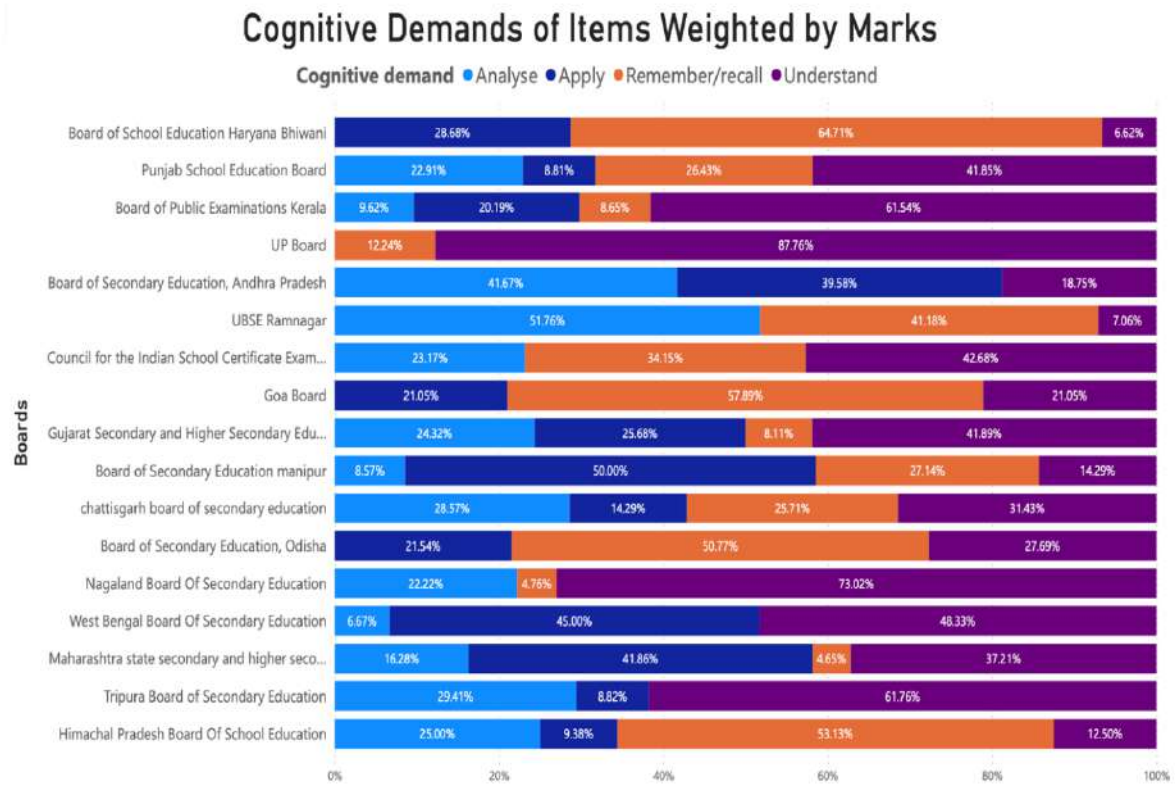



*Figure 16: Marks-Weighted Percentage of Items with Various Cognitive Demand Levels*

A high percentage of recall-based questions highlight the shortcomings in assessment procedures as outlined by the NEP 2020 and the NCF-SE 2023, especially the prevalence of rote or memory-based learning and assessment. It was observed that a few boards lacked creative questions for languages, which underscores the said point.

Figure 17 illustrates the distribution of different types of questions weighted by marks across various school boards. The question types considered are Long Answer, Multiple Choice Questions (MCQ), Short Answer, and Very Short Answer. The findings reveal a significant variation among boards in their approach to question types. About 25% of the boards place more than 50% emphasis on Long Answer questions.

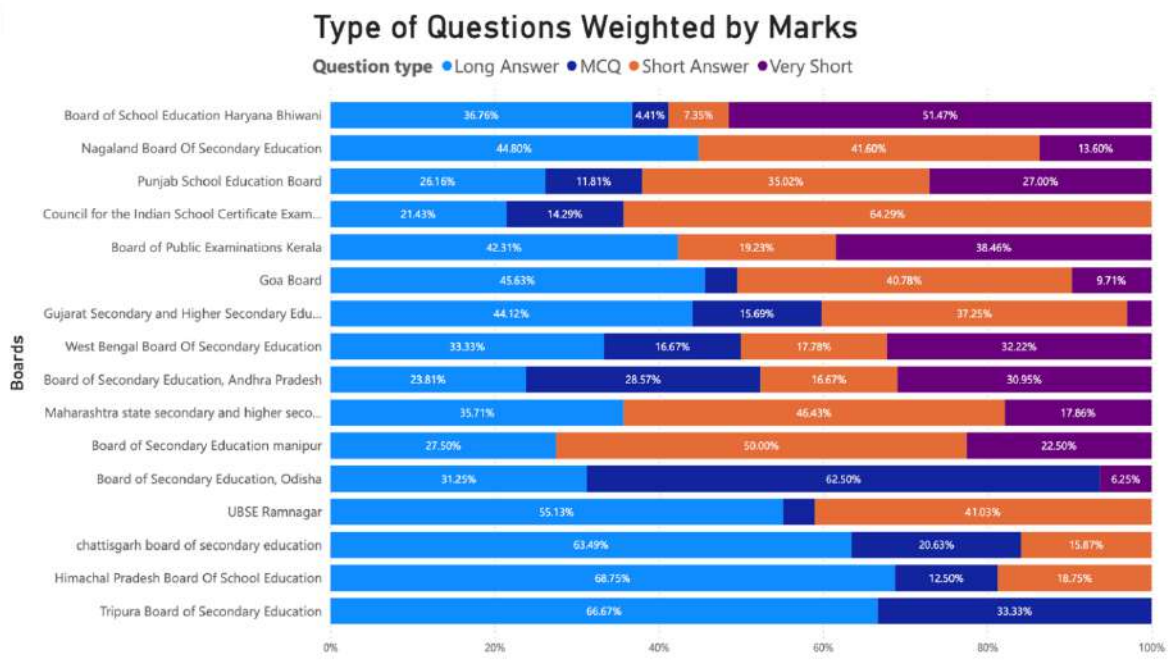



*Figure 17: Marks-Weighted Percentage of Items with Various Type of Questions*

One of the boards places more than 60% of their marks to MCQs. Around 12% of the boards emphasise Short Answer questions by more than 50%. Only about 6% of the boards place more than 50% emphasis on Very Short questions.

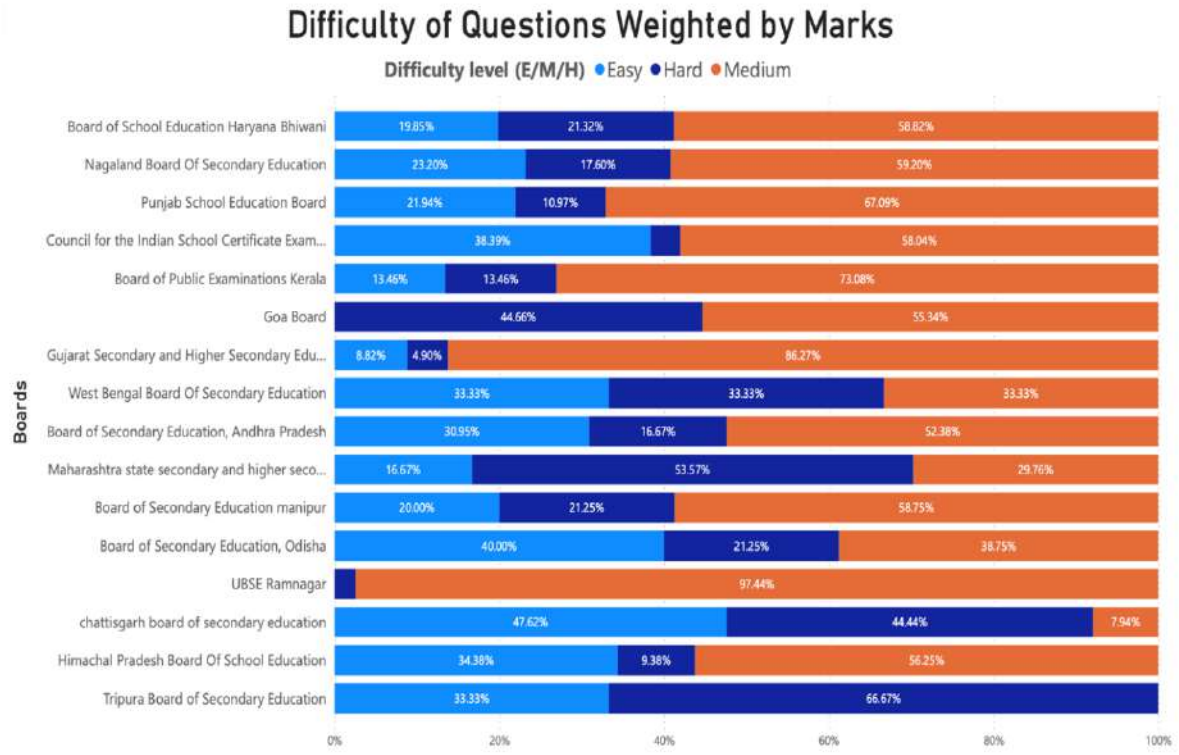


*Figure 18: Marks-Weighted Percentage of Items with Various Difficulty Levels*

For a couple of school boards, the subject matter experts deemed more than 85% of the questions in languages to be of medium difficulty level, while a few school boards had close to 67% difficult items paired with about 33% easy difficulty level items. This highlights the stark disparity in the level of difficulty of the question papers resulting in a glaring dissonance in the marks received by learners across boards.

## POLICY RECOMMENDATIONS

The NEP 2020 proposes establishing equivalence across boards of school education as crucial to improving the standards in the educational landscape of the country. At its very core, it embodies the spirit of promoting educational equity, which is the precondition for all development. However, ensuring equity in education alone cannot lead to desired results unless accompanied by a system of education based on high-quality learning-teaching and assessments.

PARAKH, NCERT is transforming the nation's educational landscape with its focus on competency-based assessment. One of the key responsibilities entrusted to PARAKH, NCERT is to bring about the equivalence of boards of school education across the country.

Deliberations were made with the participating boards during the documentation process of 'Equivalence' by the team PARAKH. During these deliberations, individual comments on the report were considered and the proposed recommendations were thoroughly discussed and finalised. Given below is a table of the post-analysis deliberations undertaken by PARAKH.

**Post-Analysis Deliberations with the School Boards**

| Date | Venue |
|---|---|
| 8th November & 9th November, 2023 | NCERT, Delhi |
| 9th November, 2023 | CBSE Office |
| 7th December, 2023 | NCERT, Delhi |
| 20th February, 2024 | NCERT, Delhi |

It is essential to highlight the need to strengthen PARAKH, NCERT's mechanism of supporting and collaborating with school boards in different states. As a regulatory body, PARAKH will support and supervise the attainment of equivalence and its regulation across all boards in the country.

PARAKH, NCERT is to host bi-annual meetings of all boards across the different regions ensuring that each board gets the requisite number of opportunities to share experiences and develop context-specific interventions and solutions to their administrative or pedagogical challenges.

Chairpersons of different boards or their representatives must ensure participation in these meetings.

This study at its very onset identifies that quality and equal educational facilities are paramount. It aims through its empirical, evidence-based approach to propose policy recommendations for boards of education from a multi-dimensional standpoint.

The recommendations have been distilled into five categories namely;

- **Administration**
- **Curriculum**
- **Assessments**
- **Infrastructure**
- **Inclusiveness**

This is based on the multiple administrative and pedagogical dimensions associated with the functioning of the boards of education.

PARAKH, NCERT will oversee the adoption of the recommendations by the School Education Boards for this implementation exercise. Furthermore, in its advisory role, PARAKH proposes multiple implementation models for each sub-category of the recommendations providing boards an entry point into this path-breaking exercise.

## ADMINISTRATION

1. **School Education Boards to have statutory status**. Statutory status will ensure that clear parameters are laid down for the functioning of a board as defined by the statute. This will help establish clear definitions regarding the powers, tenure of appointment, emoluments of the chairperson, and other authorities of the board, as well as other aspects of the board's functioning. All provisions/sections in the act should be updated according to current needs

2. **Boards to conduct regular periodic reviews of affiliated schools on a yearly basis**. Affiliations should be granted for a maximum period of three years only. Surprise inspections of the schools should be conducted to ensure continued implementation of the provisions required for the affiliation. Affiliations should only be granted to schools that have complied with the implementation of the provisions set by the Schools Standard Setting Authority (SSSA). Guidelines for the SSSA are to be developed in collaboration with PARAKH, NCERT. The school boards in the States to act as the SSSA.

3. **Boards to be empowered to recognise and affiliate the schools and give NOCs in the states, where recognition or affiliation is accorded by the Directorate.** The boards must have the authority to identify unrecognised institutions (schools/coaching centres etc.) and take action against them as per the prevailing laws of the land. Further, the conditions for affiliation laid down by the boards of education must be the same for all schools irrespective of the type of

management (privately-run schools as well as government-run schools). The guidelines for affiliation are to be finalized in consonance with the recommendations of PARAKH.

4. **All boards to make provisions in their bylaws for capacity building and professional development of the Teachers/Principals at all levels.** As per the NEP 2020, 50 hours of training for Continuous Professional Development (CPD) annually is mandated for all teachers by the board out of which 10 hours are compulsory for Paper Setting in competence-based assessments. A separate division of in-service training has been suggested to facilitate the upgradation of teaching skills. This division should interact closely with the Academic and Research divisions and collaborate with PARAKH to develop the CPD programs or 'competency-based assessment'. **The boards are to establish CPD programs focusing on the latest educational trends and technologies, tailored to the specific needs of educators in India.** These programs should include workshops, online courses, and collaborative learning opportunities to ensure that teachers are well-equipped to deliver high-quality education and adapt to changing educational environments.

5. **Depending on the size of the state, the board's functioning to be decentralized through the establishment of regional offices and their roles need to be strengthened.** The formulation of the decentralization process in the boards is to be prepared along with PARAKH.

6. **Boards are to have an autonomous organisational structure having a strong academic wing (curricular development, pedagogy and assessment)**. The boards should work towards defining their organisational structure precisely and comprehensively. This will give them the autonomy to function freely within the parameters laid down for them. Their functions should be diversified and expanded as well as redefined.

7. **Boards to have a Research Wing focusing on Skills and Sports Education, and developing interdisciplinary curriculum.** This division will strengthen the training mechanism and keep the boards updated on developments in educational research and policy, providing policy and pedagogical inputs as needed. Additionally, the division should have adequate staffing. Boards should ensure that professionals knowledgeable in research and familiar with field realities are identified and appointed to this division.

8. **Boards to set up of Library and Documentation Cell.** A Library and Documentation Cell should also be set up for the strengthening of the Academic and Research divisions. This will also add to the tempo of in-service training. The library should be a rich repository of textual and audio-visual materials. This activity will help the boards acquire an academic flavour with respect to their functioning.

9. **Boards to develop IT infrastructure and use generative AI.** With the changing times and keeping in focus the emerging needs it is recommended to develop IT infrastructure and use generative AI optimally.

10. **Boards to work further on digitizing the administrative infrastructure, examination, evaluation and monitoring systems including records.** Although many boards have computerized their work, there is a need to train the staff further in the use of computers not merely for the processing of examination-related work but also for improving the management of the boards. It is therefore suggested that there should be a full-fledged IT Infrastructure Unit in each board. This will enable the staff in position to perform better than they are doing at present.

11. **Grievance Redressal -** The boards are to work on developing a competent mechanism for grievance redressal for secrecy in confidential work, administration as well as the conduct of examination and have a vigilance wing.

12. **Boards to emphasise the transparency of all operations and processes.** It should be affirmed that all administrative procedures cannot be treated as confidential. All confidentiality should relate to the identity of the individuals and not the procedures. It should be ensured that procedures are followed implicitly and honestly. Both efficiency and transparency are the cornerstones of the boards' functioning. The Chairperson of the board in her/his capacity as the chief administrative executive must ensure that whatever is laid down is fully implemented. This responsibility of the chairperson should not be transferable. The mechanism should be such that every grievance is attended to promptly as well as adequately.

13. **Boards to set up special committees depending on the administrative and academic needs.** Depending upon the nature of the problem and its complexity, a board may decide to set up any other committee/committees. In certain cases, these can also be advisory in nature.

14. **Boards to conduct refresher courses at the National and State level for officials of the boards.** Most senior officials would require an infusion of new ideas and training every two to three years. At the National and State level, these training programs need to be organised for upskilling of the personnel. International exposure to the officials of the board to understand the best practices and system prevalence of different boards be studied.

15. **Boards to collaborate with PARAKH and adopt international benchmarking to enhance the quality of education and ensure global competitiveness.** Boards in collaboration with international bodies should adopt best practices and methodologies from globally recognised education systems. According to NEP 2020, integrating global perspectives is crucial to preparing learners for a globalized economy, fostering innovation, and enhancing critical thinking skills. This alignment will not only improve the quality of education but also facilitate learner mobility and acceptance in higher education institutions worldwide. Comparative studies between the boards and the international boards can also be taken up to understand the best practices.

16. **Boards to implement a rigorous evaluation system for teachers and administrative staff incorporating peer reviews and learner feedback.** Boards should ensure that evaluations should include professional development components to ensure continuous improvement. The

NEP 2020 emphasises the need for a comprehensive teacher evaluation framework that includes regular assessments, professional development opportunities, and accountability measures. This framework will enhance the quality of teaching by identifying areas for improvement and providing targeted training and resources fostering a culture of continuous professional growth and excellence in teaching.

17. **Boards to develop a centralized database for managing learner records, staff details, and other administrative information to improve efficiency and transparency.** The database should be integrated with advanced data analytics tools to provide insights for decision-making and policy formulation. The database may be linked to the PARAKH website for all stakeholders to have equal access to information. The NEP 2020 also stresses the importance of leveraging technology to enhance administrative efficiency and data-driven decision-making in education. A centralized database will streamline administrative processes, improve data accuracy, and facilitate better resource management. Additionally, it will enable real-time monitoring of learner progress and institutional performance.

## CURRICULUM

1. **Boards are to adhere to the grade-appropriate syllabus for each pedagogic stage (i.e., Foundational, Preparatory, Middle, and Secondary) aligning with the NCF-FS and NCF-SE 2023.** They must also ensure the provision of skill training and subjects during the Middle (Grades 6-8) and Secondary (Grades 9-12) stages respectively. Secondary education should be treated as terminal in character and should operate with autonomy. In practical terms, skill training completed at the end of secondary school should adequately prepare learners for employment opportunities. Each board is mandated to establish a Skill Education division, adequately staffed, adequately staffed to spearhead and oversee this relatively new area of educational activity.
2. **Boards are required to make counselling, especially career counselling mandatory for the schools affiliated with them** or promote a teacher-as-a-counselor model. They should ensure that the schools have a career counselor to provide support in respect of future career guidance, job placement assistance, academic and personal counselling and the mental and social well-being of the learners. They should work towards a community-based voluntary counselling model like the *Vidyanjali* initiative of the Government of India.
3. **The membership of the Boards of Studies and the Academic and Research Division must be both strengthened and professionalized if these are to improve the resource input for improving the quality of school education.** Proper diligence must go into nominating the members for the Board of Studies.
4. **Boards are to collaborate with PARAKH to see how interdisciplinary and multidisciplinary learning can be implemented in its affiliated schools by integrating subjects and encouraging collaborative projects across different fields of study.** The NEP 2020 supports an interdisciplinary approach to education, recognising that real-world

problems are often complex and multifaceted. Encouraging learners to work on interdisciplinary projects will help them develop critical thinking, problem-solving, and collaboration skills. It will also foster creativity and innovation by allowing learners to explore connections between different fields.

5. **Boards are to emphasise digital literacy and incorporate comprehensive ICT training within the curriculum in its affiliated schools.** The boards must work in collaboration with PARAKH and integrate digital literacy as a core component of the curriculum from the Foundational Stage in its affiliated schools. NEP 2020 highlights the importance of digital literacy in preparing learners for the digital age, where technology plays a central role in all aspects of life. Comprehensive ICT training should include coding, cybersecurity, and the ethical use of technology. By equipping learners with these skills, the education system will ensure that they are ready to thrive in a technology-driven world and contribute to the digital economy.
6. **Boards, based on the curriculum, need to prepare a blueprint for the grade-specific and the state-specific subjects that are being assessed.** These blueprints should primarily reflect the competencies that are being assessed. The blueprints should also consider subject-specific competencies outlined in the NCF-SE 2023, ensuring that assessments align with the learning outcomes defined for each subject and grade level.

## ASSESSMENT

1. **Boards are to develop a comprehensive assessment framework in alignment with the NEP 2020 and the NCF-SE 2023**. They should ensure that the Question Papers should be developed on scientific design and blueprint mapped to clearly defined competencies. They should further ensure that the assessment design is prepared in such a manner that each unit of content is assigned a weightage in terms of credits. The scope for selective study by the learners should be eliminated to the maximum extent possible. Boards are to work towards developing alternative assessment strategies to reduce the 'high stakes' nature of assessment.

2. **Boards to develop an elaborate system of credit transfer as per NCrF.** To ensure inter-board mobility, and multiple entry and exit points, boards must develop a system of credit accumulation and transfer. This should include an academic mechanism for credit allocation mapped to the National Curriculum Framework along with the development of an Academic Bank of Credit (ABC) to ensure that credits are transferred across school boards in case of inter-board migration and/or across various entry/exit points. **(Details enclosed as Addendum-1).**

3. **Boards to prepare assessment schemes for Skill, Art and Physical Education, and Well-being.** The assessment and evaluation should be done locally at the school level with external examiners. The designed assessment schemes should efficiently assess the learning outcomes of the course.

4. **School Boards to have a MoU with the National Council for Vocational Education and Training (NCVET) for assessment and certification in vocational subjects**. They must ensure that the norms are worked out in conjunction with industries and these should conform to the norms already laid down by the NCVET to ensure achievement of equivalence in this area. Also, **Education Boards should award learners with a certificate at multiple exit points after completion of their skill course, certifying their ability to join the workforce while putting to use their particular skill expertise.** This will also certify the level of expertise acquired by the learner in the particular vocation.

5. **Boards are to devise a foolproof mechanism to maintain confidentiality, and prevent leakages, and cheating in examinations.** By implementing strict protocols for handling examination papers, conducting secure digital assessments where applicable, and monitoring examination centres effectively, boards can mitigate risks of malpractice. This approach will uphold the trust of students, parents, and educational stakeholders.

6. **Boards are to develop a cadre of professional paper setters.** Boards are to ensure the quality and relevance of examination papers across their affiliated schools. This will enhance the rigour and standardisation of assessments by recruiting experienced subject matter experts who can construct fair, balanced, and thought-provoking exam questions. By establishing clear criteria and guidelines for paper setters, boards can uphold the academic integrity of examinations and align them with the learning objectives outlined in the curriculum.

7. **Boards are to choose examination centres that are secure, accessible, and equipped to handle the logistical requirements of conducting exams.** The location of examination centres has a direct bearing on ensuring integrity in the conduct of examinations. **The obvious thing to do is to lay down rules in advance for locating examination centres.** Not even the Chairman should have the authority to make any exceptions. This ensures that examination processes are conducted in a controlled environment, minimizing external influences and ensuring fairness in assessments.

8. **Boards are to ensure that clear guidelines for evaluation are prepared and provided to all the evaluators to minimize inter-examiner variability.** They should work on preparing a marking scheme including an item-wise analysis of the question paper.

9. **Boards are to move towards On-demand Examinations and develop Question Banks accordingly.** In accordance with the essential need to provide the learners with more opportunities to appear for the board examinations, as NCF-SE 2023 states its two major challenges as, "High Stakes" and giving "No Second Chances" (NCF-SE 3.4.12.1a), the provision for a greater number of supplementary/compartment board examinations will be in alignment with the aspirations of the NCF-SE 2023 and the NEP 2020. **Boards must also have provisions for supplementary/compartment board examinations.** The learners are to be allowed to appear in at least two supplementary/compartment board examinations.

10. **Boards are to develop a mechanism for moderation of question papers in a scientific manner based on specific and clear-cut guidelines.** By implementing clear-cut moderation guidelines, boards are to standardise the process of reviewing and refining question papers to align them with the prescribed curriculum and learning objectives. The scientific approach to moderation involves evaluating the clarity of questions, assessing the balance of difficulty levels, and ensuring alignment with educational standards and can also be drawn from best practices and recommendations outlined in educational policies such as the NEP 2020,

11. **Boards are to ensure that the reliability and validity of the infrastructure is maintained.** They should do a performance analysis of the assessment as well as the population using an integrative mixed methods approach and disseminate the same to all stakeholders.

12. **Boards are to ensure that 360-degree Holistic Progress Cards for every learner in the affiliated schools are incorporated in board's certificate**. In line with the vision of NEP 2020, the elements of personality development such as a high emotional quotient, creativity etc. are equally important and need to be assessed to get a total picture of the learner's ability and personality. The boards will therefore incorporate a component of learners' Holistic progress in the form of the Holistic Progress Card within the boards' certification of exams.

13. **Boards are to work towards the development of assessment benchmarks for examinations to ensure inter and intra-year comparability of results**. Benchmarking as an exercise ensures checks and balances in question paper development and makes the practice of moderation scientific and evidence-based.

14. **Boards are to move towards a more holistic assessment framework that includes formative assessments, project-based evaluations, and peer assessments in addition to traditional exams.** The NEP 2020 proposes a shift from high-stakes examinations to comprehensive evaluation. Boards must collaborate with PARAKH and use multiple assessment methods to capture a comprehensive picture of the learner's learning journey. This approach aligns with NEP 2020's vision of reducing the excessive pressure associated with high-stakes exams by incorporating diverse evaluation methods. Holistic assessment methods will help identify learners' strengths and areas for improvement, providing them with timely feedback and support. By integrating such assessment methods, educators can better understand the learner's learning processes and adjust their teaching strategies accordingly. This would encourage a more balanced and inclusive assessment system that values different aspects of learner development beyond rote memorization. This comprehensive approach ensures that assessments are more reflective of a learner's overall capabilities and learning journey.

15. **Boards are to implement real-time feedback systems for learners to help them understand their strengths and areas for improvement continuously.** Boards must use technology-based platforms in their affiliated schools to provide immediate and personalized

feedback to the learners. This recommendation aligns with NEP 2020, which emphasises the importance of continuous feedback in enhancing learner's learning and engagement. Real-time feedback systems will enable teachers to monitor learner's progress closely and make informed decisions about instructional strategies. This timely feedback will also empower learners to take ownership of their learning and make necessary adjustments to achieve their academic goals. Moreover, such systems encourage a proactive learning environment where learners are continuously engaged and motivated to improve.

16. **Boards are to adopt international assessment practices and tools to ensure the evaluation standards are on par with global benchmarks.** Boards must benchmark Indian assessments against internationally recognised standards. NEP 2020 advocates for the adoption of best practices from around the world to improve the quality and credibility of learner assessments. Aligning with international assessment practices will ensure that Indian learners are evaluated fairly and accurately, enhancing their readiness for higher education and global employment opportunities. This alignment helps in standardising educational outcomes, making it easier for learners to transition between different educational systems and pursue higher education abroad.

17. **Boards are to establish mechanisms for continuous improvement in assessment processes, leveraging technology for better analysis and reporting.** Boards must work in collaboration with PARAKH and use advanced data analytics to analyse assessment results and identify trends and ascertain areas for improvement. NEP 2020 highlights the need for ongoing evaluation and refinement of assessment methods to ensure they remain effective and relevant. Continuous improvement mechanisms will help education authorities and institutions to make data-driven decisions, enhance the quality of assessments, and ensure that they meet the evolving needs of learners and society.

18. **Boards to set paper for conducting the census-based assessment in Grade 8.** Census-based assessments can play a crucial role in transforming the education system by providing a detailed and equitable evaluation of learner performance across the country. When aligned with the objectives of the NEP 2020, such assessments can help in achieving a more inclusive, effective, and transparent educational framework, ultimately leading to better learning outcomes for all learners.

## INFRASTRUCTURE

1. **Boards are to ensure the availability of basic infrastructure in schools affiliated with them.** Boards must develop a management system of information which must keep records of the infrastructure of the schools including the availability of toilet facilities for both boys and girls separately, running water facilities, electricity, internet facility, well-equipped library (adequate number of books), facilities for indoor and outdoor games (playground),

strong room for storing the question papers, photocopying facilities, laboratories, facilities for skill education, adequate number of computer labs, etc.

2. **Boards are to conduct cyclic audits.** Boards must make provisions for regular audits of the safety and security of children and employees of the school.

3. **Boards are to put infrastructure maintenance in place.** Regular maintenance of school buildings in terms of whitewash, painting and repairs. A boundary wall is a must. Boards must also have a well-equipped library, auditorium, conference hall, and online monitoring system.

4. **Boards are to upgrade classrooms to smart classrooms equipped with the latest educational technologies such as interactive whiteboards, projectors, and internet access.** NEP 2020 emphasises the role of technology in modernizing education and making it more accessible and inclusive. Boards must invest in technology infrastructure to create an engaging and interactive learning environment. Smart classrooms will facilitate blended learning, where learners can benefit from both in-person and online instruction. This upgrade will also enable teachers to use a variety of digital resources to enhance their teaching and make learning more engaging and effective.

5. **Boards are to promote the construction of green buildings that are environmentally sustainable and energy efficient.** Boards must incorporate green building standards into school infrastructure projects to reduce environmental impact and operational costs. NEP 2020 advocates for sustainable development and the integration of environmental education into the school curriculum. Green buildings will provide a healthier learning environment for learners and staff while also promoting environmental stewardship. These buildings can serve as living laboratories for learners to learn about sustainability practices and the importance of environmental conservation.

6. **Boards are to implement comprehensive safety measures, including surveillance systems, emergency response protocols, and regular safety drills.** Boards must develop a standardised safety protocol for all schools to ensure a safe and secure learning environment. NEP 2020 highlights the importance of safety in schools and calls for robust measures to protect learners and staff. Comprehensive safety measures will include physical security enhancements, regular training for staff and learners, and clear guidelines for responding to emergencies. Ensuring a safe school environment is crucial for the well-being and academic success of the learners.

7. **Boards are to ensure that all infrastructure is inclusive and accessible to learners with disabilities, including ramps, elevators, and special classrooms.** Boards must adhere to universal design principles to accommodate all learners' needs. NEP 2020 emphasises the need for inclusive education that caters to the diverse needs of all learners. Inclusive infrastructure will provide equal opportunities for learners with disabilities to participate

fully in educational activities. It will also promote a culture of inclusivity and respect for diversity within the school community.

## INCLUSIVENESS

1. **Private schools affiliated with the boards are to provide 25% reservation for the Economically Weaker Section.** This will bridge the socio-economic gap by offering disadvantaged learners the opportunity to benefit from the same high standard of education as their more affluent peers. By fostering a diverse learning environment, schools will contribute to the overall development of all students, encouraging mutual respect and understanding across different economic backgrounds.

2. **Boards are to ensure that the affiliated schools evolve opportunities for learning for gifted and differently-abled children.** By integrating these provisions, schools can foster an inclusive educational culture where every student, regardless of their abilities, has access to tailored learning experiences and opportunities for holistic development. This approach not only aligns with NEP 2020 recommendations but also promotes a supportive and nurturing environment that empowers all students to reach their full potential.

3. **Boards are to address the disabilities mentioned in the RPWD Act 2016 and other related documents.** This requirement emphasizes the need for educational institutions affiliated with boards to implement inclusive practices and provide necessary accommodations for students with disabilities. Provisions like Braille question papers, scribes, audio examinations etc. must be made in all schools affiliated to the boards. By adhering to the guidelines of the RPWD Act 2016, boards support the integration of learners with disabilities into mainstream education, aligning with the inclusive education goals.

4. **Boards are to ensure that disability-friendly infrastructure is developed in their affiliated schools**. They should ensure the provision of accessible bathrooms, ramps, use of assistive devices, etc. This will strengthen their commitment to promoting equitable educational opportunities and creating a supportive atmosphere that accommodates the diverse needs of all learners.

5. **Boards are to encourage its schools to provide an enabling environment for the socio-economically disadvantaged groups.** By encouraging schools to implement inclusive practices and support mechanisms, boards can help mitigate barriers to education faced by disadvantaged groups. This includes initiatives such as scholarship programs, fee waivers, and supplementary educational support, which are aligned with the recommendations of the NEP 2020 and other relevant policy frameworks.

6. **Boards are to establish cultural exchange programs to promote diversity and intercultural understanding among learners.** NEP 2020 highlights the importance of fostering global awareness and cultural sensitivity among learners. In line with this, boards

are to partner with international institutions to facilitate learner and teacher exchanges. Cultural exchange programs will provide opportunities for learners to experience different cultures, perspectives, and educational practices. These programs will also enhance learners' social and communication skills, making them more adaptable and empathetic global citizens.

7. **Boards are to ensure equitable distribution of educational resources across all schools, particularly focusing on rural areas.** NEP 2020 also emphasises the need for equity in education, ensuring that all learners, regardless of their background, have equal opportunities to succeed. Boards must collaborate with PARAKH to develop a resource allocation framework to address disparities and ensure that all learners have access to quality education. Equitable resource distribution will involve targeted investments in infrastructure, teaching materials, and professional development for educators in underserved areas. This approach will help bridge the gap between urban and rural schools and promote social justice in education.

8. **Boards are to provide additional support for non-native learners, including language learning programs and cultural assimilation workshops.** NEP 2020 also advocates for an inclusive education system that accommodates the needs of all learners, including those from diverse linguistic and cultural backgrounds. Adhering to them, boards must develop specialized curricula and training programs for teachers to support non-native learners effectively. Support for non-native learners will include language instruction, peer mentoring programs, and activities.

## SUGGESTED FRAMEWORK FOR EQUIVALENCE FOR THE SECONDARY STAGE OF SCHOOL EDUCATION

The Secondary Stage of School Education is divided into two phases as per the National Curriculum Framework for School Education (NCF-SE) 2023:

- Phase I (Grade 9-10) and
- Phase II (Grade 11-12).

For the first phase of Secondary Education, learners must earn 40 credits in Grade 9 and 40 credits in Grade 10.

### PHASE I

**Grade 9**

- Earn 32 subject-specific credits
- Pass the Census-Based Assessment* (in Grade 8) (2 credits)
- Earn at least 2 credits by pursuing online course/s (60 hours) from Online Learning platforms (ex. MOOCs).
- Complete a minimum of 120 hours of 'involved activities' as per Holistic Progress Card involving Research and/or Community-Based Projects (4 credits)
- **Total credits – 40**

*The census-based assessment in Grade 8 will have 2 credits which will be added in Grade 9.

### Grade 10

- Earn 32 subject-specific credits
- Earn at least 4 credits by pursuing online course/s (120 hours) from Online Learning platforms (ex. MOOCs).
- Complete a minimum of 120 hours of 'involved activities' as per Holistic Progress Card involving Research and/or Community-Based Projects (4 credits)
- **Total credits – 40**

For the second phase of Secondary Education, learners must earn 44 credits in Grade 11 and 44 credits in Grade 12.

## PHASE II

### Grade 11

- Earn 36 subject-specific credits
- Earn at least 4 credits by pursuing online course/s (120 hours) from Online Learning platforms (ex. MOOCs).
- Complete a minimum of 120 hours of 'involved activities' as per Holistic Progress Card involving Research and/or Community-Based Projects (4 credits)
- **Total credits – 44**

### Grade 12

- Earn 36 subject-specific credits
- Earn at least 4 credits by pursuing online course/s (120 hours) from Online Learning platforms (ex. MOOCs).
- Complete a minimum of 120 hours of 'involved activities' as per Holistic Progress Card involving Research and/or Community-Based Projects (4 credits)
- **Total credits – 44**

| SECONDARY EDUCATION | | | |
|---|---|---|---|
| Phase I | | Phase II | |
| Grade 9 | Grade 10 | Grade 11 | Grade 12 |
| • Earn 32 subject-specific credits<br>• Pass the Census-Based Assessment* (in Grade 8) (2 credits)<br>• Earn at least 2 credits by pursuing online course/s (60 hours) from Online Learning platforms (ex. MOOCs).<br>• Complete a minimum of 120 hours of 'involved activities' as per Holistic Progress Card involving Research and/or Community-Based Projects (4 credits)<br>*The census-based assessment in Grade 8 will have 2 credits which will be added in Grade 9. | • Earn 32 subject-specific credits<br>• Earn at least 4 credits by pursuing online course/s (120 hours) from Online Learning platforms (ex. MOOCs).<br>• Complete a minimum of 120 hours of 'involved activities' as per Holistic Progress Card involving Research and/or Community-Based Projects (4 credits) | • Earn 36 subject-specific credits<br>• Earn at least 4 credits by pursuing online course/s (120 hours) from Online Learning platforms (ex. MOOCs).<br>• Complete a minimum of 120 hours of 'involved activities' as per Holistic Progress Card involving Research and/or Community-Based Projects (4 credits) | • Earn 36 subject-specific credits<br>• Earn at least 4 credits by pursuing online course/s (120 hours) from Online Learning platforms (ex. MOOCs).<br>• Complete a minimum of 120 hours of 'involved activities' as per Holistic Progress Card involving Research and/or Community-Based Projects (4 credits) |
| Total credits – 40 | Total credits – 40 | Total credits – 44 | Total credits – 44 |

## SCHEME OF ASSESSMENT

The suggested assessment framework for learners in classes 9 through 12 will employ a comprehensive approach that balances both, formative and summative assessment methods to provide a holistic view of learners' progress. This framework ensures that various aspects of learner performance are adequately measured through diverse assessment modes.

In classes 9 and 11, the assessment will be done in two terms. During Term I, Classroom Assessments using Holistic Progress Cards (HPCs) will include methods such as Portfolio Assessment, Self-Assessment, Peer Assessment, Teacher Observation, Group Work, Laboratory activities, and Group Discussions. The End Term Assessment will employ a competency-based approach using the Integrated Test Management System (ITMS), which will allow teachers to select content and questions from a predefined question bank. Term II will mirror Term I's classroom assessment methods but additionally include Project Work and Paper Presentations. The End Term Assessment will remain competency-based, utilising ITMS with teacher-selected content and questions.

For classes 10 and 12, the assessment framework will be divided similarly into two terms. Term I will feature Classroom Assessments through HPCs, involving Portfolio Assessment, Self-Assessment, Peer Assessment, Teacher Observation, Group Work, and Laboratory activities. The End Term Assessment will continue with competency-based assessments using ITMS, with teachers selecting from the question bank. Term II will introduce formative assessment with additional components such as Project Work, Paper Presentations with viva voice, and Group Discussions. The summative assessment will consist of a common paper consisting of Long Answers, Short Answers, Very Short Answers, and Multiple Choice Questions linking with the Learning Outcomes, based on the question paper design and blueprint.

The weightage of formative and summative marks will be adjusted progressively from class 9 to class 12, increasing the emphasis on summative assessment as learners advance in grades. Specifically, class 9 features a 70% formative and 30% summative split, class 10 an equal 50% formative and summative division, class 11 a 40% formative and 60% summative distribution, and class 12 a 30% formative and 70% summative ratio. Consequently, the cumulative marks at the end of the secondary stage are 15% for class 9, 20% for class 10, 25% for class 11, and 40% for class 12.

This assessment framework will ensure a balanced mix of formative (ongoing) and summative (end-term) assessments, providing a holistic assessment of learners' capabilities and readiness for higher education or professional paths. The diverse assessment methods, including portfolios, self-assessment, and competency-based assessments, will comprehensively measure various facets of learning and skills of learners. The suggested assessment framework is given below in tabular form as well.

# SCHEME OF ASSESSMENT

| | Class 9 & Class 11 | | | |
|---|---|---|---|---|
| | Term I | | Term II | |
| **Assessment** | Formative Assessment | Summative Assessment | Formative Assessment | Summative Assessment |
| **Mode/Pattern of Assessment** | • Portfolio Assessment<br>• Self-Assessment<br>• Peer Assessment<br>• Teacher Observation<br>• Group Work<br>• Laboratory<br>• Group Discussions | Competency-based Assessment making use of ITMS (Integrated Test Management System<br><br>Teacher will have the option of selecting the contents and the Questions from the BANK) | • Portfolio Assessment<br>• Self-Assessment<br>• Peer Assessment<br>• Teacher Observation<br>• Group Work<br>• Laboratory<br>• Project Work (using materials available in the surroundings<br>• Paper presentation<br>• OTBA | Competency-based Assessment making use of ITMS (Integrated Test Management System<br><br>Teacher will have the option of selecting the contents and the Questions from the BANK) |

| | Class 10 & Class 12 | | | |
|---|---|---|---|---|
| | Term I | | Term II | |
| **Assessment** | Formative Assessment | Summative Assessment | Formative Assessment | Summative Assessment |
| **Mode/Pattern of Assessment** | • Portfolio Assessment<br>• Self-Assessment<br>• Peer Assessment<br>• Teacher Observation<br>• Group Work<br>• Laboratory | Competency-based Assessment making use of ITMS (Integrated Test Management System) | • Portfolio Assessment<br>• Self-Assessment<br>• Peer Assessment<br>• Teacher Observation<br>• Group Work<br>• Laboratory<br>• Project Work (using materials available in the surroundings<br>• Paper presentation with viva voice<br>• Group Discussions | Question paper LA, SA, VSA, MCQ linking with LOs<br><br>Based on Question paper Design and Blue Print |

## SUGGESTED FRAMEWORK FOR EQUIVALENCE FOR THE SECONDARY STAGE OF SCHOOL EDUCATION

| | Class 9 | Class 10 | Class 11 | Class 12 |
|---|---|---|---|---|
| Weightage of Formative Assessment and Summative Assessment | 70% of Formative Assessment Marks & 30% of Summative Assessment Marks | 50% of Formative Assessment Marks & 50% of Summative Assessment Marks | 40% of Formative Assessment Marks & 60% of Summative Assessment Marks | 30% of Formative Assessment Marks & 70% of Summative Assessment Marks |
| Weighted Marks at the end of Higher Secondary Stage | 15% | 20% | 25% | 40% |

## SUBJECT-SPECIFIC CREDITS

Learners must earn the following **32 subject-specific credits** per year to be awarded in the first phase (Grade 9-10) of Secondary Education.

These credits are divided in the following manner:

- Phase I (Grade 9 and Grade 10)
  - 12 credits in 3 Languages (R1, R2, and R3; 4 credits each)
  - 4 credits in Mathematics
  - 4 credits in Sciences
  - 4 credits in Social Sciences
  - 2 credits in Art Education
  - 2 credits in Interdisciplinary Areas
  - 2 credits in Physical Education & Well-being
  - 2 credits in Skill Education

Learners must earn the following **36 subject-specific credits** per year to be awarded in the second phase (Grade 11-12) of Secondary Education.

These credits are divided in the following manner:

- Phase II (Grade 11 and Grade 12)
  - 12 credits in 2 compulsory Languages (Choose two Languages from Group 1; at least one of which is native to India)
  - 24 credits for Groups 2, 3 and 4 (four subjects from at least two of the following groups)

## SUBJECTS OFFERED IN THE TWO PHASES:

## PHASE I

The list of subjects for Secondary Education Phase I as provided by NCF-SE 2023.

| Curricular Areas | Subjects | Examinations |
|---|---|---|
| **Languages** | Language 1 | External Examination |
| | Language 2 | External Examination |
| | Language 3 | External Examination |
| **Mathematical & Computational Thinking** | Mathematics | External Examination |
| **Science** | Science | External Examination |
| **Social Science** | Social Science | External Examination |
| **Art Education** | Art Education | Local Assessment with External Examiner |
| **Interdisciplinary Areas** | Environmental Education | External Examination |
| **Physical Education & Well Being** | Physical Education | Local Assessment with External Examiner |
| **Vocational Education** | Vocational Education | Local Assessment with External Examiner |

## PHASE II

## GROUP 1 OF SUBJECT-SPECIFIC CREDITS (AS PER NCF-SE 2023)

Choose two Languages from the following; at least one of which must be native to India.

- Languages
  - Languages native to India (Compulsory)
  - Other Languages (Compulsory)
  - Modern Indian Languages
  - Classical Languages
  - Foreign Languages

## GROUP 2, 3, AND 4 OF SUBJECT-SPECIFIC CREDITS (AS PER NCF-SE 2023)

Of the 24 credits in Phase II of compulsory credits, learners must complete four from at least two of the following Groups.

## GROUP 2:

- Art Education
  - Indian Classical Music
  - Folk Music
  - Contemporary Music
  - Theatre
  - Puppetry
  - Sculpture
  - Fine Arts
  - Folk Painting
  - Graphic Design
  - Motion Pictures
  - Photography
  - Textile Designing

- Physical Education and Well-being
  - Yoga & Lifestyle
  - Sports & Nutrition
  - Physical Education for Learners with Disabilities
  - Biomechanics and Sports

- Vocational Education
  - Agriculture-Cereal Production
  - Agriculture – Seed Production
  - Agriculture – Gardening
  - Automobile Servicing
  - Machining
  - Electronics
  - Community Health
  - Accounting Services
  - Data Entry & Management
  - Banking Services
  - Textile & Garments

## GROUP 3:

- Social Science
  - History
  - Geography
  - Political Science
  - Psychology
  - Psychology & Mental Health
  - Economics
  - Development
  - Economics
  - Sociology
  - Philosophy
  - Anthropology
  - Archaeology
- Interdisciplinary Areas
  - Business Studies
  - Accounting
  - Sustainability and Climate Change
  - Journalism
  - Indian Knowledge Systems
  - Legal Studies

## GROUP 4:

- Mathematics & Computational Thinking
  - Mathematics
  - Computer Science
  - Business Mathematics
  - Advanced Mathematics
  - Probability & Statistics

- Science
  - Physics
  - Chemistry
  - Biology
  - Earth Sciences
  - Astronomy
  - Modern Physics
  - Biology

## NOTE:

Vocational Education, Art Education, and Physical Education and Well-being are integral parts of the curriculum in NCF-SE. However, much of the assessment, in this case, will have to be demonstration-based and not written-exam-based. It is recommended that 75% of the overall certification weightage be given to such demonstration-based assessment, and only 25% to any written examination. Boards will also need to design and implement high-quality systems which can locally (at the school) assess these demonstrations on the basis of demonstration. This will need to be independent from the school, yet operationally feasible.

Science and other subjects also need to have demonstration-based assessments, e.g., conducting experiments. This should have 20-25% weightage in the overall subject certification. While such assessments currently exist, they require significant enhancement for improved validity and objectivity, similar to the aforementioned criteria (similar to item e. above).

## CENSUS BASED ASSESSMENT (GRADE 8)

Learners must achieve the required competencies equivalent to the end of the Middle School Stage i.e. at the end of Grade 8 to earn their Secondary Education certificate. To ensure consistency and proficiency in the performance of the learners at the secondary stage, they must attain competencies equivalent to the end of the middle stage, as assessed by the census-based assessment at the end of Grade 8.

Credits will be awarded based on the percentages obtained in the Census-based Assessment (CBA) as follows:

- 0.5 credit (Below 60%)
- 1 credit (60%-75%)
- 2 credits (75% and above)

This will ensure that learners possess fundamental language, mathematical, and comprehension skills which are essential for academic success at a later stage and to being a lifelong learner.

## ONLINE LEARNING FROM MOOC PLATFORMS

Learners must engage in at least one online course offered by a Massive Open Online Course (MOOC) platform, culminating in a certificate of completion. Embracing the opportunities presented by digital learning platforms is not only advantageous but also essential in today's fast-evolving educational landscape.

The certificates will serve as tangible evidence of the individual's dedication to self-improvement and skill acquisition, enhancing their academic and professional profile in an increasingly competitive world.

Prominent MOOC platforms such as SWAYAM, Coursera, MOOC KIT, and edX, among others, offer a variety of courses that can be surveyed to find suitable options.

## 'INVOLVED HOURS' FROM HOLISTIC PROGRESS CARD (HPC)

Learners are required to complete a minimum of 120 hours of "involved activities" as outlined in the Holistic Progress Card (HPC) at the Secondary Stage. These activities may involve Skill Internships, Individual Research Projects (Community-based), Sports internships, etc. This will help in providing learners with a well-rounded educational experience going beyond traditional academic pursuits.

Participating in Skill Internships will allow learners to apply theoretical knowledge in real-world settings, gaining valuable hands-on experience and insights into their chosen fields. This practical exposure will not only enhance their skill set but also foster a deeper understanding of the professional landscape they aim to enter.

Individual Research endeavours will empower learners to explore their intellectual curiosity and delve into topics of personal interest. This will not only contribute to the development of critical thinking and analytical skills but also encourage a sense of academic ownership and passion for lifelong learning.

Community-based Projects will provide learners with opportunities to make a positive impact beyond the classroom. By actively engaging in projects that address local or global challenges, learners will be able to cultivate a sense of social responsibility and develop teamwork, communication, and leadership skills that are essential for success in various facets of life.

Incorporating sports into the holistic progress framework will aid in recognising the importance of physical well-being in overall development. Participation in sports activities will not only promote a healthy lifestyle but also instil qualities such as discipline, teamwork, and resilience.

Learners need to view these "involved activities" as integral components of their educational journey, contributing significantly to their personal and professional growth. The 120-hour requirement is not merely a benchmark but an opportunity for learners to shape a comprehensive skill set and a well-balanced perspective that will serve them well in the future.

Division of credits:

- 30 hours = 1 credit
- 60 hours = 2 credits
- 90 hours = 3 credits
- 120 hours = 4 credits

# CONTENTS

# INTRODUCTION

The federal structure of governance results in diversity in the structure and functioning of school boards across the country. School boards in India comprise state boards, central boards, and international boards. There are a total of 69 recognised boards in India with approximately 14.8 lakh schools affiliated to these boards and serving around 26.5 crore learners. (Figure 1).

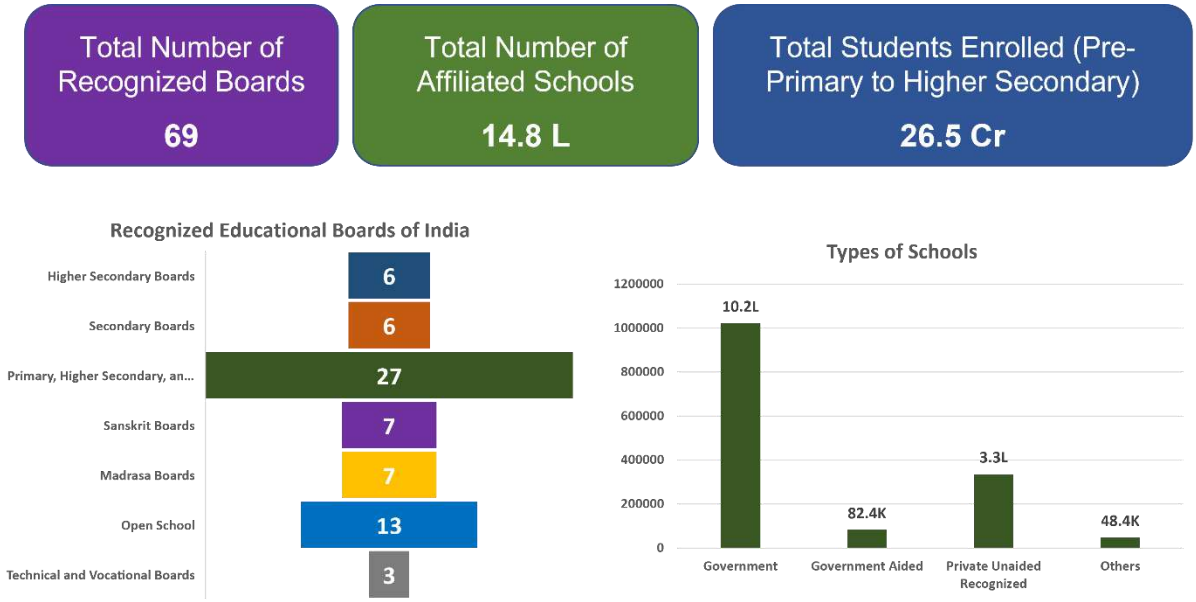



*Figure 1 Insights from the Equivalence Questionnaire and UDISE+ 2021-22*

Following is the list of recognised boards in India.

## HIGHER SECONDARY BOARDS: 6 BOARDS

| |
|---|
| **Assam Higher Secondary Education Council (AHSEC) {Assam State Open School (ASOS) (under banner of AHSEC)}** |
| **Board of Intermediate Education, Andhra Pradesh** |
| **Board of Higher Secondary Education, Kerala** |
| **Council of Higher Secondary Education, Manipur** |
| **Council of Higher Secondary Education, Odisha Bhubaneswar** |
| **West Bengal Council of Higher Secondary Education (WBCHSE)** |

## SECONDARY BOARDS: 6 BOARDS

| |
|---|
| Board of Secondary Education, Assam (SEBA) |
| Board of Secondary Education, Andhra Pradesh |
| Board of Public Examination, Kerala |
| Board of Secondary Education, Manipur |
| Board of Secondary Education, Odisha |
| West Bengal Board of Secondary Education (WBBSE) |

## COMMON BOARDS FOR PRIMARY, HIGHER SECONDARY AND SECONDARY EDUCATION: 27 BOARDS

| |
|---|
| Bihar School Examination Board, Patna |
| Chhattisgarh Madhyamik Shiksha Mandal, Raipur |
| Jharkhand Academic Council |
| Board of Secondary Education, Madhya Pradesh |
| Meghalaya Board of School Education |
| Mizoram Board of School Education |
| Nagaland Board of School Education, Kohima |
| Tripura Board of Secondary Education |
| Board of School Education, Haryana, Bhiwani |
| The Himachal Pradesh Board of School Education |
| Jammu & Kashmir Board of School Education {Jammu & Kashmir State Open School (subsidiary of Jammu & Kashmir Board of School Education} |
| Punjab School Education Board, Mohali |
| Madhyamik Shiksha Parishad, Uttar Pradesh |
| Uttarakhand Board School Education, Ramnagar, Nanital |
| Karnataka Secondary Education Examination Board |
| Board of Secondary Education, Telangana, Hyderabad, |
| School Education Department, Tamil Nadu |

| |
|---|
| West Bengal Board of Primary Education (WBBPE) |
| Goa Board of Secondary & Higher Secondary Education, Alto Betim Goa |
| Gujarat Secondary and Higher Secondary Education Board |
| Maharashtra State Board of Secondary and Higher Education, Pune recognised by State of Maharashtra |
| Board Of Secondary Education, Rajasthan |
| Central Board of Secondary Education (CBSE). New Delhi |
| International Baccalaureate (IB) |
| Council for the Indian School Certificate Examination (ICSE) |
| Delhi Board of School Education (DBSE) |
| UP Basic Shiksha Parishad, Prayagraj (1-8 class) |

## OPEN BOARDS: 13 BOARDS

| |
|---|
| Bihar Board of Open Schooling & Examination (BBOSE), Patna |
| Andhra Pradesh Open School Society |
| Chhattisgarh State of Open School, Raipur |
| Madhya Pradesh State Open School Education Board |
| The West Bengal Council of Rabindra Open Schooling |
| Board of Open Schooling and Skill Education, Sikkim |
| Haryana State Open Board of Schooling |
| Himachal Pradesh state open school |
| Punjab board of open school |
| Telangana Open School Society, Hyderabad |
| Maharashtra State Board of Open Schooling, Pune |
| Rajasthan State Open School |
| National Institute of Open Schooling (NIOS) |

## SANSKRIT BOARDS: 7 BOARDS

| |
|---|
| **Bihar Sanskrit Education Board, Patna** |
| **Chhattisgarh Sanskrit Vidyamandalam, Raipur** |
| **Sanskrit Board Maharishi Patanjali Sanskrit Sansthan** |
| **Shri Jagannath Sanskrit University, Shri Vihar Puri, Odisha** |
| **Board of Secondary Sanskrit Education, Uttar Pradesh** |
| **Uttarakhand Sanskrit Education Board Dehradun** |
| **Assam Sanskrit board** |

## MADRASA BOARDS: 7 BOARDS

| |
|---|
| **Bihar State Madrasa Education Board, Patna, (बिहार राज्य मदरसा शिक्षा बोर्ड, पटना)** |
| **Chhattisgarh Madrasa Board** |
| **Odisha State Board of Madrasa Education** |
| **West Bengal Board of Madrasah Education** |
| **U.P. Board of Madrasa Education (mats)** |
| **Uttarakhand Madrasa Shiksha Parishad Dehradun** |
| **State Madrassa Education Board, Assam** |

## TECHNICAL & VOCATIONAL BOARDS: 3 BOARDS

| |
|---|
| **Directorate of Technical Education, Goa** |
| **Board of Higher Secondary Education (Vocational)** |
| **West Bengal State Council of Technical Education & Vocational Education and Skill Development** |

## APART FROM THESE RECOGNISED BOARDS, THERE ARE SEVERAL OTHER UNIVERSITY BOARDS AS WELL WHICH INCLUDES:

| |
|---|
| **Aligarh Muslim University Board of Secondary & Sr. Secondary Education, Aligarh** |
| **Jamia Millia Islamia, New Delhi** |
| **Dayalbagh Educational Institute (Deemed University), Dayalbagh, Agra** |
| **Banasthali Vidyapith P.O., Banasthali Vidyapith** |
| **Central Sanskrit University (Formerly Rashtriya Sanskrit Sansthan), New Delhi** |
| **Sampurnanand Sanskrit Vishwavidyalay, Jagatganj, Varanasi, Uttar Pradesh** |

Since Independence, school boards in India have undergone significant evolution, transitioning from being mere examination-conducting bodies to autonomous entities and actively participating in the creation and remodelling of state curricula. This attained autonomy entails the responsibility of standardisation and equivalence. In a diverse country like India, such equivalence plays a critical role. It ensures that education received by every individual across the country is of equal level, equivalent, and comparable. It enables learners to continue their education across different boards and ensures uniformity in their achievement levels. It also adds authenticity and credibility to the certificates issued by school boards, making them widely accepted for admission to higher education institutions. These are a few reasons highlighting the importance of Equivalence.

The 1997 report on the Remodeling of School Education Boards, led by the task force chaired by Amrik Singh, marked a significant milestone in the evolution of school boards in India. It recommended granting autonomous status to the School Education Boards. It was suggested that school education be removed from the shadow of universities as "universities virtually determine the teaching curriculum at this level." (Singh 3.01) Defining the mission of the School Education Boards, the report says:

> "The mission of School Education Boards to be to ensure that the right kind of secondary education is imparted. In concrete terms, this will mean equipping learners at the secondary level with the requisite amount of knowledge and skills competently and adequately at work or, alternatively, to enable them to become self-employed. (Singh 3.9)"

The report thus asks for a restructuring of the Education Boards in India in order to become autonomous and take charge of more activities concerning education than just acting like examination-holding authorities. This autonomy entails an interaction and, consequently, a comparability among the autonomous boards, thus "the issue of equivalence gets put on the agenda." (Singh 7.27) A certain degree of help from NCERT on the professional plane is also sought after according to the report.

The NEP 2020 addresses the issue of equivalence across boards in a comprehensive manner. It underscores the significance of a flexible and multidisciplinary education system that enables learners to choose their learning paths and progress at their own pace. According to section 4.41, the policy mandates the establishment of a National Assessment Centre called PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development) as a standard-setting body under the Ministry of Education. The policy specifies that PARAKH will:

> "Advise school boards regarding new assessment patterns and latest researches, promote collaborations between school boards. It will also become an instrument for the sharing of best practices among school boards, and for ensuring equivalence of academic standards among learners across all school boards." (NEP, 4.41)

The policy mandates the creation of a new National Curriculum Framework for School Education (NCF-SE) to guide the development of curricula and textbooks across all educational boards in the country. PARAKH, with its establishment, is tasked with developing common standards to assess learner-learning outcomes uniformly across all educational boards in India. Implementing these reforms necessitates assessing the current state of Education Boards and taking steps to achieve equivalence.

PARAKH, a constituent unit of NCERT, collaborated with school boards in India, and organised Regional Workshops on the Equivalence of Boards. These workshops aimed to address challenges and explore potential solutions regarding the varying quality and standardisation of educational boards nationwide. These workshops also employed two major tools: Question Paper Templates (QPT) of the boards and a detailed Equivalence Questionnaire (EQQ) to gather information pertaining to the academic and administrative standings of the boards.

The Question Paper Templates (QPT) of the boards for Grades 10 and 12 served as crucial tools for understanding various aspects of assessments, such as difficulty levels, question types, and their nature, while the Equivalence Questionnaire (EQQ) asked numerous qualitative and quantitative questions to assess the current standings of the educational boards

This research analyses the two tools in relation to the reforms proposed by NEP 2020, NCF-SE 2023, and other pertinent documents. Initially, the report seeks to establish an understanding of educational equivalence from various perspectives gathered from national and international educational measures. Throughout this process, the report examines key relevant documents, namely NEP 2020 and NCF-SE 2023, to grasp the concept of equivalence as defined by their policies. Following this, the pilot report on the Question Paper Templates (QPT) establishes the parameters for analysing the question papers. Subsequently, the analysis focuses on the data gathered from the QPTs and the Equivalence Questionnaire. The aim of this report is to present the current status of Educational Boards in India across five main categories: Administration, Curriculum, Assessment, Inclusiveness, and Infrastructure. This analysis aims to propose operational reforms to achieve equivalence across all boards based on the current findings. Throughout, the report refers to relevant policies to cite their recommendations. Following the analysis, recommendations for achieving equivalence have been drafted based on the findings.

# NATIONAL PERSPECTIVES ON EQUIVALENCE IN EDUCATION

Before analysing the current condition of educational boards in India and suggesting requisite measures for attaining equivalence, it is important that the numerous perspectives on equivalence in education should be studied. This study will provide intellectual depth to our understanding of the idea of equivalence and help us in tracing related developments in the area.

In India, the concept of educational equivalence is crucial as it directly affects academic recognition, employability, and career opportunities. India has developed a comprehensive framework overseen by regulatory bodies to ensure the standardisation and equivalence of educational qualifications. These perspectives on educational equivalence are vital for maintaining the integrity of the education system and facilitating seamless transitions between institutions and qualifications.The University Grants Commission (UGC) is a pivotal regulatory body in India that plays a central role in determining the equivalence of degrees awarded by various universities. The UGC establishes guidelines and maintains a list of recognised universities, ensuring that academic qualifications adhere to established standards. This standardisation is vital for academic mobility and the credibility of educational qualifications. (UGC Act, 1956)

The Association of Indian Universities (AIU) serves as a vital link between Indian and international universities. AIU plays a role in determining the equivalence of degrees awarded by foreign universities, facilitating the recognition of international qualifications in India. This perspective on equivalence is crucial for individuals seeking to pursue higher education or employment with foreign-acquired qualifications. (AIU)

Equivalence in education goes beyond academic recognition; it encompasses employment and professional opportunities. Many employers and government agencies require candidates to possess educational qualifications equivalent to the standards set by recognised bodies, highlighting the importance of equivalence in fostering a level playing field for candidates in the job market.

Indian perspectives on equivalence in education are shaped by the need for standardisation, quality assurance, and ensuring equitable access to academic and professional opportunities for individuals with recognised qualifications. Regulatory frameworks established by various bodies contribute to the maintenance of the integrity of the education system and foster confidence in the equivalency of qualifications.

In this light, it can be beneficial to trace the development of education in India and the various perspectives offered over the course of time about the idea of equivalence.

## RADHAKRISHNAN COMMISSION REPORT (1949)

The Radhakrishnan Commission report, formally titled the "University Education Commission" or the "Radhakrishnan Commission on Higher Education," was a landmark document that emerged in post-independence India. Formed in 1948 and chaired by Dr Sarvepalli Radhakrishnan, the Commission aimed to comprehensively review the state of university education in the country and suggest reforms to meet the socio-economic and cultural needs of a newly independent India.

The report, submitted in 1949, addressed various aspects of higher education, including curriculum design, faculty development, infrastructure, and the need for educational institutions to adapt to the changing needs of society. While the primary focus of the report was on higher education, its recommendations had far-reaching implications for the entire educational system.

In the context of equivalence among Boards, the Radhakrishnan Commission emphasised the need for a standardised and universally accepted educational framework. The report underscored the importance of creating a system where learners graduating from different boards and institutions could be considered equivalent in terms of their educational qualifications. This was crucial to facilitate mobility and ensure equal opportunities for learners from diverse backgrounds in higher education and employment.

The recommendations of the Radhakrishnan Commission played a significant role in shaping the educational policies of post-independence India. Over time, efforts have been made to implement some of these recommendations, resulting in the formation of bodies like the University Grants Commission (UGC) to oversee and uphold higher education standards in India

Although equivalence among Boards may not have been the primary focus of the Radhakrishnan Commission, its broader recommendations aimed at enhancing education quality and standardisation have left a lasting impact on the Indian education system.

## MUDALIAR COMMISSION REPORT (1953)

The Mudaliar Commission Report of 1953 outlines comprehensive recommendations for the restructuring and enhancement of the education system in India. The proposed changes cover organisational structure, curriculum, technical and agricultural education, language instruction, textbooks, dynamic teaching methods, character education, guidance and counselling, physical welfare of learners, examination and evaluation systems, and the improvement of teaching personnel.

In terms of organisational structure, the report advocates a new approach: a four or five-year period of Primary or Junior Basic education, followed by a Middle or Senior Basic or Junior Secondary Stage of three years, and a subsequent four-year Higher Secondary Stage. Existing high schools and higher secondary schools are expected to align with these recommendations during the transitional Stage

Professional education undergoes changes with admission to professional colleges being open to graduates of Higher Secondary courses or the one-year pre-university course. Pre-professional courses of one year are suggested in professional colleges or degree colleges.

The report also underscores the importance of technical and agricultural education, recommending the establishment of technical schools, central technical institutes in larger cities, and apprenticeship training. It emphasises the involvement of representatives from commerce and industry in planning technical education.

Language instruction becomes a focal point, suggesting that the mother tongue or regional language should generally be the medium of instruction throughout the secondary school stage. Introduction of English and Hindi at specific stages is also recommended.

The report recommends restructuring the curriculum in secondary education. At the Middle School Stage, it suggests incorporating Languages, Social Studies, General Science, Mathematics, Art and Music, Craft, and Physical Education. For the High School or Higher Secondary Stage, it suggests introducing diversified courses covering Humanities, Sciences, Technical Subjects, Commercial Subjects, Agricultural Subjects, Fine Arts, and Home Sciences.

Dynamic methods of teaching are encouraged, emphasising the activity and project methods. It is recommended that libraries be well-equipped, with trained librarians. Experimental and demonstration schools are advocated to introduce progressive teaching methods. The education of character is highlighted, emphasising shared responsibility for discipline and strengthening personal contact between teachers and learners. Group games, co-curricular activities, and legislation against using learners for political propaganda are suggested.

According to this report, the examination and evaluation system should undergo some changes, with a reduction in the number of external examinations. School records are given significant weight in assessing a learner's progress, and a symbolic marking system is suggested. It proposes having only one public examination at the end of the secondary school course.

In summary, the Mudaliar Commission Report provides a comprehensive framework for the transformation and improvement of the education system in India, encompassing structural, curricular, instructional, and personnel-related dimensions. The recommendations underscore a commitment to holistic education that caters to diverse learner needs and fosters continuous professional development for educators.

## KOTHARI COMMISSION REPORT (1966)

The Kothari Commission, officially known as the "National Education Commission," was a pivotal body appointed by the Government of India in 1964, chaired by Dr. Daulat Singh Kothari. The commission was tasked with reviewing the state of education in India and providing recommendations for its improvement. The resulting report, submitted in 1966, had a profound impact on the country's education policies and systems.

The Kothari Commission recognised the need for a comprehensive and uniform educational structure to cater to the diverse needs of the nation. In its vision for the education system, the commission proposed the 10+2+3 structure for school education, entailing 10 years of Primary and Secondary Education, two years of intermediate education and culminating in three years of degree education.

One of the key aspects addressed by the Kothari Commission was the idea of equivalence among different educational boards. The commission acknowledged the existence of multiple boards and recognised the importance of ensuring that learners graduating from different boards possessed equivalent educational qualifications. This emphasis on equivalence aimed to facilitate mobility and create a standardised system where learners from various regions and boards could compete on an equal footing in higher education and employment.

The recommendations of the Kothari Commission indeed laid the foundation for the National Policy on Education (NPE) in 1968, which integrated many of the commission's proposals into the educational framework of the country. The NPE aimed to achieve uniformity and quality in education, with a focus on promoting national integration and equal opportunities for all.

Efforts have been made over the years to address the issue of equivalence with the establishment of bodies like the National Council for Educational Research and Training (NCERT) and the Central Board of Secondary Education (CBSE) playing a role in standardising the curriculum and assessment methods across different boards.

In summary, the Kothari Commission's report on education, with its emphasis on equivalence among boards, has had a lasting impact on India's education policies. The commission's vision of a unified and standardised education system continues to shape discussions and is also the primary goal of the present research.

## AMRIK SINGH COMMITTEE REPORT (1997)

The Amrik Singh Report, officially known as the “Remodeling of School Education Boards,” submitted in 1997, was a work of immense importance emphasising the idea of equivalence in education in India.

The report states that an autonomous character is desired in the School Education Boards. It was suggested that School Education be removed from the shadow of universities as "universities virtually determine the teaching curriculum at this level." (Singh 3.01) Defining the mission of the School Education Boards, the report says:

> "The mission of School Education Boards to be to ensure that the right kind of secondary education is imparted. In concrete terms, this will mean equipping learners at the secondary level with the requisite amount of knowledge and skills competently and adequately at work or, alternatively, to enable them to become self-employed." (Singh 3.9)

The report thus asks for a restructuring of the Education Boards of India for them to become autonomous in character and take charge of more activities in relation to education than just acting like examination-holding authorities. This autonomy entails an interaction and, consequently, a comparability among the autonomous boards, thus "the issue of equivalence gets put on the agenda." (Singh 7.27) The proposed restructuring involves diversifying their approach, strengthening their organisational structure, and making them autonomous entities with statutory status. The report also suggests insulating School Boards from political interference, defining their powers precisely, and establishing checks and balances to protect their autonomy.

The report underscores the historical neglect of Secondary Education in India, contrasting it with the relatively more focused attention given to Primary and Higher Education. The report criticises School Education Boards for primarily functioning as examining bodies without a holistic approach to secondary education, contributing to the lack of emphasis and allocation of funds for this crucial stage of learning. Notably, it observes that more than one-third of learners graduating from higher secondary schools continue to join colleges, indicating a societal perception that secondary education is not terminal but rather a stepping stone to higher education.

Furthermore, the report advocates for the autonomy of the school system, proposing that schools should operate independently and be weaned from the dominance of the university systems and education departments. The creation of autonomous organisational structures for School Education Boards is seen as essential to achieving this goal. The report recommends the establishment of statutory selection committees for appointing board chairpersons, ensuring their protection against harassment or termination, and clearly specifying their powers and responsibilities. The emphasis on autonomy, clear delineation of roles, and insulation against political interference aims to create a robust and self-reliant system of Secondary Education in line with the experiences of other countries, particularly in East Asia and other developing nations.

## NATIONAL EDUCATION POLICY (NEP) 2020

The National Education Policy (NEP) 2020, brings about several significant reforms in the education system, addressing various aspects including equivalence. One of the key features of the NEP is its emphasis on flexibility and the elimination of rigid separations between streams of

study. The policy recognises the importance of multidisciplinary education and allows learners to choose subjects across different streams without being confined to conventional boundaries. This move towards a more flexible and integrated approach aims to reduce the emphasis on artificial distinctions between academic, vocational, and extracurricular domains.

Moreover, the NEP 2020 seeks to integrate vocational education into the mainstream curriculum. It envisions a system where learners can seamlessly transition between vocational and academic pathways. The policy encourages the establishment of vocational courses at both the school and higher education levels. This integration is designed to provide learners with a broader skill set, making them more adaptable to the demands of the rapidly evolving job market.

In terms of equivalence in education, the NEP underscores the need for a common structure of school curricula across the country while allowing for flexibility in regional content. This approach aims to ensure that learners receive a standardised level of education regardless of their geographical location. The policy also encourages the use of technology for the creation of a National Repository of Educational Content, which can aid in maintaining quality and consistency in education.

Furthermore, the NEP introduces a 5+3+3+4 curricular structure, replacing the traditional 10+2 system (Kothari, xvii). The Foundational Stage (5 years), the Preparatory Stage (3 years), the Middle Stage (3 years), and the Secondary Stage (4 years) provide a more nuanced and developmentally appropriate approach to education. This restructuring aims to make education more inclusive and learner-centric, focusing on the cognitive development of learners at each stage.

In conclusion, the National Education Policy 2020 reflects a paradigm shift towards a more inclusive, flexible, and holistic approach to education in India. By promoting interdisciplinary studies, integrating vocational education, standardising curricula, and introducing a new curricular structure, the policy aims to enhance the overall quality and relevance of education while addressing the issue of equivalence across different regions and educational pathways.

## NATIONAL CURRICULUM FRAMEWORK-SCHOOL EDUCATION (NCF-SE) 2023

The National Curriculum Framework for School Education (NCF-SE or NCF) 2023 plays a pivotal role in driving positive changes in India's school curricula, extending beyond textbook content to include broader aspects of school environment and culture. The NCF-SE aims to holistically and iteratively transform the learning experiences of learners, with a specific focus on the teacher's role as a catalyst for these changes.

The vision of the National Curriculum Framework aligns with the NEP 2020, emphasising the development of new NCF-SE and State Curriculum Frameworks (SCFs) to standardise the school education system across the country. The overarching goal is to establish a robust, aspirational, and practical framework that ensures high-quality education for all learners, irrespective of their backgrounds. At the individual level, the aim is to cultivate well-rounded individuals, with strong characters, life-long learning skills, adaptability, and the ability to make meaningful contributions to society.

The curriculum content is designed to reflect the evolving global landscape by integrating multidisciplinary capacities across various subjects. It prioritises the development of 21st-century skills, such as scientific temper, critical thinking, creativity, and ethical reasoning. To achieve these goals, the NCF-SE proposes a reduction in content load to essential core elements, allowing for more effective pedagogy, including experiential, discussion-based, and activity-based learning.

Pedagogy is considered a crucial aspect, advocating for effective and engaging approaches that adapt according to the subject, context, and learner's stage of development. The NCF-SE encourages more participatory and interactive learning, nurturing skills in languages, communication, and logical reasoning. Assessment methods are also slated for transformation, shifting from fact-based testing to evaluating core capacities and competencies, aligning with the evolving pedagogical approaches.

The Board Examinations for Grades 10 and 12 are set to undergo substantial reforms, aiming to assess understanding and competencies rather than rote memorization. The focus is on reducing the 'high stakes' nature of examinations, allowing learners multiple attempts to improve their scores. The NCF-SE also underscores the significance of the overall school environment, practices, and culture in shaping the learning experience. It calls for a transformation in school culture to create inclusive, caring, and nurturing communities that support the cognitive, emotional, and physical well-being of the learners.

To facilitate these curricular changes, the NCF-SE considers the practical challenges faced by average teachers and schools, providing a realistic pathway to bridge the gap between the current situation and the ideal educational scenario. The document acknowledges the roles played by

various stakeholders, including teachers, administrators, support institutions, school leadership, and families, in implementing the proposed changes. The NCF-SE aims to address critical issues and realities facing the schooling system transparently, recognising that tackling these challenges is essential for real change in the educational landscape. Structured into five parts, the NCF-SE articulates aims, values, and approaches; discusses cross-cutting themes, provides subject-specific guidelines, addresses school culture and processes, and outlines the requirements for an overall schooling ecosystem.

## CONCLUSION

"Equivalence" refers to the comparability of educational standards, curricula, assessment methodologies, and outcomes across different school boards. It ensures that students from various boards receive a comparable quality of education, enabling fair recognition of their qualifications, skills, and competencies, regardless of the board they belong to.

Equivalence is the process of recognizing and validating the academic qualifications, curricula, and examinations of different educational boards as being of comparable value and rigor. The goal of equivalence is to ensure that learners' credentials are acknowledged fairly across various educational institutions and regions, facilitating mobility and access to opportunities.

Focusing on comparing and recognizing diverse educational standards as being comparable, it respects the diversity of curricula and examination patterns while ensuring fair recognition of qualifications.

Key aspects of equivalence include:

- Curricular Semblance: Ensuring that the learning competencies are comparable across boards.
- Assessment Standards: Establishing consistent assessment methods and scoring criteria that reflect similar expectations of learner performance.
- Administrative Practices: Standardizing governance and operational procedures among different boards.
- Inclusiveness: Promoting equitable access to education for all learners, regardless of their background or learning needs.
- Infrastructure Quality: Ensuring that educational facilities and resources are on par across different regions and boards.

These definitions aims to facilitate a framework for achieving parity in education, ultimately supporting student mobility and equity in educational outcomes.

The pursuit of equivalence is not a novel concept within the Indian education system. On the contrary, the desire for equivalence has existed and developed gradually in the post-independent

education system of the country. From the onset, the Radhakrishnan Commission underlines the idea of a standardised and universally accepted educational framework.

The recent National Education Policy (NEP) 2020 and the National Curriculum Framework for School Education (NCF-SE) 2023 reflect contemporary efforts towards creating a more inclusive, flexible, and holistic education system. NEP 2020 emphasises flexibility, integrated approaches, and vocational education, addressing the issue of equivalence through standardised curricula and promoting a seamless transition between academic and vocational pathways. NCF-SE 2023 complements NEP 2020, focusing on multidisciplinary education, reduced content load, transformative pedagogy, and inclusive assessment practices, all aimed at fostering well-rounded individuals capable of adapting to a rapidly changing world.

In essence, the concept of equivalence in education in India is a dynamic and evolving construct, shaped by historical perspectives, regulatory frameworks, and contemporary educational reforms. It reflects a commitment to standardisation, quality assurance, and equitable access to academic and professional opportunities for individuals across diverse backgrounds. The collaborative efforts of regulatory bodies and policy initiatives play a crucial role in upholding the integrity of the education system and instilling confidence in the equivalency of qualifications.

# INTERNATIONAL PERSPECTIVES ON EQUIVALENCE IN EDUCATION

Equivalence exercises in education systems are critical for ensuring the recognition and comparability of qualifications obtained across different countries, thereby facilitating international mobility for learners and professionals. One prominent example is the European Union's Bologna Process, a collaborative effort among European countries aimed at establishing a European Higher Education Area. This initiative includes tools like the European Credit Transfer and Accumulation System (ECTS) and the Diploma Supplement, which aim to standardise and enhance the comparability of qualifications across participating European nations. (The Bologna Process)

Australia has implemented the Australian Qualifications Framework (AQF), serving as a national policy for regulated qualifications. The AQF allows for the recognition of qualifications across different education and training sectors, streamlining the process of understanding and validating educational achievements within the country. (AQF 2013)

In Canada, each province and territory has its own qualifications framework. Credential evaluation services exist to assess international credentials against Canadian standards, ensuring that qualifications obtained abroad are appropriately recognised within the Canadian context. The Canadian Information Centre for International Credentials (CICIC) is one such organisation offering credential evaluations. (CICIC)

Similarly, New Zealand operates with the New Zealand Qualifications Authority (NZQA), which ensures the quality assurance of non-university education providers. This authority ensures that qualifications awarded by these providers are equivalent and nationally recognised, contributing to the consistency and transparency of the education system. (NZQF)

South Africa also employs the South African Qualifications Authority (SAQA) to oversee the National Qualifications Framework (NQF). The NQF serves as a basis for comparing and recognising qualifications, fostering transparency and portability in the South African education system. (NQF Act 2008)

These examples highlight the global efforts to establish equivalence exercises and frameworks, demonstrating a commitment to recognising the diversity of educational backgrounds and fostering international collaboration in education.

It will only be beneficial at this point to highlight the education systems in some of the other countries in order to understand their perspective on equivalence and also to study the measures taken by them to face challenges similar to those of India concerning education.

## AUSTRALIAN EDUCATION SYSTEM

Australia operates under a decentralised education system where each state and territory assumes responsibility for its education, encompassing secondary education. Despite this decentralization, commonalities exist across the country. The secondary education system is structured with compulsory education for children aged 6 to 16, the starting age varies by state or territory.

It is observed that the system includes four sub-sectors: Primary School (six to seven, starting at Foundation), Secondary School (four years), Senior Secondary School (two years), and Tertiary Education (encompassing Higher Education and Vocational Education and Training - VET). (The Australian Education System – Foundation Level, 5)

In terms of curriculum, the national curriculum covers a spectrum of subjects including English, Mathematics, Science, Humanities and Social Sciences, the Arts, Languages, Health and Physical Education, and Technologies. Learners engage with a diverse range of subjects in the early years, with opportunities to specialize in specific areas as they progress. Common subjects encompass English, Mathematics, Science, History, Geography, and Physical Education.

Certification for completing secondary education is conferred through the Senior Secondary Certificate of Education (SSCE) (AES, 10). Learners typically undertake a combination of compulsory and elective subjects in their final years.

Diversity in the education landscape is evident through various types of schools. Public schools, government-funded and operated by state or territory education departments, co-exist with private schools, independently operated and funded, often affiliated with a religious or philosophical ethos. While potentially more expensive, private schools often offer smaller class sizes and additional facilities. A notable portion of non-government schools comprises Catholic schools, integral to the broader Catholic education system.

It is imperative to acknowledge potential variations between states and territories, and the information provided offers a general overview. Following secondary education, learners in Australia have the flexibility to pursue diverse pathways, including vocational education, apprenticeships, or direct entry into the workforce.

The Australian Qualifications Framework (AQF) serves as the national policy for regulated qualifications in the Australian education and training system. It integrates qualifications from various sectors into a unified national framework. The AQF encompasses ten qualification levels, ranging from Certificate I to Doctoral Degree, with each level indicating a specific type and complexity of learning. Qualification types within the AQF include Certificates, Diplomas, Advanced Diplomas, Associate Degrees, Bachelor's Degrees, Graduate Certificates, Graduate Diplomas, Master's Degrees, and Doctoral Degrees. (AQF 2013)

The framework considers the volume of learning associated with each qualification, covering both formal (e.g., class attendance) and informal (e.g., work experience) learning. Each qualification is tied to a set of learning outcomes, detailing the knowledge, skills, and capabilities a graduate should possess. Recognising diverse entry points into education, the AQF allows for flexible pathways, acknowledging prior learning through credit transfer and Recognition of Prior Learning (RPL).

Industry and community collaboration play a crucial role in AQF development, ensuring qualifications remain relevant to workforce needs. National recognition is granted to qualifications aligned with the AQF, fostering consistency and mobility across states and territories. The AQF establishes a framework for quality assurance, upholding high standards in education and training delivery.

Linked to international frameworks, the AQF facilitates global recognition of Australian qualifications. The Australian Qualifications Framework Council (AQFC), comprising representatives from education, industry, and government, oversees the AQF. The AQF contributes significantly to lifelong learning, supports educational mobility, and ensures the integrity and comparability of qualifications in Australia. It serves as a valuable tool for individuals, employers, and educational institutions navigating the Australian education and training landscape.

## EUROPEAN UNION EDUCATION SYSTEM

The European Union (EU) doesn't have a unified secondary education system, as education falls under the competence of individual member states. Each member state is responsible for its own education policies, including those related to secondary education. However, there are overarching frameworks and initiatives within the EU that aim to promote collaboration and standardisation in education.

One significant initiative is the Bologna Process, which focuses primarily on higher education. It was launched in 1999 and involves 48 countries, including EU member states. The Bologna Process aims to create a European Higher Education Area (EHEA) with compatible and comparable education systems. It has led to the establishment of common structures, including three cycles of higher education (Bachelor's, Master's, and Doctorate degrees), the European

Credit Transfer and Accumulation System (ECTS), and the Diploma Supplement. (The Bologna Process)

Within individual member states, secondary education typically spans several years, often starting around the age of 11 or 12. The duration and structure can vary from country to country. Secondary education is a crucial phase where learners receive more specialized instruction and prepare for higher education or skill training.

In terms of commonalities, many EU countries offer a broad curriculum during the early years of secondary education, covering subjects such as Mathematics, Sciences, Languages, And Humanities. As learners make progress, they may have the opportunity to choose specific tracks or specializations based on their interests and future career aspirations.

Erasmus+ is another notable EU program that impacts higher education. While Erasmus+ is more renowned for its impact on higher education, it also supports projects related to school education, including partnerships between schools, professional development for teachers, and efforts to improve the quality and relevance of school education. (Erasmus + Programme Guide, 4)

The European Credit Transfer and Accumulation System (ECTS) serves as a standardised framework for assessing and comparing the academic performance of learners within the European Higher Education Area (EHEA). Established by the European Commission, ECTS operates on a credit system, with one academic year equivalent to 60 credits, based on a standard workload of 1,500 to 1,800 hours. These credits are assigned to individual courses and full study programs, providing a standardised measure for the workload required for successful completion. (ECTS User's Guide, 6)

ECTS emphasises learning outcomes, articulating what learners are expected to know, understand, and be able to do by the end of a course or program. A standardised grading scale, ranging from A (excellent) to F (fail), facilitates the transfer and recognition of academic achievements. ECTS is instrumental in promoting learner mobility within the EHEA, allowing learners to earn and transfer credits between institutions. The system is widely implemented across European countries, providing a common framework for academic recognition and fostering transparency. (ECTS User's Guide, 10)

The Diploma Supplement, attached to higher education diplomas, complements ECTS by offering a standardised description of completed studies. Beyond supporting learner mobility, ECTS contributes to quality assurance in higher education, encouraging institutions to assess and enhance the quality of their study programs. Overall, ECTS plays a pivotal role in harmonizing higher education systems, ensuring comparability, and fostering collaboration among European institutions.

## FINNISH EDUCATION SYSTEM

The Finnish secondary education system is structured around the general upper secondary school, or *lukio*, offering a three-year program for learners aged between 16 and 19. Unlike traditional grading, learners progress together through out the entire duration without division into grades. (Kalalahti et al.)

The curriculum is comprehensive, covering languages, Mathematics, Sciences, Humanities, and Arts, with the added flexibility for learners to choose elective courses aligning with their interests and future aspirations.

The education system "emphasises diversity in assessment methods as well as assessment that guides and promotes learning," (Dhital). The feedback mechanism is crucial and regular with information on each pupil's progress given to the pupil and guardians on a "sufficiently frequent basis".

The teaching approach is learner-centred, emphasising collaboration, critical thinking, and active participation, (Education Finland) with teachers enjoying a high degree of autonomy.

The Finnish approach prioritizes learner well-being and a positive learning environment, maintaining a healthy work-life balance. Overall, it was noted that the Finnish secondary education system stood out for its commitment to equality, flexibility, and a holistic approach to preparing learners for both academic and personal success.

## JAPANESE EDUCATION SYSTEM

The Japanese secondary education system comprises lower secondary school and upper secondary school, followed by higher education at universities, junior colleges, and vocational schools.

The curriculum covers various subjects, and extracurricular activities, including clubs, are encouraged. Admission is based on entrance exams and learners choosing between academic and vocational tracks. The academic track follows a standard curriculum, while the vocational track offers specialized education. Learners can choose elective courses, and extracurricular activities continue to play a significant role.

The significance of entrance exams, the prevalence of uniforms, the emphasis on discipline, and the inclusion of traditional values and moral education are notable aspects of the system. (CRICED)

## SOUTH AFRICAN EDUCATION SYSTEM

South Africa's secondary education system follows a 12-year cycle, guided by the National Curriculum Statement (NCS). The NCS serves as the foundation for curriculum development, emphasising outcomes-based education and including subjects such as Languages, Mathematics, Natural Sciences, Social Sciences, and Life Orientation. (Republic of South Africa)

Successful completion of Grade 12 results in the award of the National Senior Certificate (NSC), the primary school-leaving certificate. The NSC is obtained through final examinations at the end of Grade 12, which play a crucial role in determining eligibility for higher education.

Assessment includes continuous evaluation through assignments, projects, and tests. The NSC is a prerequisite for university admission, and the education system has seen reforms addressing historical inequities, focusing on issues of access, quality, and resources.

Language policies aim to be inclusive, recognising the multilingual nature of South Africa while acknowledging the importance of English as a medium of instruction.

The National Curriculum Statement (NCS) is a pivotal framework guiding curriculum development and execution within South Africa's education system. Serving as a comprehensive blueprint for each grade level, it endeavours to deliver an inclusive, equitable, and outcomes-based education.

Originating from post-apartheid educational reforms, particularly after the end of apartheid, the NCS is deeply rooted in the philosophy of Outcomes-Based Education, focusing on desired learning outcomes and competencies for learners. It embraces inclusivity, accommodating diverse learner needs and fostering an understanding of South Africa's multicultural and multilingual society.

The NCS outlines specific learning outcomes, and assessment standards, and encourages varied assessment practices, including continuous assessment and periodic testing.

Structured across phases like the Foundation Phase, Intermediate Phase, Senior Phase, and Further Education and Training (FET) Phase, the NCS allows specialization in academic or vocational pathways in the latter. Core subjects, including Languages, Mathematics, Natural Sciences, Social Sciences, and Life Orientation, are complemented by elective choices in the FET Phase.

Recognising linguistic diversity, the NCS promotes a multilingual approach and treats language as a distinct learning area. Successful implementation necessitates ongoing teacher training and sufficient resources, including materials, infrastructure, and professional development.

## BRITISH EDUCATION SYSTEM

The British secondary education system in England is structured to provide education for learners aged between 11 and 16 and is divided into two key stages: Key Stage 3 (ages from 11 to 14) and Key Stage 4 (ages from 14 to 16). During Key Stage 3, learners continue a broad and balanced curriculum, building on their Primary Education. The National Curriculum outlines the subjects, which typically include English, Mathematics, Science, History, Geography, Modern Foreign Languages, Art, Music, Physical Education, and Design and Technology. This stage serves as a foundation for the more specialized study at Key Stage 4 (Khatri).

Key Stage 4 is marked by the General Certificate of Secondary Education (GCSE) examinations. Learners usually take these exams at the age of 16, and the subjects are chosen based on their interests and potential career paths. Core subjects, including English, Mathematics, and Science, are mandatory, and learners choose additional subjects from a range of options. GCSEs are a crucial component of the education system as they influence future educational and career choices.

Following the completion of Key Stage 4, learners have the option to enter post-16 education. This can take place in a school sixth form, a further education (FE) college, or through apprenticeships. Learners can pursue Advanced Level (A-Level) qualifications in academic subjects or opt for vocational qualifications such as BTECs. A-Levels are typically a two-year program and are a common route for those planning to attend university.

The grading system for GCSEs and A-Levels ranges from A* (highest) to U (ungraded). This system helps universities and employers assess the academic performance of learners. Following post-16 education, learners can choose to enter higher education, which typically begins at the age of 18 with a three-year bachelor's degree program.

Continuous assessment, including coursework, assignments, and exams, is a common feature throughout secondary education. Exams are often taken at the end of each academic year or at the culmination of a specific course. The education system also allows for the inclusion of vocational education, providing alternative pathways for those who prefer practical skills and experience over traditional academic routes.

It's important to note that the education systems in Scotland, Wales, and Northern Ireland have their own variations and structures, reflecting the devolved nature of education policy within the United Kingdom.

## UNITED STATES OF AMERICA EDUCATION SYSTEM

From the age of 5/6 to 16, formal education in the United States of America has been made obligatory, with slight variations in different states (Ziklova, 34). In secondary education the curriculum becomes more specialized, featuring a mix of required and elective courses. Core

subjects include English, Mathematics, Science, and Social Studies, supplemented by electives such as foreign languages, arts, physical education, and vocational subjects.

Credits serve as a measure of academic progress, with a specific number required for graduation. Graduation requirements can vary across states and school districts, encompassing subject-specific mandates and elective choices. Diploma types, such as standard, honours, or vocational, may be offered, each with distinct criteria. Some states also implement graduation exams or assessments as a prerequisite for diploma attainment.

Extracurricular activities play a significant role in secondary education, fostering personal development and well-rounded education. These activities encompass sports, clubs, and community service. The successful completion of secondary education opens avenues for various post-secondary options, including college attendance or entry into the workforce.

High schools in the U.S. can differ in size and structure. Some exclusively serve specific grade levels (e.g., grades 9-12), while others may include a combination of middle and high school grades. The system is designed to be flexible, accommodating diverse paths for learners. This flexibility allows for career and technical education programs, dual enrolment in college courses, and participation in work-study programs, catering to individual goals and aspirations.

It is crucial to recognise that education in the United States is primarily governed at the state and local levels, leading to variations in policies and practices.

## CONCLUSION

The review of international perspectives on equivalence in education underscores the shared commitment of other countries to recognising diverse educational backgrounds and fostering international collaboration. Various countries, exemplified by the European Union, the United States, Australia, Canada, New Zealand, South Africa, Japan, Singapore, Finland, and the United Kingdom, have established frameworks and systems to ensure the recognition and comparability of qualifications.

The European Union's Bologna Process, with tools like the European Credit Transfer and Accumulation System (ECTS) and the Diploma Supplement, exemplifies the collaborative effort to standardise qualifications. In the United States, the National Association of Credential Evaluation Services (NACES) provides guidelines for credential evaluation services, ensuring fair recognition of international qualifications. Australia's Australian Qualifications Framework (AQF) and Canada's provincial frameworks contribute to national recognition, while New Zealand's Qualifications Authority oversees consistency.

South Africa's National Qualifications Framework (NQF) plays a pivotal role in ensuring equivalence, showcasing global diversity in approach. Further exploration of specific education

systems, such as Australia's decentralized structure and flexible pathways, Finland's holistic and equality-focused model, Japan's emphasis on entrance exams, Singapore's meritocratic system, and the United States' diverse post-secondary options, enhances understanding.

The examination of assessment and grading systems in Singapore and South Africa, as well as the role of the National Curriculum Statement (NSC) in South Africa, emphasises the importance of comprehensive frameworks in maintaining standards. The British education system's Key Stage structure and the U.S. emphasis on flexibility highlight adaptability.

In essence, the international perspectives on equivalence in education demonstrate a concerted effort to create transparent, portable, and comparable qualifications. By recognising the uniqueness of each system while fostering collaboration, these efforts contribute to a globalized landscape that facilitates educational mobility and mutual recognition. Further exploration of other countries provides valuable insights for understanding and addressing challenges in India's education system.

# NATIONAL EDUCATION POLICY 2020 ON EQUIVALENCE AND ASSESSMENTS

The National Education Policy (NEP) 2020, the first education policy of the 21st century in India, is a comprehensive policy document released by the Government of India with the aim of reforming the education system of the country. In July 2020, the policy was approved by the Union Cabinet of India representing a significant overhaul of the previous education policy implemented in 1986. The NEP 2020 attempts to address numerous challenges in the Indian Education System with the aim of providing a more holistic and flexible approach to education.

The National Education Policy 2020 addresses the issue of equivalency across boards primarily by standardising the curriculum and assessment frameworks. The policy emphasises the need for a flexible and multidisciplinary education system that allows learners to choose their own learning paths and progress at their own pace. Adhering to this, it projected the development of a new National Curriculum Framework for School Education (NCF-SE) serving as a guideline for the development of the curricula and textbooks across all states and boards in the country. The present NCF-SE 2023 is a product of this mission, ensuring that all learners have access to high-quality education, regardless of their location or socio-economic background. NEP 2020 also proposes the establishment of a National Assessment Centre, PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development), tasked with setting common standards for learner learning outcomes across all states and boards. This will enable learners to move between schools and boards without facing any disadvantage due to differences in curricula or assessment systems. Overall, the National Education Policy 2020 aims to promote a more equitable and inclusive education system that provides equal opportunities for all learners, regardless of their background or location.

With regard to assessments, the NEP 2020 advocates for a significant shift in the way they are conducted in the education system. There is a notable considerable emphasis on moving away from traditional, rote-based assessment methods and to promote a more holistic and continuous assessment approach. The policy recommends a reduction in the emphasis on high-stakes board exams. It suggests that board exams should primarily test core competencies rather than

memorization skills. The policy encourages a more formative and competency-based assessment approach. The document states,

> "To further eliminate the 'high stakes' aspect of Board Exams, all learners will be allowed to take Board Exams on up to two occasions during any given school year, one main examination and one for improvement, if desired. (NEP 2020, 4.37)"

The policy calls for a restructuring of assessment methods to prioritise competency-based evaluation and to assess a learner's conceptual understanding, critical thinking, and analytical abilities. The document aspires to revolutionize the progress card of all learners. It projects the idea of a "holistic 360-degree, multidimensional report that reflects in great detail the progress as well as the uniqueness of each learner in the cognitive, affective, and psychomotor domains." (NEP 2020, 4.35) This report card is supposed to include self and peer assessment, the progress of the child in inquiry-based and project-based learning, quizzes, group work, etc.

NEP 2020 also calls for reforms in other domains of education. It proposes the methodical identification of learners with special talents/gifted children so that they can be encouraged to pursue their areas of interest beyond the general school curriculum. The teachers are supposed to "encourage learners with singular interests and/or talents in the classroom by giving them supplementary enrichment material and guidance and encouragement" (NEP 2020, 4.44) to realise their potential in the area. "Olympiads and competitions in various subjects will be conducted across the country" (NEP 2020, 4.45) to make sure that all learners can participate at all levels for which they qualify.

The policy promises continuous opportunities to teachers for self-improvement and to learn the latest innovations and advances in their professions. NEP 2020 states that all the teachers "will be expected to participate in at least 50 hours of CPD opportunities every year for their own professional development, driven by their own interests." (NEP 2020, 5.15) The CPD opportunities, according to the policy, will cover systematically the latest pedagogies regarding foundational literacy and numeracy, competency-based learning, formative and adaptive assessment of learning outcomes, and related pedagogies, such as experiential learning, arts-integrated, sports-integrated, and storytelling-based approaches, etc.

The NEP 2020 thus seeks to bring a comprehensive change in the domain of education. It aspires to reform school education by bringing administrative, curricular, and assessment-based changes, thereby ensuring the holistic growth of the learner. In terms of equivalency, NEP 2020 by bringing the required reforms attempts to standardise the processes of school education thus promoting a more equitable and inclusive education system that provides equal opportunities for all learners, regardless of their background or location.

# NATIONAL CURRICULUM FRAMEWORK FOR SCHOOL EDUCATION 2023 ON ASSESSMENTS

It is only through an understanding of the framework and nature of assessments conducted by boards that a true idea of whether an equivalence is achieved can be formed. Fleshing out ideas from the NEP 2020, the NCF-SE 2023 suggests major reforms in the domain of assessments. This section is an attempt to understand the changes in assessments suggested by the NCF-SE 2023 to regulate assessment practices in the country and reach an equivalence in the domain.

The National Curriculum Framework for School Education (NCF-SE) 2023, while addressing the school education framework, has taken heed of the National Education Policy (NEP) 2020 at all levels, abiding by it as the foundational block of ideas that the NCF-SE 2023 aspires to execute.

In describing its approach towards assessment, the NCF-SE 2023, initially quotes section 4.34 of the NEP 2020 stating that in the schooling system, it aspires to shift the aim of assessment from summative tests (testing rote memorization skills) to more formative and regular that is more competency-based assessment promoting learning and development of learners, and testing higher-order skills, such as analysis, critical thinking, and conceptual clarity. The primary purpose of such an assessment would be learning. This will help the schooling system completely revise the teaching-learning process.

The document then goes on to quote section 4.35 of the NEP 2020 dealing with the Holistic Progress Card (HPC). The HPC will be a holistic, 360-degree, multi-dimensional report reflecting, in great detail, the progress as well as the uniqueness of each learner in the cognitive, affective, and psychomotor domains. It will include self-assessment and peer-assessment, and the progress of the child in project-based and inquiry-based learning, quizzes, role plays, group work, portfolios, etc. along with teacher assessment. The HPC will form an important link between home and school and will be accompanied by parent-teacher meetings to actively involve parents in their children's holistic education and development.

## PURPOSES OF ASSESSMENT

According to NCF-SE 2023, assessment serves two major purposes - **measuring achievement** of learner learning and **gauging the effectiveness** of classroom processes and teaching materials in teaching and learning. The document defines everyday assessment as the systematic gathering of information about learner progress, which teachers interpret, analyse, and use to guide the teaching-learning process. It aggregates learner achievements at critical points and reports their progress over time. Additionally, assessment plays a crucial role in certifying learner achievements and completing educational milestones, such as in Grade 10 and Grade 12.

There are three major types of assessment defined by the NCF-SE 2023, namely, Assessment of Learning, Assessment for Learning, and Assessment as Learning. *Assessment of Learning* refers to the measurement of achievement of learner learning. *Assessment for Learning refers* to the evidence of learner learning that the teacher gathers to aid the teaching-learning process. It helps to improve learner learning and evaluate teaching practices as well. *Assessment as Learning* refers to the recent studies showing that learners can play an active role in taking charge of their learning. The document mentions the observation that if the assessments are introduced as non-threatening tools, they work well for self-reflection and introspection, i.e. they become developmental and self-constructive in nature. All three approaches to assessment are stated to be equally important for school education.

## CURRENT CHALLENGES IN ASSESSMENT

According to NCF-SE 2023, current challenges in assessment include overly mechanical and routinized practices in schools. These approaches, at their best, often assess only rote memorization of content rather than measuring competencies and learning outcomes. At their worst, these methods create such an intimidating environment that induces fear, leading to labelling and segregation of the learners based on the 'marks' they have scored in tests and examinations. At Grades 10 and 12, the Board Examinations, have been continually leading learners and their families to a state of stress and anxiety. These exams place immense pressure on students over a few critical days in their academic lives. Moreover, the current structure of Board Examinations often forces learners to prioritize a few subjects at the expense of others, hindering holistic development. According to the NCF-SE 2023, it is desirable that the examinations be seen as learning experiences, from which one can learn and improve in the future. The current Board Examinations do not serve this purpose.

## KEY PRINCIPLES OF GOOD ASSESSMENT

Mentioning the key principles of good assessment, the document states that ideally, assessment should measure the achievement of Competencies and Learning Outcomes ensuring the attainment of Curricular Goals. The assessments should explicitly track learner progress on all

aspects of learning as stated in the Competencies for each stage and learning outcomes for each grade. There should be a clear and precise connection between competency or learning outcomes.

As per their nature, the assessments are desired to be constructive, developmental, and learning-focused. To attain this, the assessments are to be visualized as an ongoing process that the teachers integrate within the teaching-learning process using formal and informal ways to present reliable evidence about learner learning. This way of collecting evidence of learner learning also helps the teachers in understanding the effectiveness of their pedagogy in terms of what the learners have understood and what needs to be worked on further. For the learners, assessments should be placed as an important tool that would help them understand and reflect on their own learning. Recurrent mentions are found in the document stating that assessments should not become an intimidating process at any stage. Also, it should not result in the labelling and segregation of learners.

It is desired that the assessments be stage-specific in nature. At the Foundational Stage, it is assumed, that the Teachers would primarily drive all the assessment activities that would be largely based on observation. Learners need to be given a more proactive role in assessing their learning trajectories in the Preparatory and Middle Stages. Finally, in the Secondary Stage, the learners should be competent enough to take standardised tests including Board certifications and other competitive assignments thus preparing them for their future endeavours.

NCF-SE 2023 stresses the accounting of learner diversity through assessments. It states the importance of moving away from the one-size-fits-all approach while designing the assessments. Classroom assessments are to be graded in accordance with the Learning Outcomes and the Competencies that are to be achieved. The tools must be selected by the teachers according to the performance of the learners at different levels in a classroom. For e.g., understanding the individual learner's needs better is an imminent goal of the graded assignments. NCF-SE 2023 proposes that learner diversity can be catered to by using various assessment methods like oral assessments, paper-pencil tests, project work, and group assignments.

The importance of adequate feedback is stressed by the NCF-SE 2023. It states that feedback needs to be constructive with efficient information about the things that have worked well and the areas that need more attention. The feedback should also state the measures to be taken to overcome the shortcomings of the learners. This section also puts importance on the Holistic Progress Cards and suggests exploring them further for formative and summative assessments.

In its final point on Key features of Assessment, NCF-SE 2023 reminds of the persistent relevance of Summative Assessments including the certificate examinations. It states that “Summative examinations, including certification examinations, continue to be relevant as they serve as a necessary test to understand learner’s achievement of Competencies and Learning Outcomes.” [NCF-SE 2023, 3.4.4(f)] Furthermore, the document again emphasises the requirement of immediate attention on the approach towards Summative Examinations to diverge from testing

the rote learning skills of the learners and focus on conceptual understanding, application of concepts, problem-solving abilities, critical thinking, and other such higher-order capacities.

## TYPES OF ASSESSMENT

Broadly, there are two different types of assessment as stated by NCF-SE 2023. Formative Assessments are "continuous and ongoing". They are used to track learner learning and provide continuous feedback to be used by both, teachers and learners. They are said to be "low stakes", i.e., they do not have strong consequences. Some examples of Formative Assessment would be observing the behaviour of learners in class, asking learners to draw a concept map to demonstrate their understanding of a topic in class, etc. Summative Assessments, on the other hand, are the final evaluation of the learners' learning at the end of a lesson or a logical period of teaching. In comparison to the Formative Assessment, they are more "high stakes", i.e., they would give a final report of the performance of the learner comparing it to a benchmark or standard, thus having some consequence. Some examples of Summative Assessment would be the term-end test, writing and submitting a paper or project. NCF-SE 2023 also goes on to state that results of the Summative Assessment can be used for formative purposes, like informing teaching and learning.

## ASSESSMENT ACROSS STAGES

The NEP 2020 and the NCF-SE 2023, both, define four stages of school education. Beginning with the Foundational Stage where the child spends five years, he/she moves into the Preparatory Stage. After spending three years here they move into the Middle Stage where they spend another three years. Finally, the child enters the Secondary Stage of school education where they spend the last four years of their school life.

According to the NCF-SE 2023, the nature of assessment has to adapt itself to comply with the respective stage of school education. In the Foundational Stage, emphasis has been laid on making sure that assessment does not result in any additional burden on the child. NCF-SE 2023 mentions, "assessment tools and processes should be designed such that they are a natural extension of the learning experience for the child." [NCF-SE 2023, 3.4.9.1(a)] The document strictly states that explicit tests and examinations are completely inappropriate assessment tools for the Foundational Stage. Assertions have been made stating that assessment should allow for diversity among children and in their learning. The assessment of a child's Learning Outcome and Competency could be made in numerous ways keeping in mind their individual way of learning and expressing. The document mentions that it is important for the teachers to have the ability to design different kinds of assessment for the same Learning Outcome and use each assessment appropriately. At this stage, the progress of the child has to be described and analysed through systematic collection of evidence. For this purpose, it becomes imperative for the document to enable recording and documentation. NCF-SE 2023 also tries to look from the perspective of the Teacher. It mentions sternly that the assessment shouldn't over burden the teacher. It assures the

teacher the autonomy to judiciously choose the appropriate tool for assessment and periodicity in which assessment-related record keeping is maintained. That being said, the document states that keeping a systematic record of the child's assessment falls under the important responsibilities of the Teacher. Two important methods of assessment, according to the NCF-SE 2023, appropriate for the Foundational Stage are: observations of the child and analysing artefacts produced by the child as a part of the learning experience.

In the Preparatory Stage, as we move more into the curricular areas of formal learning, a robust system of formative assessment becomes essential. According to the NCF-SE 2023, the role of assessment at this stage is to act as an "instructional tool" that would help to provide a comprehensive account of learner learning. The learners are observed to learn more, at this stage, when aware of the desired competency. Therefore, the NCF-SE 2023 recommends teachers help learners understand the desired competency through a lesson or a unit of study. Various assessment methods are to be introduced at this stage. It is recommended to introduce Written Tests for assessment at this stage. To capture learner progress holistically, it is recommended to introduce Portfolios at this stage. Peer and self-assessment techniques could also be introduced to the learners at this stage. The culmination of the Preparatory Stage would be marked by a comprehensive summative assessment that would give the readiness of the learner to enter the Middle Stage where more curricular areas will be introduced.

Assessment would continue to be competency-based at the Middle Stage. It would cover all the new concepts introduced in each subject. The focus of the curriculum, at this stage, moves to conceptual learning and higher-order capacities. Therefore, stress has been laid upon the use of classroom assessment techniques like projects, debates, presentations, experiments, investigations, role plays, journals and portfolios. It is suggested to have regular summative assessments at this stage, that will help learners to "synthesize their learning at logical intervals." Summative assessments comprising MCQs and constructed responses are also to be used periodically. The learners should go through a comprehensive summative assessment by the end of the Middle Stage that will test the learner's achievement of the Competencies in each curricular area. Additionally, NCF-SE 2023 mentions that the assessments at this stage should also be able to indicate special interest or inclination in specific curricular areas that learners may have demonstrated.

Greater subject depth and understanding become essential at the Secondary Stage of School Education. For this reason, NCF-SE 2023 suggests the effective practice of comprehensive classroom assessments for facilitating meaningful learning and constructive feedback at this stage. For recording learner learning against the competencies, it is suggested to use regular summative assessments. Considering the nature and complexity of the Competencies at this stage, classroom assessments are supposed to play an important role. Self-assessment would also play a major role in learner learning at this stage. NCF-SE 2023 advises the facilitation of learners to monitor their learning so that they can "adjust, adapt, and decide their strategies of learning." Case-based questions, simulations, and essay-type questions can be used for designing the

summative assessments to ensure examination of the Competencies. As the learners also need to gain access to higher education and livelihood opportunities, NCF-SE 2023 suggests that they should be prepared accordingly for the Board examinations and other selection tests at this stage.

## APPROACH TO BOARD EXAMINATIONS AT GRADE 10 AND GRADE 12

The NCF-SE 2023 states the purpose of Board Examinations conducted at the end of Grade 10 and Grade 12 to be that of certification to ascertain the extent to which learners have achieved Competencies across curricular areas leading to the attainment of Curricular Goals. The incompetence of the current Board Examinations to fulfil this purpose is stated in the document. While mentioning the current challenges faced by the Board examinations, NCF-SE 2023 states that at present the focus of the examination is mostly on testing the capacity of the learners to reproduce learnt facts, thereby unfortunately, promoting rote learning. This tends to give an "incomplete (at best) and incorrect (at worst) picture of learner learning." Additionally, the absence of clear and detailed marking schemes leads to subjectivity by the evaluators and questions of consistency or comparability arise. Another major point that the NCF-SE 2023 makes regarding the current challenges of Board examinations is about it being offered only once a year. As there is no chance to take the exam twice a year, the learner doesn't get the opportunity to appear for the test when they are ready or to take it again if they miss the examination.

To bring about a change, NCF-SE 2023 asserts that the Board examinations should assess the achievement of Competencies for the Secondary Stage as stated in the Curriculum. The assessment should provide a valid and reliable picture of learner performance as per the Competencies in the Curriculum. The NEP 2020 gives the authority of Curriculum design to the appropriate academic authority (e.g., NCERT or SCERT), thus the Boards of Examination have no role to play in curriculum design. Their primary responsibility involves designing and implementing fair, reliable, and valid testing processes, and instruments to assess the achievement of the articulated Competencies and the certification of learners accordingly. To ensure that learners have enough time and opportunity to perform well in the Board exams, NCF-SE 2023 states that the exams should be offered "at least twice a year." To aid this process, it suggests the creation of a "comprehensive test item bank" that can be used to create the tests using suitable software. According to the document, this is supposed to be the stepping stone towards a system of "on-demand examinations" in the near future as described in the NEP 2020. With regard to the selection of test developers, translators, reviewers, and evaluators for Board examinations, the NCF-SE 2023 strictly mentions the adoption of a rigorous process of selection based on detailed guidelines. It is required for the Boards of Examination to ensure that all test developers, reviewers and evaluators go through formal University-certified courses on test development before they begin this work. Furthermore, the document goes on to state that there should be continuous capacity building of test developers, evaluators, and reviewers in order to support them in the design of high-quality test instruments. NCF-SE 2023 mentions Vocational Education, Arts Education, and Physical Education as integral parts of the curriculum. High-

quality test instruments are to be designed by the Boards of Examination for the certification at Grade 10 and Grade 12 in these curricular areas. These areas are to be assessed differently due to their significant practice component.

## STREAMLINING THE TEST DEVELOPMENT PROCESS

To streamline the test development processes for written examinations, NCF-SE 2023 mentions some illustrative steps. The process begins with the creation of Assessment frameworks for the purpose of ensuring what to test and what not to. In such a framework the Competencies, Learning Outcomes, and content domains to be assessed must be laid out. The next step is designing a blueprint with reference to the Assessment framework. The blueprint is a planning document listing all the relevant information for a test. As it is a working document, the blueprint goes through numerous changes in the process of test item designing. The information in the blueprint includes Competencies, Learning Outcomes and content domains to be tested, the format of test items (e.g., multiple choice, short written answers, others), length of the test, and marking schemes. The third step is the designing of good quality test items and scoring guides. NCF-SE 2023 divides test items into two broad categories, i.e., Selected Response Questions (e.g., MCQs, True/False) which require the learner to choose a response from the given set of options and Constructed Response Questions where the learner needs to create and develop the correct response. It is stated that quality parameters like language clarity, factual accuracy, quality of distractors, etc. are to be kept in mind while designing test items. It is to be kept in mind that the scoring guides are just as important as the test items. After the development of test items, it is important to ensure rigorous review procedures like item paneling with an expert group. Along with test items, scoring guides should also be reviewed. Periodic rigorous reviews are to be ensured by the Boards of examination of the quality of test instruments designed.

Thus, the NCF-SE 2023 outlines assessment strategies across the four stages of school education, emphasising adaptability to each stage's nature. In the Foundational Stage, assessment tools should align with the learning experience and avoid explicit tests or examinations. The Preparatory Stage introduces formative assessments as instructional tools, integrating written tests, portfolios, and peer assessments. The Middle Stage focuses on conceptual learning, utilising various assessment methods such as projects, debates, presentations, and regular summative assessments. The Secondary Stage emphasises comprehensive classroom assessments, self-assessment, and preparation for board examinations and competitive tests. The document critically evaluates the current challenges of board examinations and proposes a transformation, advocating for assessments at least twice a year, a comprehensive test item bank, and the importance of vocational, arts, and physical education in the assessment process. The document underscores the need for a rigorous selection process for test developers, translators, reviewers, and evaluators, emphasising continuous capacity building. Overall, the NCF-SE 2023 strives to streamline the test development process, ensuring a valid, reliable, and fair assessment system aligned with the competencies outlined in the curriculum.

# EQUIVALENCE OF BOARDS

The National Educational Policy (NEP) 2020 and the subsequent National Curriculum Framework (NCF) 2023 have both endeavoured to bring an equivalence in the domain of education. With this regard, the Association of Indian Universities (AIU), entrusted with the responsibility of granting equivalence to Grade 10 and Grade 12 Board examinations/ qualifications/ courses conducted by various School Education Boards of India, came up with a Standard Operating Procedure (SOP) to be followed by the Boards.

Five regional workshops were conducted between June and August 2023 detailing the dates and participants involved. Notably, the study excluded Sanskrit, Madrasas, and technical boards due to significant differences in their curricular frameworks. In the workshops, attendees received presentations on education reform visions aligned with NEP 2020, insights from keynote speakers representing each region, and an overview of PARAKH's role in guiding educational entities across India.

**Table 1. Regional Workshops Dates and Locations**

| Date | Venue | Region | Participating States/UTs |
|---|---|---|---|
| 28th June to 1st July, 2023 | Pune University, Pune, Maharashtra | Western | Chhattisgarh, Gujarat, Goa, Madhya Pradesh, Maharashtra |
| 10th to 13th July, 2023 | RIE, Ajmer, Rajasthan | Northern | Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab, Rajasthan, Uttar Pradesh, Uttarakhand |
| 17th to 20th July, 2023 | RIE, Bhubaneswar, Odisha | Eastern | Assam, Odisha, West Bengal |
| 24th to 27th July, 2023 | Kohima, Nagaland | North-Eastern | Arunachal Pradesh, Mizoram, Meghalaya, Sikkim, Tripura, CBSE, ICSE, NIOS |
| 22nd to 25th August, 2023 | Kochi, Kerala | Southern | Andhra Pradesh, Karnataka, Kerala, Manipur, Tamil Nadu, Telangana, Bihar, Jharkhand, DBSE |

**Table 2. Educational Board Representation at Regional Meetings**

| Total Boards | Total Boards who participated in the Regional Workshops | Total No. of Boards | Per cent Participation |
|---|---|---|---|
| Secondary boards only | 5 | 6 | 83.3% |
| Higher Secondary boards only | 4 | 6 | 66.6% |
| Common boards (Secondary and Higher secondary) | 18 | 25 | 72% |
| Sanskrit board | - | 7 | 0% |
| Madrasa board | - | 7 | 0% |
| Open school | 5 | 13 | 38.4% |
| Technical and vocational | - | 3 | 0% |
| **Total** | **32** | **69** | **46.3%** |

Before the workshops were held, a pilot test was conducted to evaluate the question paper template's usability, the consistency of procedures followed by human raters, and the quality of measurement. This involved data collection from recent Grade 10 papers (2018-2023) for English, Mathematics, Social Science, and Science from ten diverse boards, such as CBSE, Haryana, CISCE, J & K, Karnataka, Kerala, Maharashtra, Mizoram, Nagaland, and Uttar Pradesh. Subject matter experts in these fields participated in the pilot study.

In the workshops, a survey was done using two tools:

- Question Paper Template (QPT)
- Equivalency Questionnaire (EQQ)

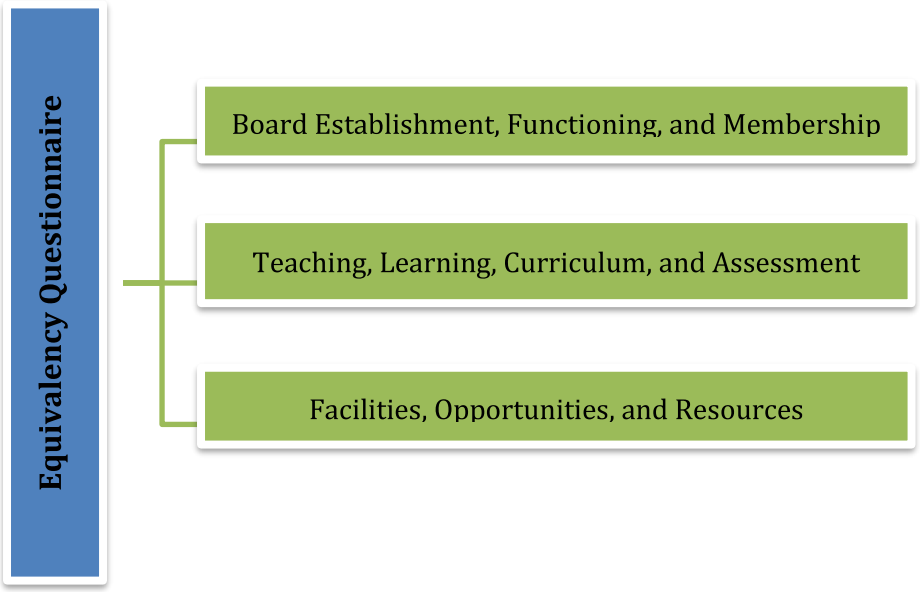
## QUESTION PAPER TEMPLATE

An analysis of the question papers used by Educational Boards in examinations (Grade 10 and Grade 12) conducted in the recent past was done using the Question Paper Template. Respective subject experts acted as raters for analysing the question papers of the Boards. The purpose of this analysis was to gain insights into the quality, relevance, and effectiveness of the examination system. This analysis aimed to evaluate the alignment of question papers with learning standards, the level of difficulty and appropriateness of questions, the inclusion of choices, the variance in cognitive demand, like critical thinking and problem-solving skills, and more. The attempt was to thoroughly examine these question papers such that the variance and similarities amongst boards would come to light. This would aid in the preparation of equivalence guidelines.

## EQUIVALENCE QUESTIONNAIRE

The EQQ was used at the workshops as a tool to study the opportunities and facilities provided by school boards with regard to achieving equivalence. Through the questionnaire, an attempt

has been made to judge the present condition of the School Boards keeping in mind the guidelines specified by NEP 2020 and the NCF-SE 2023, in order to bring forth the required changes to attain equivalence. The survey has collected both qualitative and quantitative data regarding the state of Educational Boards in India. There is a total of 58 questions in the questionnaire that have been divided into three different sections.




## SECTION I – BOARD ESTABLISHMENT, FUNCTIONING, AND MEMBERSHIP

Section I includes questions related to the functions of Education Boards, school membership within Education Boards, and funding sources of the boards. This section has 12 questions. Questions like whether the board performs periodic reviews on various aspects like Learner Attendance, Teacher Performance, Internal Assessment Practices, Pedagogical Practices for CWSN, etc. are aligned with the aspirations of the NEP 2020 and the NCF-SE 2023. The language policy of the schools on the board is asked in Question 4 of the questionnaire. The data will be indicative of whether the boards are following the two-language model or the three-language model. According to the NCF-SE 2023:

> "R1, which is most often the regional language, will help learners form a deeper understanding and connect. Exposure to two other languages (R2 and R3) will help learners to become multilingual, appreciate unity in diversity, and thereby help form a national identity. (NCF-SE B1.3)"

There is a blank space provided to specify any other language if taught. The percentage of the board's funding coming from different sources is asked in question 5. Question 6 asks the Boards to specify the process for an existing school to become affiliated with their education Board.

Questions 10, 11, and 12 ask if the Board is involved in other activities in addition to conducting exams in alignment with the idea of the Amrik Singh report emphasising boards to be more than just examination-conducting bodies.

## SECTION II – TEACHING, LEARNING, CURRICULUM, AND ASSESSMENT

In Section II, there are questions related to the curriculum in Schools of the board, as well as how learners are taught, how they learn, and how their learning is assessed. Questions 13 and 14 inquire about the compulsory and optional subjects for Grade 10 and Grade 12 as prescribed by the Boards. As per the NEP 2020,

> "Learners will be given increased flexibility and choice of subjects to study, particularly in secondary school - including subjects in physical education, the arts and crafts, and vocational skills – so that they can design their own paths of study and life plans. (NEP 2020, 4.9)"

Thus, the question is an attempt to understand the flexibility in choosing the desired subjects, provided by the Board. Also, it tries to gauge if the Boards promote the importance of subjects like Physical Education, Arts and Crafts, and Vocational Education, which have been given significant importance in the NEP 2020 and the consequent policies. With regards to assessment, Question 15 asks a number of questions which indicate the nature of Board Examinations, at Grade 10 and Grade 12, conducted by the Boards. The weightage for Formative and Summative Assessments is judged in this question. NCF-SE 2023 states that in the Secondary Stage, "regular formative assessments should be effectively practiced for facilitating meaningful learning and constructive feedback." (NCF-SE 3.4.9.4) An analysis of the ratio of Formative to Summative Assessments would be of help to judge if the aspired goals have been made. In Question 17, the time allocation for each of the subjects in the Board is inquired. This is to understand whether enough emphasis, in the form of time allocated, is given to the specified curricular areas. In Question 18, whether the Board provides specific Examination Bylaws, Syllabus, Assessment Framework, etc. is asked. This is in alignment with the Amrik Singh Report as it prescribes the Boards to actively take part in designing curriculum, examination bylaws, and affiliation bylaws, as against being mere Examination conducting bodies. The two major challenges of Board Examinations in Grade 10 and Grade 12 as stated by NCF-SE 2023 are its "High Stakes" nature and an unforgiving nature of giving "No Second Chances". To bring essential reform in this regard, the NEP 2020 and the NCF-SE 2023 suggest the provision for a greater number of opportunities for learners to sit for Board Exams. Aligning to this idea, Questions 19, 20, and 23 inquire regarding the provisions for on-demand examinations, the number of supplementary/ compartment board examinations permitted to the learners by the Board, and whether the Board conducts semester examinations, respectively. The NEP 2020 talks about the identification of gifted children and advises to "encourage learners with singular interests and/or talents in the classroom by giving them supplementary enrichment material and guidance and encouragement" (NEP 2020, 4.44) Question 25 attempts to determine the policies adopted by the Board for

assessing gifted children. Question 28 aims to understand the kind of training provided by the Board to administration staff (e.g. board question paper setters, moderators, examination conduct personnel, result processing personnel). Question 34 is very comprehensive in nature. It identifies numerous administrative aspirations prescribed by the NEP 2020 and its consequent documents and attempts to find out whether the Educational Boards have adopted them actively or not. For instance, it asks if the emphasis on holistic development of learners is taken care of through innovative pedagogies, experiential learning, creativity and critical thinking by the Board. It inquires whether assessment patterns for both formative and summative assessments and formulated evaluation procedures are in accordance with extant NCF. Another question regarding the introduction of holistic progress cards for 360-degree assessment of learners is asked in the same question. A total of nine questions of this type are asked in Question 34 of the questionnaire. These questions can be seen as a direct interrogation of the adoption of suggested policies by the Educational Boards.

## SECTION III – FACILITIES, OPPORTUNITIES, AND RESOURCES

This section of the questionnaire deals with the questions regarding schools in the Board and their surrounding communities. This is done to assess their available resources and collect background information about the populations of learners that they serve. Questions 35 – 38 inquire about the percentage of schools in the Board that have access to various infrastructural amenities like uninterrupted internet and electricity, running water, indoor plumbing, accessible toilets, drinking fountains, etc. Question 39 asks whether the schools have proper ventilation, examination halls, photocopying facilities, strong rooms, etc. Questions 40, 41, and 42 can be seen as an extension of the same strain of thought. They attempt to determine whether schools have the required rooms (art room, music room, library, computer room, etc.), if they provide adequate grounds/playgrounds/indoor play spaces and relevant facilities to the learners, and whether numerous courses on art and music are provided by the Boards to its learners. Questions 43 – 46 aspire to look into the facilities in relation to libraries provided by the Boards. The number of books in the libraries is asked. If the libraries have books in braille, audiobooks, or Indian Sign language books is questioned. The number of new books prescribed to be added to the library each year is asked. And, an attempt has been made to determine the different purposes served by school libraries such as studying/research, individualized tutoring, instruction on the use of library resources, etc. Questions 49 and 50 inquire if the Board mandates compulsory vocational education in its schools for learners in Grade 9 or above and ask the Board to pick from the list of numerous vocational programs on which courses could be provided to the learners. Question 53 asks whether schools on the Board have certified teachers on staff for learners with special needs. Question 58 inquires if the community members or organisations (i.e., parent/learner guardians, local volunteer groups, Parent – Teacher Organisations) contribute to the schools on the Board by doing activities like building school facilities such as classrooms or teacher houses, organising cultural activities or events at school, etc.

The data thus procured through all the 58 questions has been analysed using the mixed method of research. A grading methodology has consequently been devised and the Boards are graded according to the parameters. It is to be understood that the aspired equivalency will come by transcending the current shortcomings of the School Boards and making the required changes to reach the desired goals as stated in the NEP 2020 and the NCF-SE 2023.

# PILOT REPORT

Standards for inclusive, equitable, and high-quality assessments that can positively impact learner achievement are an important component of educational systems built to provide learners with the opportunities they need to learn. PARAKH aims to develop objectives for state-level learning assessments and test specifications that provide valid and reliable assessments based on relevant and widely accepted professional standards. Part of the development work includes a critical study of the assessment patterns of all Education Boards in India. This section describes the pilot for one component, an analysis of question papers, for which the purpose is to collect information which will be used to identify areas of need for standardisation guidelines and develop plans for establishing equivalence. Equivalence across educational boards will be reached when there is an established set of norms, standards, and guidelines for learner assessment and evaluation for all recognised school boards in India and a common set of learning standards across the four levels of foundational, preparatory, middle, and secondary grades. This set of norms, standards, and guidelines will constitute the basis for an effective system for monitoring achievement and learning outcomes in the country, and for encouraging and helping school boards to shift their assessment patterns towards meeting current and future skill requirements.

**Equivalence across Education Boards will be reached when there is an established set of norms, standards, and guidelines for learner assessment and evaluation for all recognised school boards in India and a common set of learning standards across the four levels of Foundational, Preparatory, Middle, and Secondary Grades.**

To create a path towards increased equivalence of norms, standards, and guidelines for learner assessment and evaluation across Education Boards, PARAKH is evaluating the range of current assessment practices across school boards in India. A critical analysis of assessment patterns includes (a) identifying and documenting the processes currently in practice for developing assessments; (b) reviewing question papers and scoring of learner responses, as well as approaches to analysing, interpreting, and using assessment results; and (c) reviewing learning objectives and competencies across levels (Foundational, Preparatory, Middle, and Secondary) regarding both large-scale standardised assessments and classroom-based assessments.

Finalizing standards for assessment will be an iterative process including several rounds of revisions based on stakeholder input. The initial framework for evaluating the extent to which Education Boards are meeting the standards will consider current practices and challenges. The framework is expected to change over time as PARAKH and the assessment practices of Education Boards evolve.

This report describes a pilot study on a tool developed to analyse question papers from all Education Boards in India. The tool comprises an item inventory, associated scoring rubric and rater training materials, a digital data collection system, and an R code for importing, cleaning, aggregating, and analysing the data. The analysis of question papers includes collecting data on the characteristics of the items and the test from trained raters, computing additional summaries over items and tests, and conducting quantitative and qualitative analyses to describe patterns. The purpose of the pilot was to evaluate the usability of the tool, the fidelity of the procedures followed by human raters, and the quality of measurement of the intended item characteristics. The information gathered from the pilot study was used to further refine the tool and plan for data collection to classify question papers across all recognised Education Boards in India. In the sections that follow, we describe the development process for the tool, the definition of data elements, the method and results of the pilot study, and the next steps.

## DEVELOPMENT PROCESS FOR ITEM INVENTORY

We developed an item inventory to capture information about the items that make up the question papers across all boards. The iterative process for developing the item inventory, which involved close collaboration between the ETS US and India team as well as with the NCERT team, is described in Figure 1.

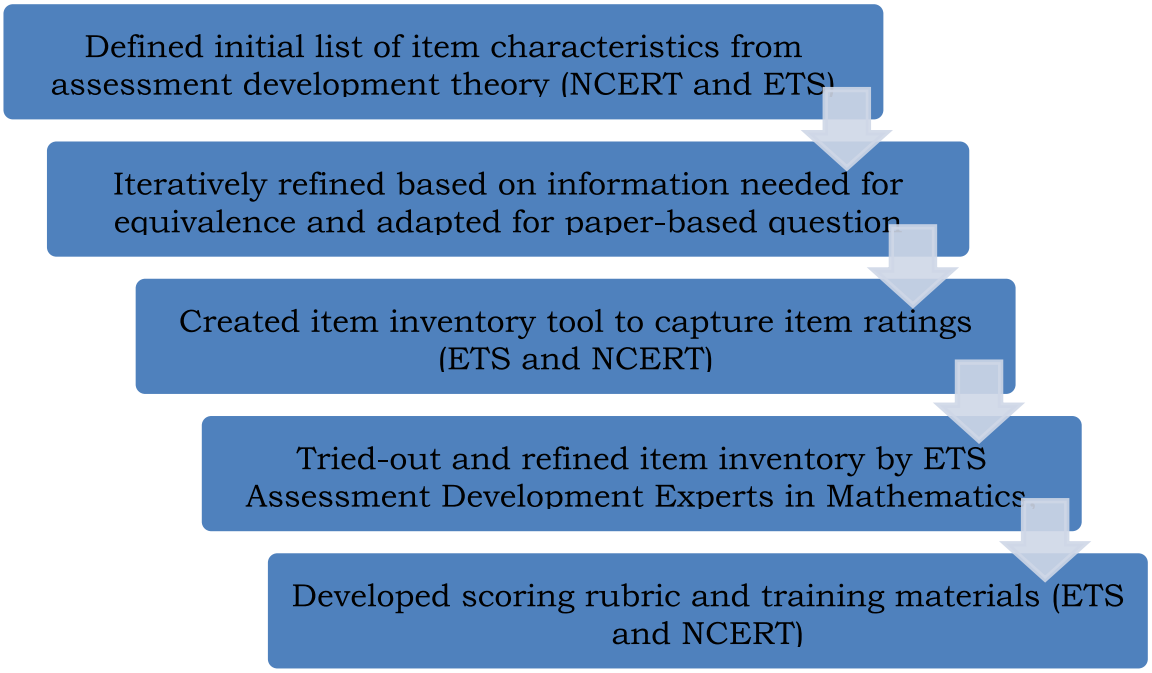



*Figure 1: Item Inventory Development Process*

## DEFINITION OF DATA ELEMENTS

The data elements in the item inventory include both human judgments (i.e., rater-provided data elements, Table 1) and aggregated data (i.e., generated data elements, Table 2). In the item template, each row represents an item that learners are asked to respond to. For multi-part questions, each part is represented in its row.

**Table 1: Definitions of Rater-Provided Data Elements of the Item Inventory**

| Rater-Provided Data Elements |
|---|
| 1. Name of the Education Board |
| 2. Question Paper Year |
| 3. Question Paper Grade |
| 4. Question Paper Subject Category (Math, English/Reading, Social Science, Science) |
| 5. Name of Test as Written on Question Paper |
| 6. Total Number of Sets (For Given Board, Year, Grade, and Subject) |
| 7. Duration of Test in Minutes |
| 8. Maximum Marks on the Question Paper |
| 9. Set Number |
| 10. The item number as written on the Question Paper (e.g., 2(a) i) |
| 11. An index that keeps track of the number of learner responses |
| 12. Maximum marks for the item |
| 13. Is the learner given a choice between different items to answer? (Yes/No) |
| 14. If the learner is given a choice between different items to answer, please describe the choice options and how the item number distinguishes among choices (e.g., answer 4 of 6 of items defined by the lowercase letters. E.g., 2a vs 2b) |
| 15. Type of question (Multiple choice (MCQ), Very Short Answer-less than 20 words, Short Answer-20-50 words, Long Answer-100-120 words). |
| 16. Does the marks awarded seem appropriate for the question? Please provide your subjective judgment. (Yes, “no, mark is too high”, “mark is too low”) |
| 17. Is the item linked to an assessment framework? (For question papers with an assessment blueprint, Yes, no, or unclear, if no assessment blueprint is available, please choose NA) |
| 18. High-level content category that the item is measuring (Reading Informational Texts, Reading Literature, Writing, Grammar) |
| 19. Content sub-topic being measured by the item |
| 20. Competencies measured by the item |
| 21. Is there any error identified in the question? |
| 22. If yes, kindly describe the identified error. |
| 23. Based on your experience, please provide your judgment on whether the item is easy (E), medium (M), or difficult/hard (H) for Grade X learners. |
| 24. Passage status (Passage is provided or passage is referenced but not provided) |

| |
|---|
| 25. Passage type (informational or literary) |
| 26. Informational Passage Interdisciplinary Focus (Math, English, Science, Social science) |
| 27. Passage Word Count (for provided passages only) |
| 28. Passage Reading Level (please provide your judgment of below grade level, at grade level, or above grade level) |
| 29. Does the question also appear in another set? |
| 30. If it appears in another set, which set? |
| 31. Does the question also appear in another year? |
| 32. If from other year, which year? |
| 33. If from other year, which set? |
| 34. Please provide any notes or comments needed to explain your ratings or observations. |

**Table 2: Definitions of Generated Data Elements of the Item Inventory**

| Generated Data Elements |
|---|
| 1. Unique Item ID |
| 2. Does the question measure Lower-Order Thinking Skills or Higher-Order Thinking skills? |
| 3. Weightage of item marks out of the total marks in a question paper |
| 4. Summaries of item-level data aggregated over boards, years, and sets |

## METHOD

### Sample

For each of the four subjects, English, Mathematics, Social Science, and Science, the pilot data was drawn from three years of recent question papers from 10 different boards which were selected to achieve variability in responses. The boards were CBSE, ICSE, and State boards of Haryana, Jammu & Kashmir, Karnataka, Kerala, Maharashtra, Mizoram, Nagaland, and Uttar Pradesh. The question papers spanned the years between 2018 and 2023 because several boards did not administer question papers during parts of the COVID-19 pandemic. The pilot question papers were all Grade 10 summative assessments. The scores were used for several purposes such as graduation requirements, college admissions, and applications for further study and employment.

### Raters

Nine subject matter experts spanning English/Reading, Mathematics, Social science, and science were invited for the pilot study. The raters participated in an online, synchronous training on how to use the item inventory template to rate items according to the rubric. During the coding activity, raters had the opportunity to ask questions and get additional support as needed.

## ANALYSIS

A mixed-methods approach relying on both quantitative as well as qualitative analysis steps was taken to extract relevant empirical-based insights from the collected data.

R[1] code was written to import and combine ratings from all question papers into a single dataset and to manage the data. Data management included cleaning, checking data quality, and summarizing the data with descriptive statistics and visualisations.

Qualitative analysis was used to summarize open-ended responses to the following data elements: content that the item is measuring, sub-topic that the item is measuring, describing errors, and item-level general comments or notes. For item content and sub-topic, we used the English pilot data combined with subject matter expertise to derive an item classification schema that we will recommend for the full board data collection and that we used to summarize the pilot data. We computed frequencies for responses to describing errors and general comments and grouped them into a smaller set of themes to use in refining the item inventory and in data cleaning.

## RESULTS

Results are reported by subject, in the following order: English, Mathematics, Science, and Social Science.

## ENGLISH RESULTS

Table 3 shows the pilot boards, years, and the number of sets of question papers with ratings for English.

**Table 3: Number of Sets of English Question Papers**

| Board | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|
| CBSE | | 30 | 18 | | 12 | |
| HARYANA | 4 | 4 | | 4 | | |
| ICSE | 1 | 1 | 1 | | | |
| J&K | | 3 | 3 | | 3 | |
| KARNATAKA | | 2 | 2 | | 2 | |
| KERALA | | 1 | 1 | | 1 | |

1 R Core Team (2022). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL https://www.R-project.org/.

| Board | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|
| MAHARASHTRA | | 1 | 1 | | 1 | |
| MIZORAM | | 1 | 1 | | 1 | |
| NAGALAND | 1 | 1 | 1 | 1 | 1 | |
| UTTAR PRADESH | | 2 | | | | 2 |

*Note. For CBSE, English Communication, English Language and Literature are combined in the set count.*

We collected data on 5,334 English items. Ninety-five per cent were rated by one subject matter expert and 5 per cent were rated by another. Across boards, years, and sets, the number of items on the question papers ranged from 26 to 79. In this tally, each part of a multipart question is counted separately, and learner choice is not accounted for. The pilot data revealed variability in the ways that learners are given choices among items and this information is also being used to revise the item inventory template to collect detailed information about how learners are given choices among items during the full board data collection.

The duration of the exams ranged from 120 to 195 minutes. The total marks per question paper ranged from 40 to 125. Duration and total marks were consistent across sets within years for all boards.

## ITEM TYPES

Raters were asked to judge the length of answers using the following definition which was developed after rater try-outs: a very short answer is less than 20 words, a short answer ranges between 20 to 50 words, and a long answer ranges between 100 to 120 words. Figures 2-6 describe the item types, competencies measured by the items, percentages of items measuring Higher-Order and Lower-Order Thinking Skills and estimated item difficulty. In this preliminary report, we have combined items across all sets in a given year. In general, there appears to be variability across boards in item types, with short items being the most common types across boards.

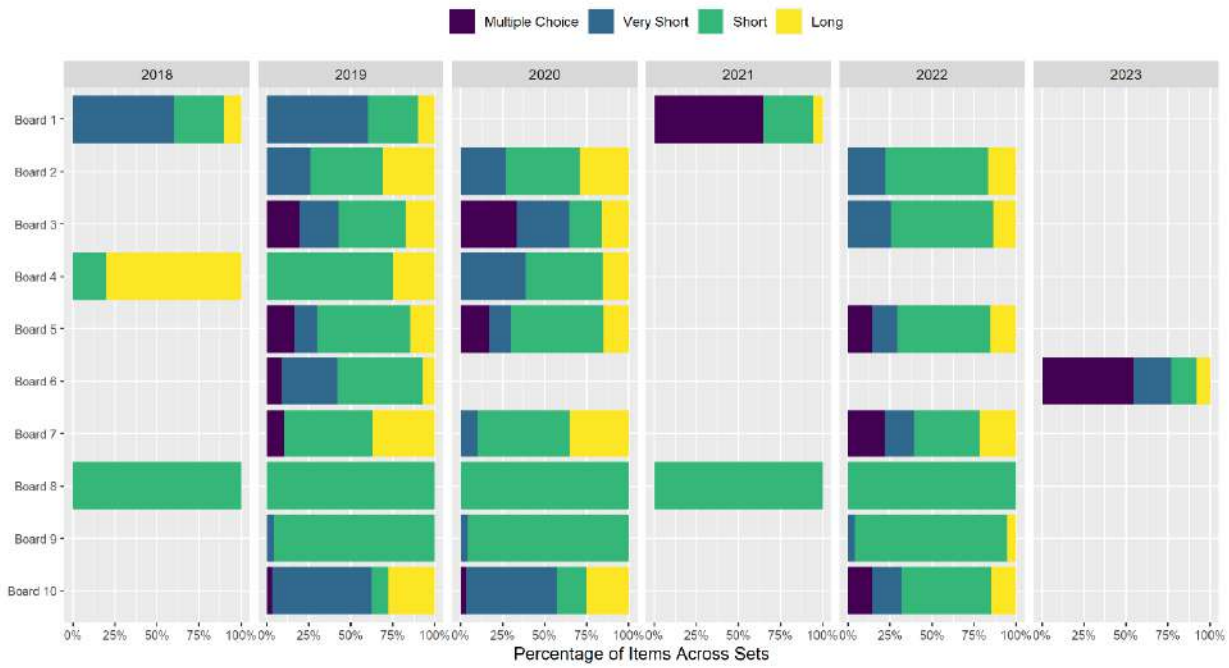



*Figure 2: English Item Types*

*Note: Interpret summaries of pilot data with caution.*

## ITEM COMPETENCIES AND LOWER VS. HIGHER-ORDER THINKING SKILLS

Raters were asked to judge the competencies being measured by items from a choice of six competencies (remembering, understanding, applying, analysing, evaluating, and creating). The first three competencies map to Lower-Order Thinking Skills (LOTS); the latter three map to Higher-Order Thinking Skills (HOTS). As shown in Figure 3, raters judged a mix of competencies measured on items. But, for most of the pilot boards, the majority of the items were rated as measuring remembering, understanding, and applying. This is also illustrated in Figure 4, where the majority of the items were judged to measure Lower-Order Thinking Skills (LOTS) and fewer items were identified as measuring Higher-Order Thinking Skills (HOTS) for 8 of 10 pilot boards.

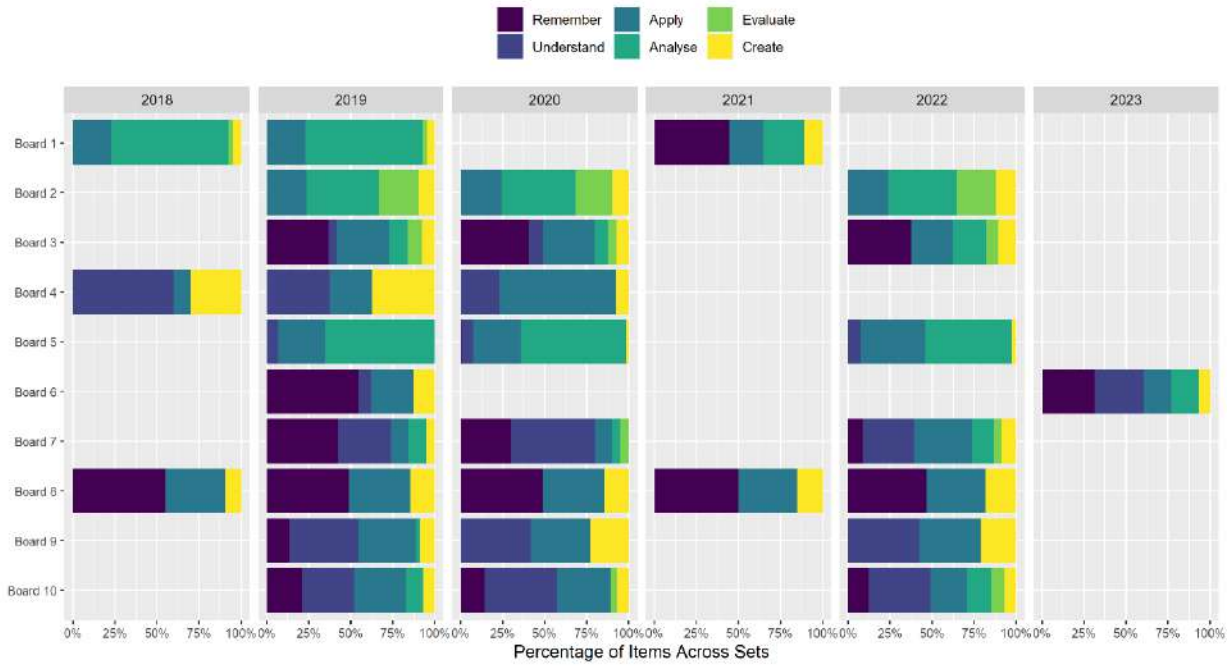



*Figure 3: English Item Competencies*

*Note: Interpret summaries of pilot data with caution.*

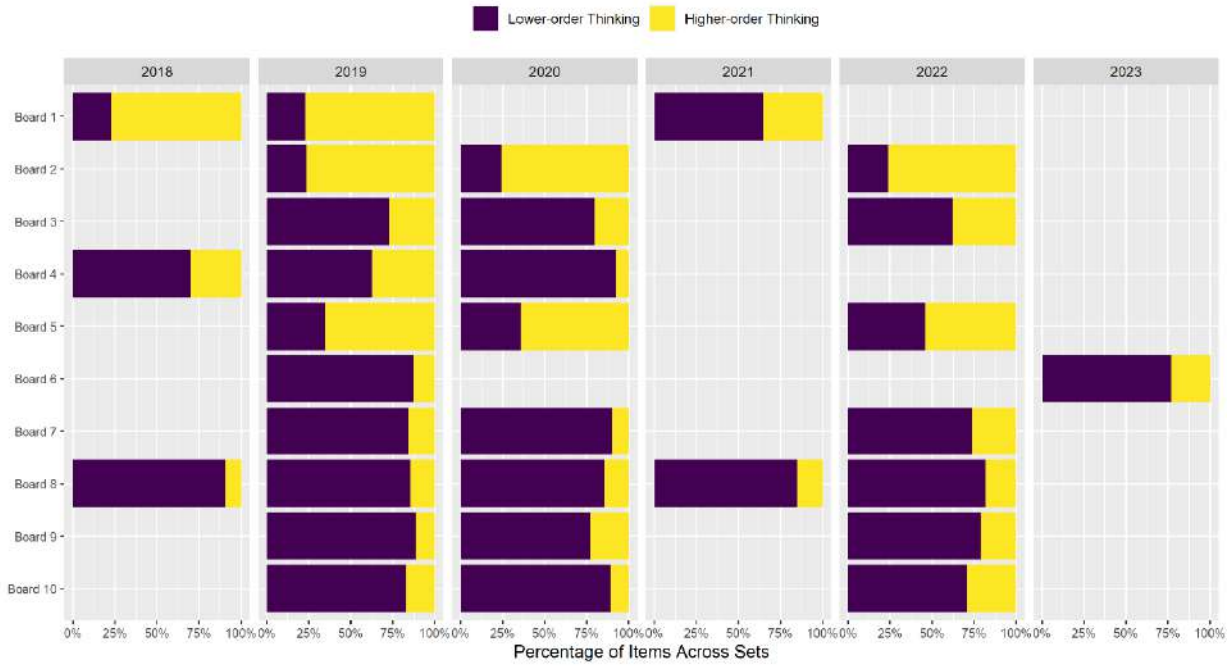



*Figure 4: English Item HOTS/LOTS*

*Note: Interpret summaries of pilot data with caution.*

## EXPERT-JUDGED DIFFICULTY

We asked raters to use their experience as teachers and in the field of education to provide their judgment on whether each item would be easy (E), medium (M) or difficult/hard (H) for Grade 10 learners. Easy items are those that a large majority of learners exposed to relevant learning opportunities would be expected to answer correctly. Hard items, on the other hand, would be expected to be solved by only a minority of learners exposed to relevant learning opportunities. As shown in Figure 5, raters judged most of the items overall to be easy for 6 of the 10 boards.

Please note, that these expert-based ratings are inherently subjective and should be interpreted with caution. Also, these ratings may or may not align with empirical difficulty ratings. While they provide a first insight into the potential variation of difficulty across question papers from different boards, results from this pilot should only be interpreted with caution. For making inferences about item difficulty from the full QPT across all recognised Education Boards in India, ratings by two independent, trained raters may contribute to greater accuracy of results, although predicting empirical difficulty has been shown as a very difficult task both in practice and research literature. Having multiple raters may improve difficulty ratings, but these ratings cannot replace empirical difficulty estimates.

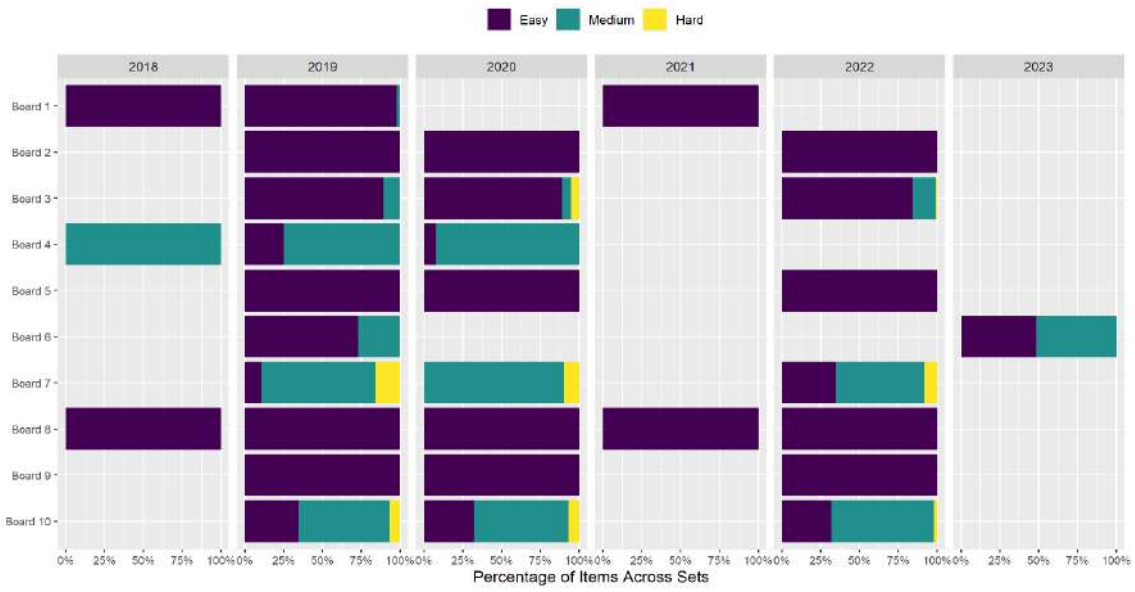



*Figure 5: English Item Difficulty*

*Note: Interpret summaries of pilot data with caution.*

## APPROPRIATENESS OF MARKING

We asked raters to provide their subjective judgment about whether the marks awarded seemed appropriate for the question. Raters judged most of the items to have appropriate marks, although there were some exceptions for two Education Boards. Very few items with errors were

identified across the 10 pilot boards. See Figure 6 for details regarding the appropriateness of item marks.

Please note, that these expert-based ratings are inherently subjective and should be interpreted with caution.

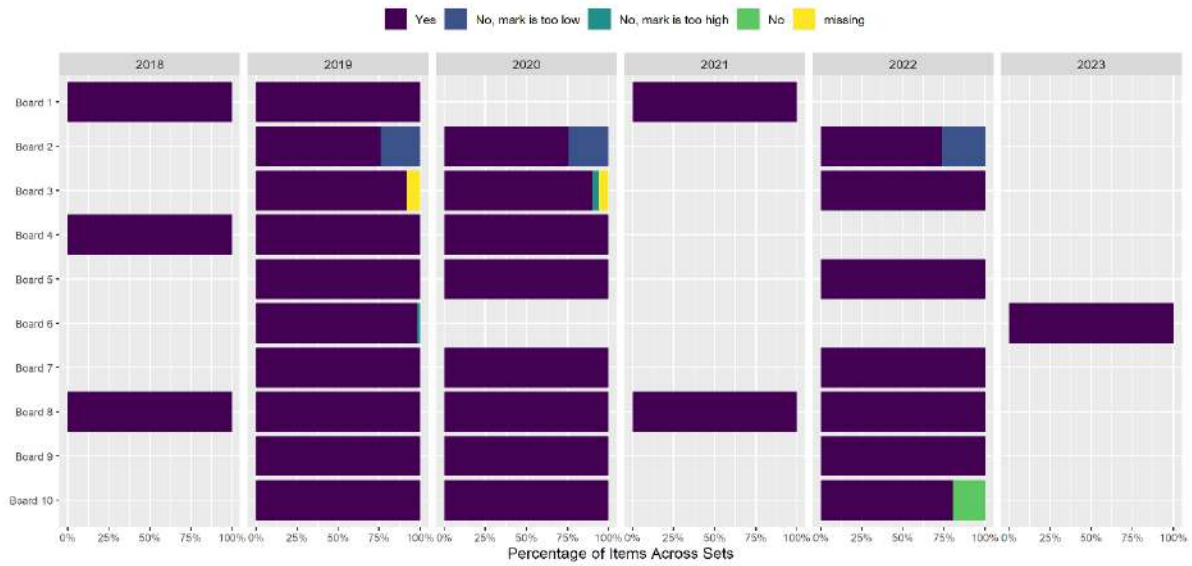



*Figure 6: Appropriateness of English Item Marks*

*Note: Interpret summaries of pilot data with caution.*

## ITEM CONTENT & FRAMEWORK COVERAGE

Raters were asked to judge the high-level content and sub-topic being measured by each item. We left this open in the pilot to capture the breadth of content measured by the range of assessments. To summarize the pilot data and to refine the data collection template for full board data collection, we combined the data with theories of english education to define an item classification schema for rating the content and sub-topic measured by each item. The schema is shown in Table 4. See Figure 7 for a summary of content coverage.

**Table 4: English Content and Sub-topic Item Classification Schema**

| English Content Topic | Subtopics |
|---|---|
| Reading Informational Texts | Comprehension |
| | Analysis |
| | Vocabulary |
| Reading Literature | Comprehension |
| | Analysis |
| | Vocabulary |
| | Works and Authors |

| English Content Topic | Subtopics |
|---|---|
| Writing | Narrative/Story Writing |
| | Informative/Expository Writing |
| | Argumentative/Persuasive Writing |
| | Descriptive Writing |
| Grammar | Nouns |
| | Pronouns |
| | Verbs (tenses, forms, and voice) |
| | Adverbs |
| | Modals |
| | Adjectives |
| | Prepositions |
| | Conjunctions |
| | Reported Speech (Direct/Indirect Speech) |
| | Punctuation and capitalization |
| | Phrases and clauses |
| | Sentence types |
| | Sentence structure and formation |
| | Determiners, Articles, and Quantifiers |
| | Word Choice and Homonyms |

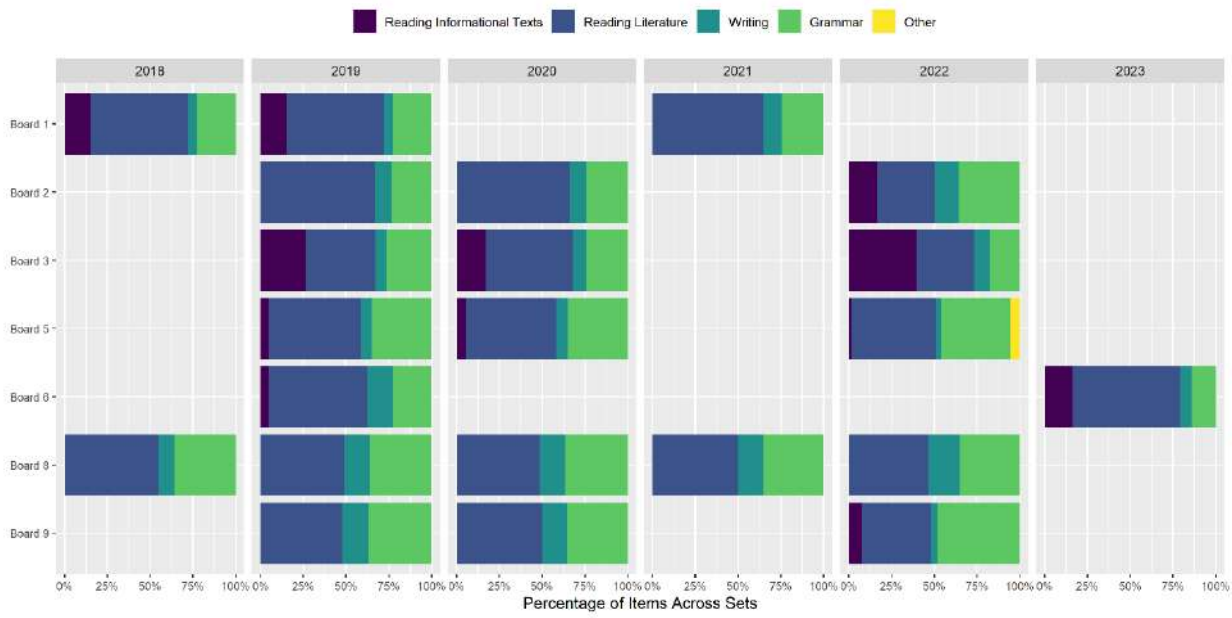



*Figure 7: Content Measured by English Items*

*Note: Interpret summaries of pilot data with caution.*

Each item was also classified according to its linkage to the boards' assessment framework, if available. For question papers where raters had access to an assessment blueprint, they were asked to rate yes, no, or unclear. If there was no assessment blueprint available, we asked them to choose NA. 99% of the English items were judged to be linked to the assessment framework.

## CLASSIFICATION OF READING PASSAGES

For items that had reading passages associated with them, we asked raters a series of questions about the passage. Raters recorded whether the reading passages were provided in the question paper. Raters were asked to classify the passages as informational or literary. Informational passages are non-fictional writings. An example of an informational passage is shown in Figure 8. Literary passages are fictional writings or literary non-fiction. An example of a literary passage is shown in Figure 9.

**Sifting through the sands of time**

1 *When you're on the beach, you're stepping on ancient mountains, skeletons of marine animals, even tiny diamonds. Sand provides a mineral treasure-trove, a record of geology's earth-changing processes.*

2 Sand : as children we play on it and as adults we relax on it. It is something we complain about when it gets in our food, and praise when it's moulded into castles. But we don't often look at it. If we did, we would discover an account of a geological past and a history of marine life that goes back thousands and, in some cases, millions of years.

3 Sand covers not just sea-shores, but also ocean beds, deserts and mountains. It is one of the most common substances on Earth. And it is a major element in man-made items too — concrete is largely sand, while glass is made of little else.

4 What exactly is sand ? Well, it is larger than fine dust and smaller than shingle. Depending on its age and origin, a particular sand can consist of tiny pebbles or porous granules. Its grain may have the shape of stars or spirals, their edges jagged or smooth. They have come from the erosion of rocks, or from the skeletons of marine organisms which accumulate on the bottom of the oceans, or even from volcanic eruptions.

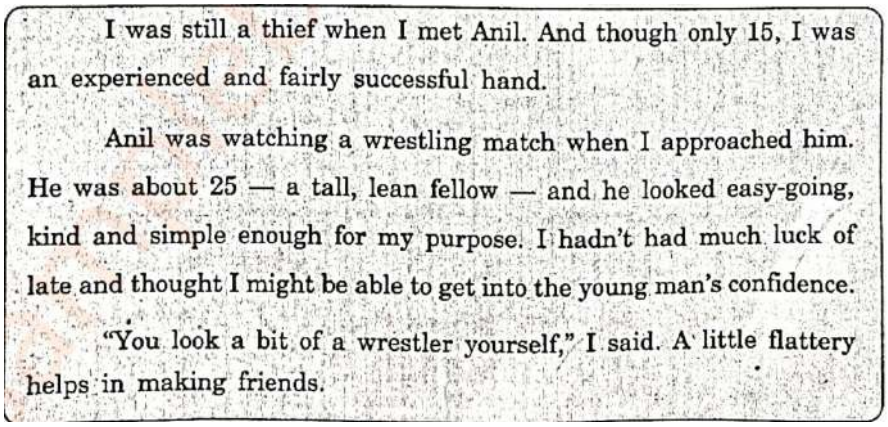
5 Colour is another clue to sand's origins. If it is a dazzling white, its grains may be derived from nearby coral outcrops, from crystalline quartz rocks or from gypsum. On Pacific islands jet black sands form from volcanic minerals.

6 Usually, the older the granules, the finer they are and the smoother the edges. The fine, white beaches, for instance, are recycled from sandstone several hundred million years old. Perhaps they will be stone once more, in another few hundred million.

7 Sand is an irreplaceable industrial ingredient whose uses are legion : but it has one vital function you might never even notice. Sand cushions our land from the sea's impact, and geologists say it often does a better job of protecting our shores than the most advanced coastal technology.

*Figure 8: An Example of an Informational Reading Passage*

Source: CBSE (2022). English Language and Literature. Question 1, i-vi.

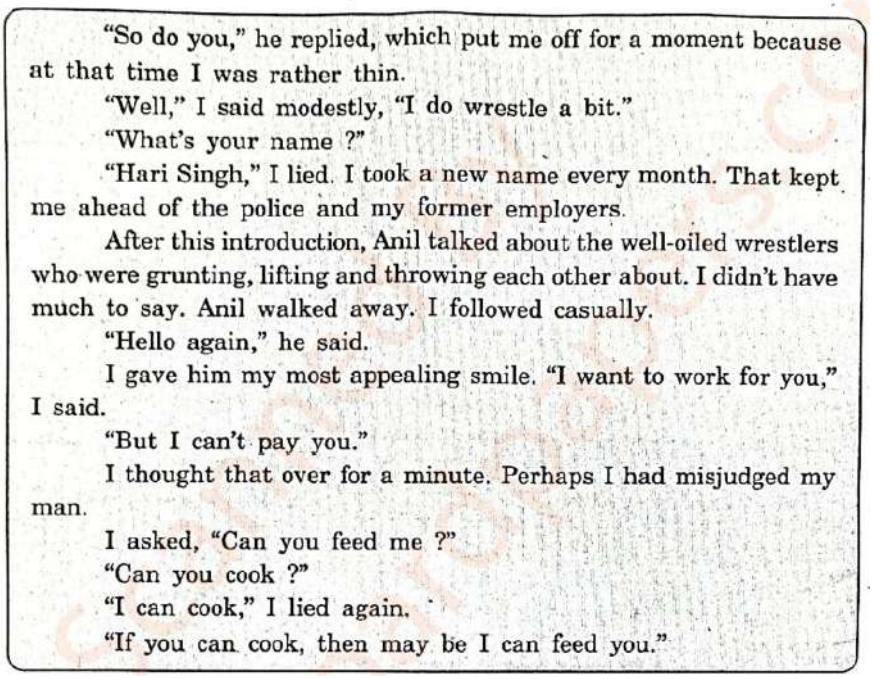


I was still a thief when I met Anil. And though only 15, I was an experienced and fairly successful hand.

Anil was watching a wrestling match when I approached him. He was about 25 — a tall, lean fellow — and he looked easy-going, kind and simple enough for my purpose. I hadn't had much luck of late and thought I might be able to get into the young man's confidence.

"You look a bit of a wrestler yourself," I said. A little flattery helps in making friends.

*Figure 9: An Example of a Literary Reading Passage*



"So do you," he replied, which put me off for a moment because at that time I was rather thin.

"Well," I said modestly, "I do wrestle a bit."

"What's your name ?"

"Hari Singh," I lied. I took a new name every month. That kept me ahead of the police and my former employers.

After this introduction, Anil talked about the well-oiled wrestlers who were grunting, lifting and throwing each other about. I didn't have much to say. Anil walked away. I followed casually.

"Hello again," he said.

I gave him my most appealing smile. "I want to work for you," I said.

"But I can't pay you."

I thought that over for a minute. Perhaps I had misjudged my man.

I asked, "Can you feed me ?"

"Can you cook ?"

"I can cook," I lied again.

"If you can cook, then may be I can feed you."

*Source: Maharashtra (2022). English. Question 2(a) i & ii.*

There were 1,759 English items (34%) that had reading passages associated with them. Three of the 10 boards did not have reading passages in the question paper rated in the pilot. Figures 10-13 describe this subset of items and show characteristics of the reading passages by board and year. Passages were always provided in the question papers of 5 out of the 7 boards.

Across all question papers in the pilot, and among items that were associated with reading passages, the passages were provided in the question paper for 99% of the items. Fifty-two per cent of the items with passages had literary passages and 48% were informational. The breakdown of the interdisciplinary focus on the passages was 53% - English, 27% - Science and

20% - Social Science. Raters judged 58% of the passages to be at grade level and 42% to be below grade level.

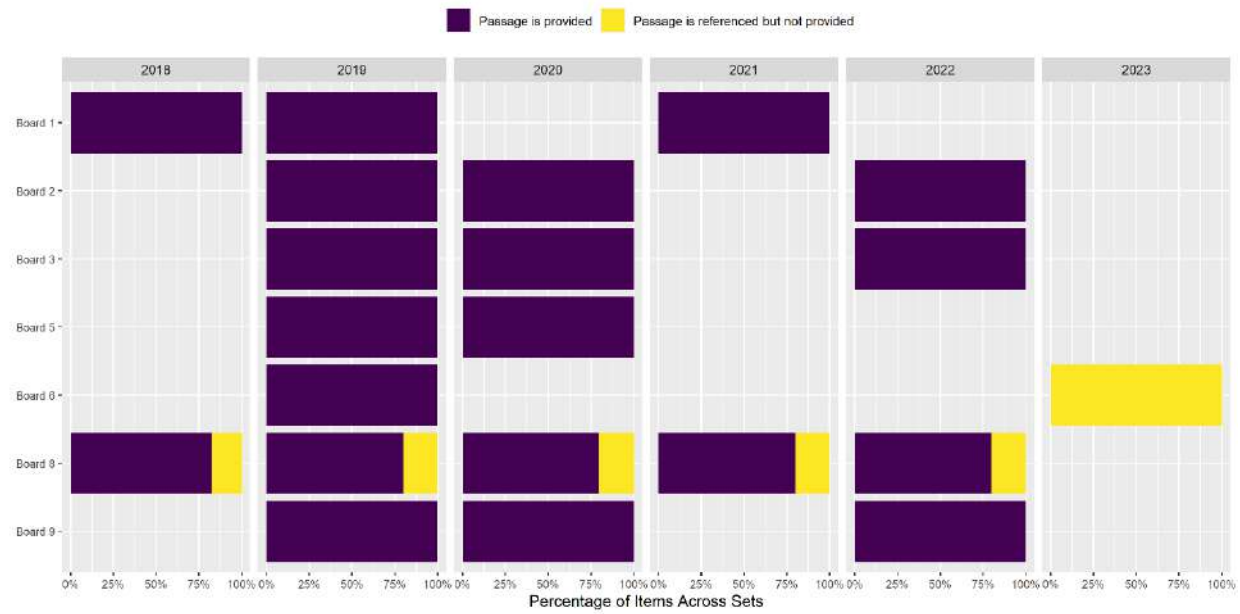



*Figure 10: Passages provided in Question Paper or Referenced Only*

*Note: Interpret summaries of pilot data with caution.*

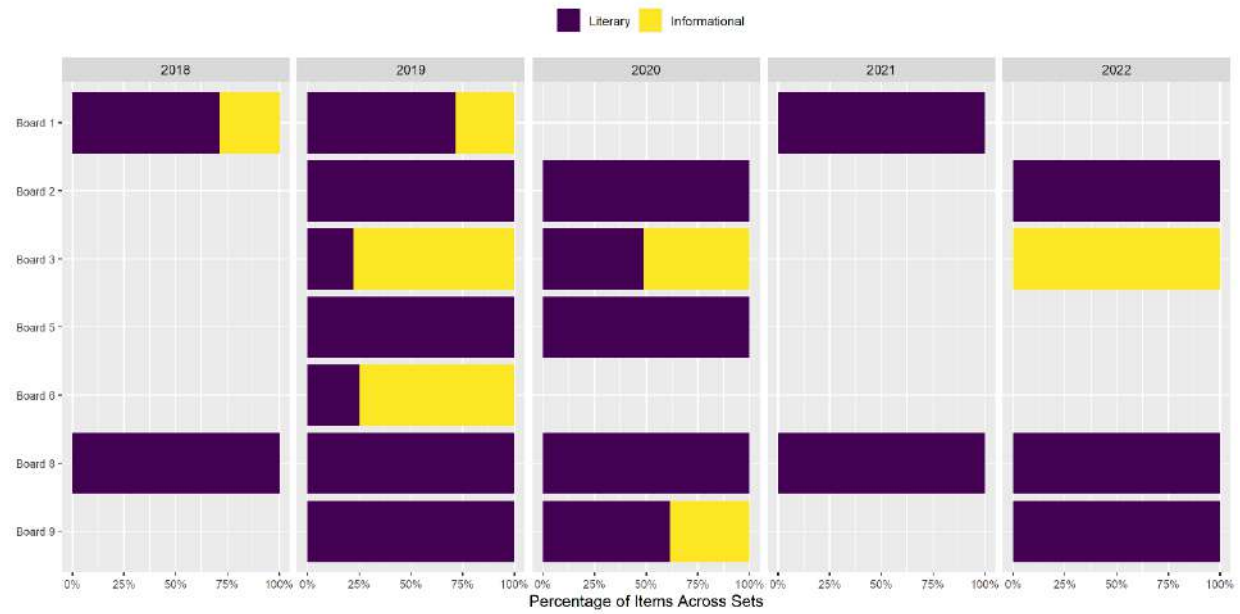



*Figure 11: Passage Type – Literary or Informational*

*Note: Interpret summaries of pilot data with caution.*

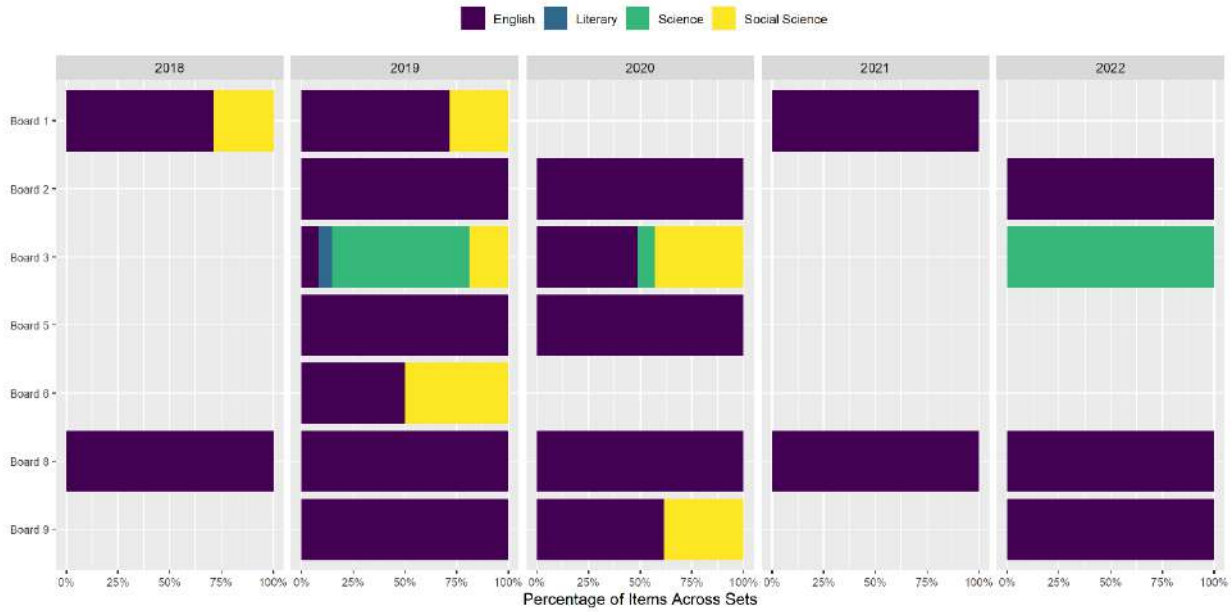



*Figure 12: Passage Interdisciplinary Focus*

*Note: Interpret summaries of pilot data with caution.*

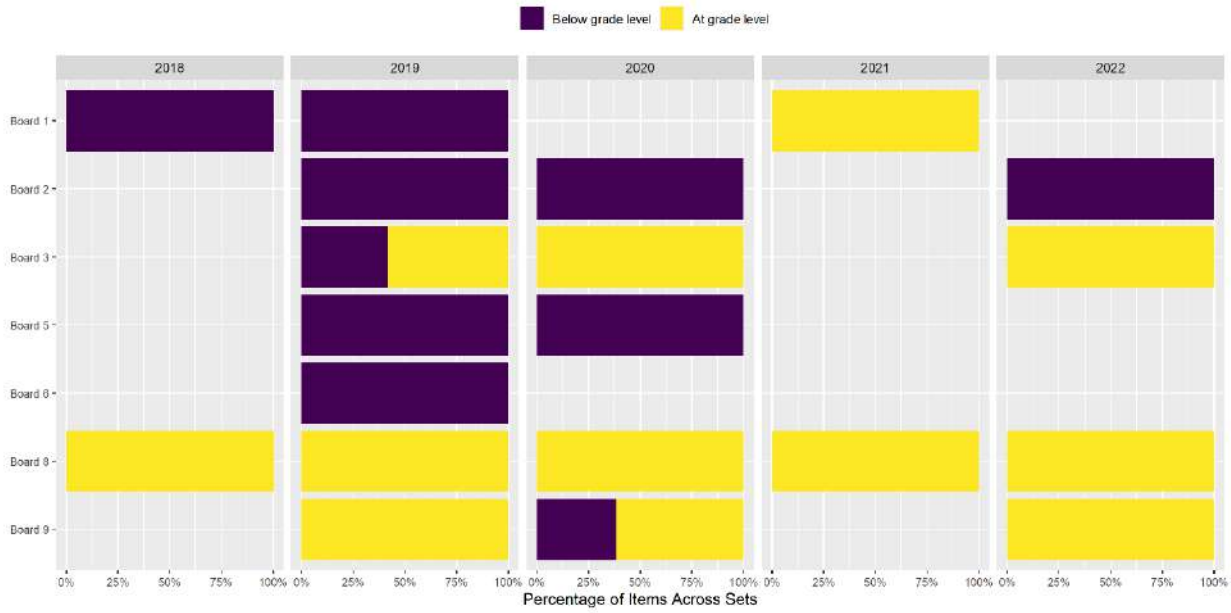



*Figure 13: Passage Reading Level Judgments*

*Note: Interpret summaries of pilot data with caution.*

## MATHEMATICS RESULTS

Table 5 shows the pilot boards, years, and the number of sets of question papers with ratings for Mathematics.

**Table 5: Pilot Boards, Years, and Number of Sets of Question Papers, Mathematics**

| Board | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|
| CBSE | | 13 | 2 | | 24 | |
| HARYANA | 4 | 4 | | 4 | | |
| ICSE | 1 | 1 | 1 | | | |
| J&K | | 3 | 3 | | 3 | |
| KARNATAKA | | 4 | 4 | | 2 | |
| KERALA | | 1 | 1 | | 1 | |
| MAHARASHTRA | 2 | 2 | | | 2 | |
| MIZORAM | | | 1 | 1 | 1 | |
| NAGALAND | | | 1 | 1 | 1 | |
| UTTAR PRADESH | | 1 | | | | 1 |

We collected data on 3,168 Mathematics items. One subject matter expert rated 82% of the items, another rated 15% and a third rated 3% of the items. Across boards, years, and sets, the number of items on the question papers ranged from 20 to 58. In this tally, each part of a multipart question is counted separately, and learner choice is not accounted for. The pilot data revealed variability in the ways that learners are given choices among items; we are using this information to revise the item inventory template to collect detailed information about how learners are given choices among items during the full board data collection.

The duration of the exams ranged from 120 to 195 minutes. The total marks per question paper ranged from 40 to 100. Duration and total marks were consistent across sets within years for 9 out of the 10 boards. One board differentiated duration and total marks between regular and private schools.

## ITEM TYPES

Raters were asked to judge the length of answers using the definition that we developed after rater try-outs across the range of subjects: a very short answer consists of fewer than 20 words, a short answer ranges between 20 to 50 words, and a long answer ranges between 100 to 120 words. Figures 14-18 describe the item types, competencies measured by the items, percentages of items measuring Higher-Order and Lower-Order Thinking Skills and estimated item difficulty.

In this preliminary report, we have combined items across all sets in a given year. In general, there appears to be variability across boards in item types.

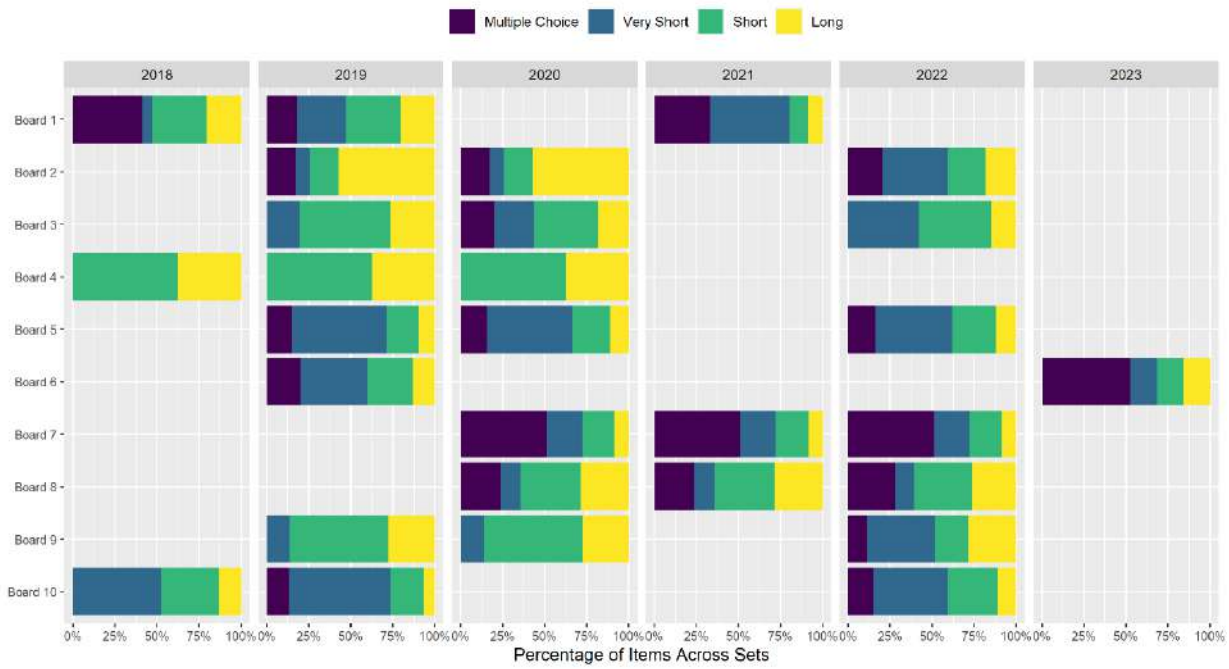



*Figure 14: Mathematics Item Types*

*Note: Interpret summaries of pilot data with caution.*

## ITEM COMPETENCIES AND LOWER- VS. HIGHER-ORDER THINKING SKILLS

Raters were asked to judge the competencies being measured by items from a choice of six competencies (Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating). The first three competencies map to Lower-Order Thinking Skills (LOTS); the latter three map to Higher-Order Thinking Skills (HOTS). As shown in Figure 2, raters judged a mix of competencies measured on items. For many boards, the percentage of items rated to have measured remembering, understanding and applying was approximately evenly split with the percentage of items rated to be measuring analysing, evaluating, and creating. This is also illustrated in Figure 3 where there was often a similar percentage of items measuring Lower-Order Thinking Skills (LOTS) and Higher-Order Thinking Skills (HOTS).

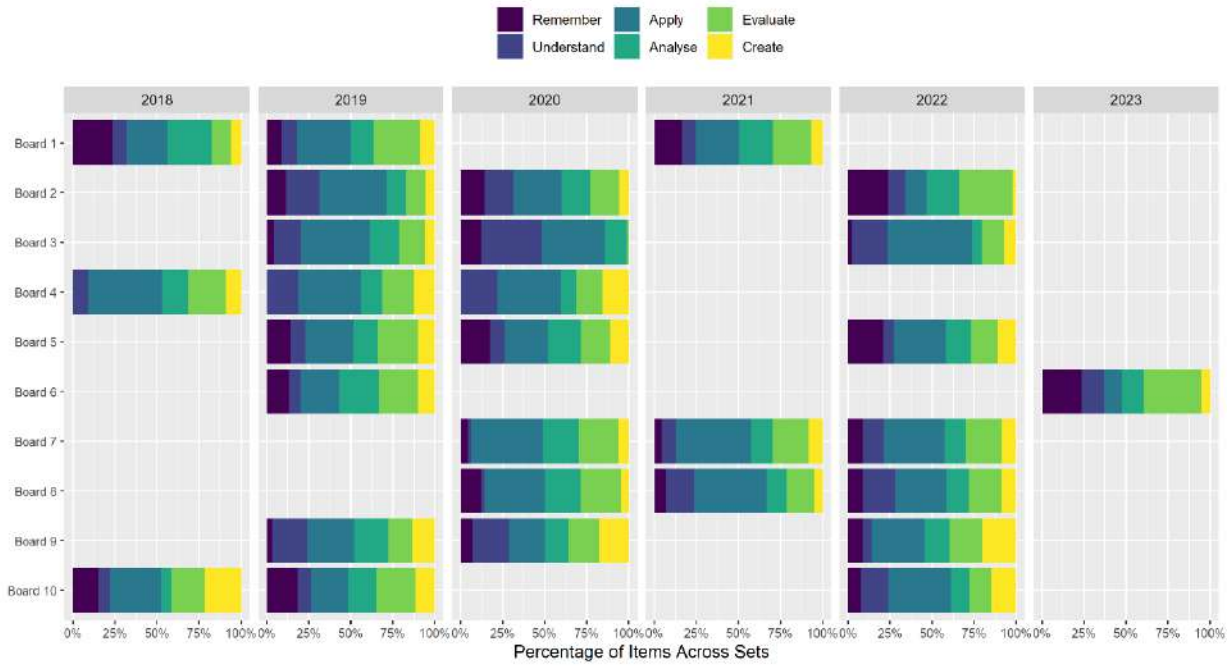



*Figure 15: Mathematics Item Competencies*

*Note: Interpret summaries of pilot data with caution.*

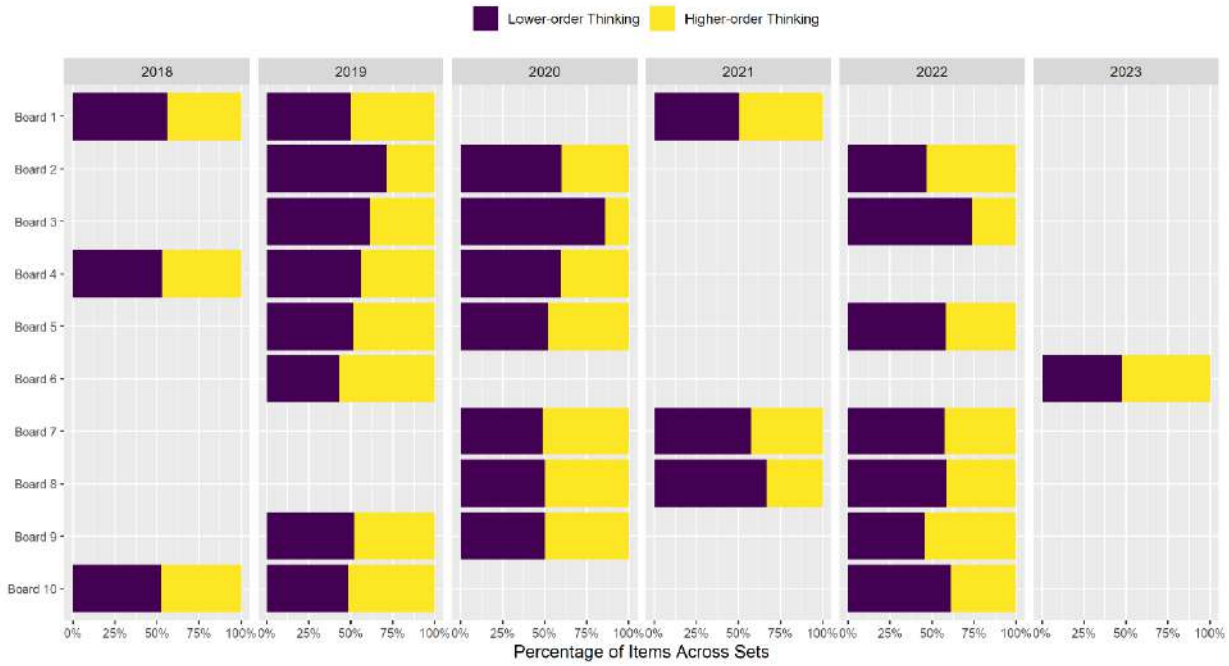



*Figure 16: Mathematics Item HOTS/LOTS*

*Note: Interpret summaries of pilot data with caution.*

## EXPERT-JUDGED DIFFICULTY

We asked raters to use their experience as teachers and in the field of education to provide their judgment on whether each item would be easy (E), medium (M) or difficult/hard (H) for Grade 10 learners. Easy items are those that a large majority of learners exposed to relevant learning opportunities would be expected to answer correctly. Hard items, on the other hand, would only be expected to be solved by a minority of learners exposed to relevant learning opportunities. As shown in Figure 4, raters judged most of the items overall to be either easy or medium, with variability across boards in the percentage of easy and medium.

Please note, that these expert-based ratings are inherently subjective and should be interpreted with caution. Also, these ratings may or may not align with empirical difficulty ratings. While they provide a first insight into the potential variation of difficulty across question papers from different boards, results from this pilot should only be interpreted with caution. For making inferences about item difficulty from the full QPT across all recognised Education Boards in India, ratings by two independent, trained raters may contribute to greater accuracy of results, although predicting empirical difficulty has been shown as a very difficult task in practice and research literature. Having multiple raters may improve difficulty ratings, but these ratings cannot replace empirical difficulty estimates.

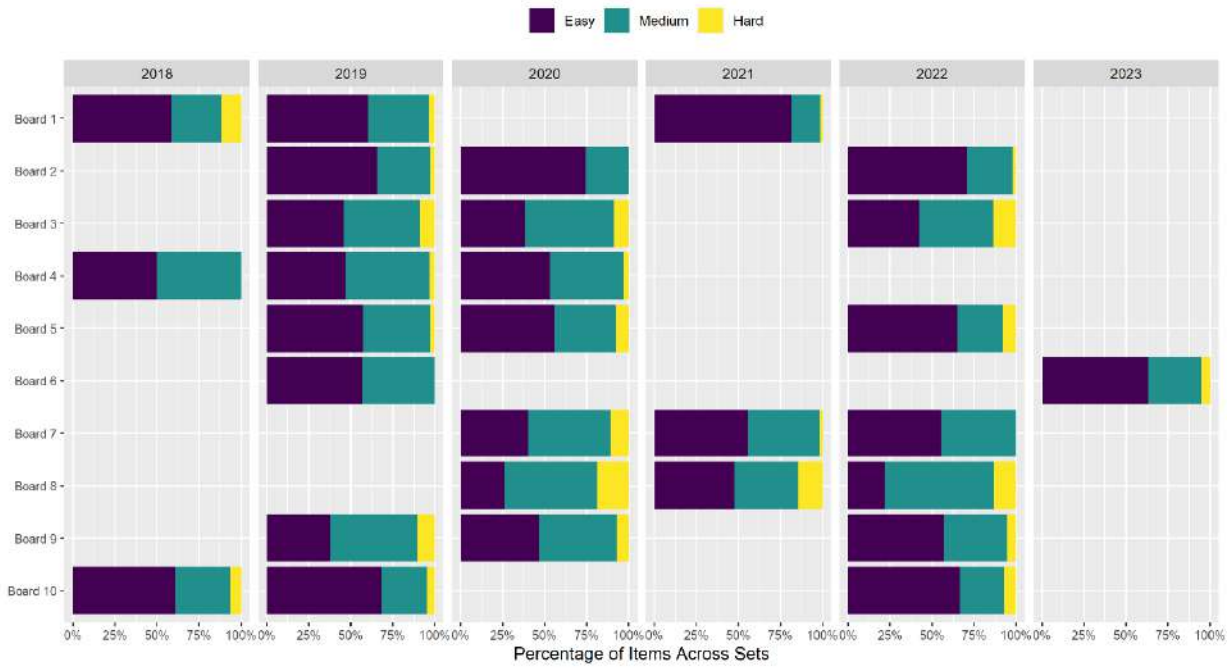



*Figure 17: Mathematics Item Difficulty*

*Note: Interpret summaries of pilot data with caution.*

## APPROPRIATENESS OF MARKING

We asked raters to provide their subjective judgment about whether the marks awarded seemed appropriate for the question item. Raters judged most of the items to have appropriate marks, although there were some exceptions for two Education Boards. See Figure 5 for details regarding the appropriateness of item marks.

Please note, that again these expert-based ratings are inherently subjective and should be interpreted with caution.

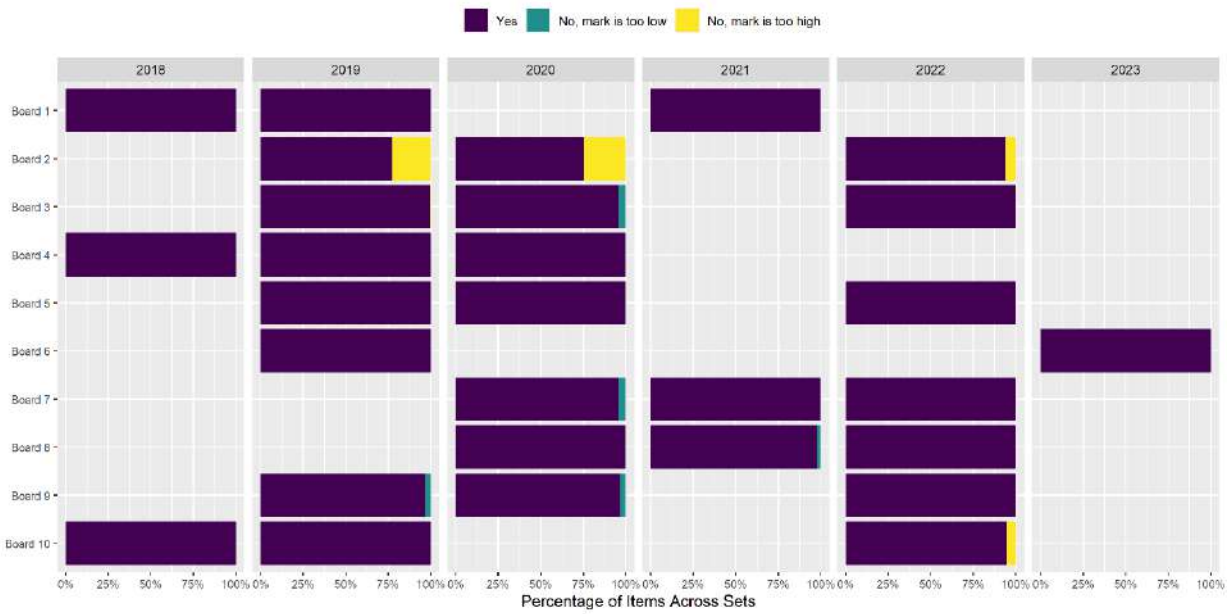



*Figure 18: Appropriateness of Mathematics Item Marks*

*Note: Interpret summaries of pilot data with caution.*

## ITEM CONTENT & FRAMEWORK COVERAGE

Raters were asked to assess the high-level content and sub-topic being measured by each item. We left this open in the pilot to encompass the breadth of content measured by the range of assessments. To summarize the pilot data and to refine the data collection template for full board data collection, we combined the data with theories of Mathematics education to define an item classification schema for rating the content and sub-topic measured by each item. The schema is shown in Table 6. See Figure 19 for a summary of content coverage.

**Table 6: Mathematics Content and Sub-topic Item Classification Schema**

| Content Topic | Subtopic |
|---|---|
| Number Systems and Operations | Real Number System |
| | Estimation |
| | Number Operations |
| | Properties of Operations |
| | Ratios and Proportions |
| Mensuration | Angles |
| | Area and Perimeter of plane figures |
| | Length and height of objects and figures |
| | Volumes and Surface Areas of Three-dimensional Figures |
| | Measurements in Triangles |
| Geometry | Geometric Construction |
| | Three-Dimensional Figures |
| | Transformation and Preservation Properties |
| | Pythagoras Theorem |
| | Geometric Figures |
| | Coordinate Geometry |
| Statistics and Probability | Data Representation |
| | Characteristics of Data Sets |
| | Simple Probability |
| | Sets and Events |
| Algebra | Patterns |
| | Functions |
| | Equations and Inequalities |
| | Linear Algebra |
| Applied Mathematics | Commercial Mathematics |

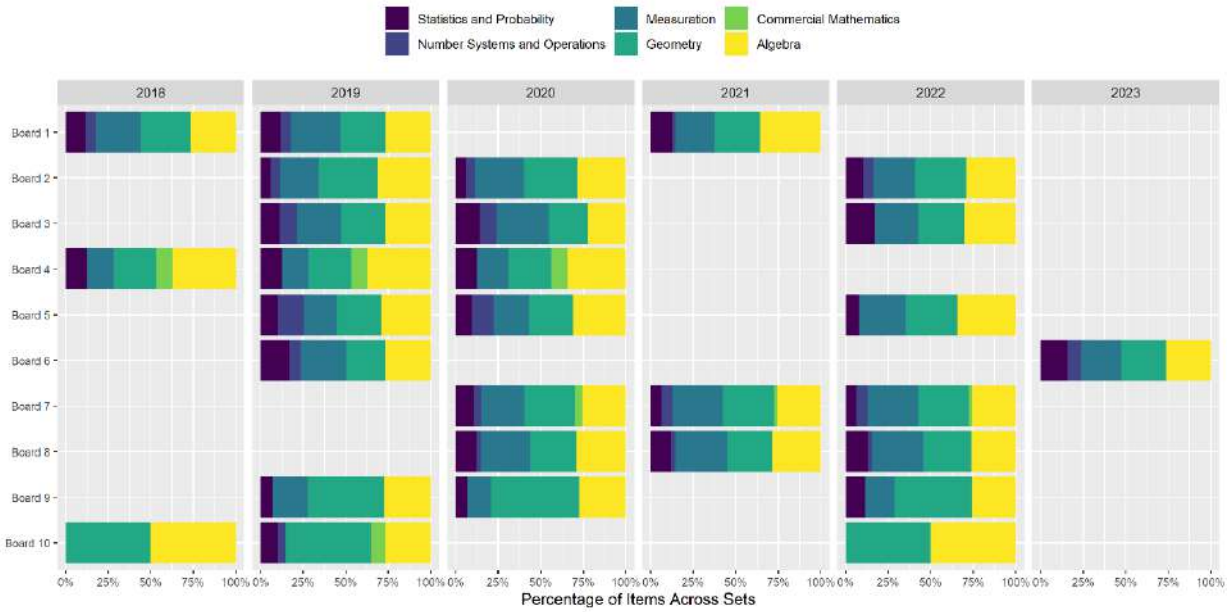



*Figure 19: Content Measured by Mathematics Items*

*Note: Interpret summaries of pilot data with caution.*

Each item was also classified according to its linkage to the boards' assessment framework, if available. For question papers where raters had access to an assessment blueprint, they were asked to rate yes, no, or unclear. If there was no assessment blueprint available, we asked them to choose NA. See Figure 20.

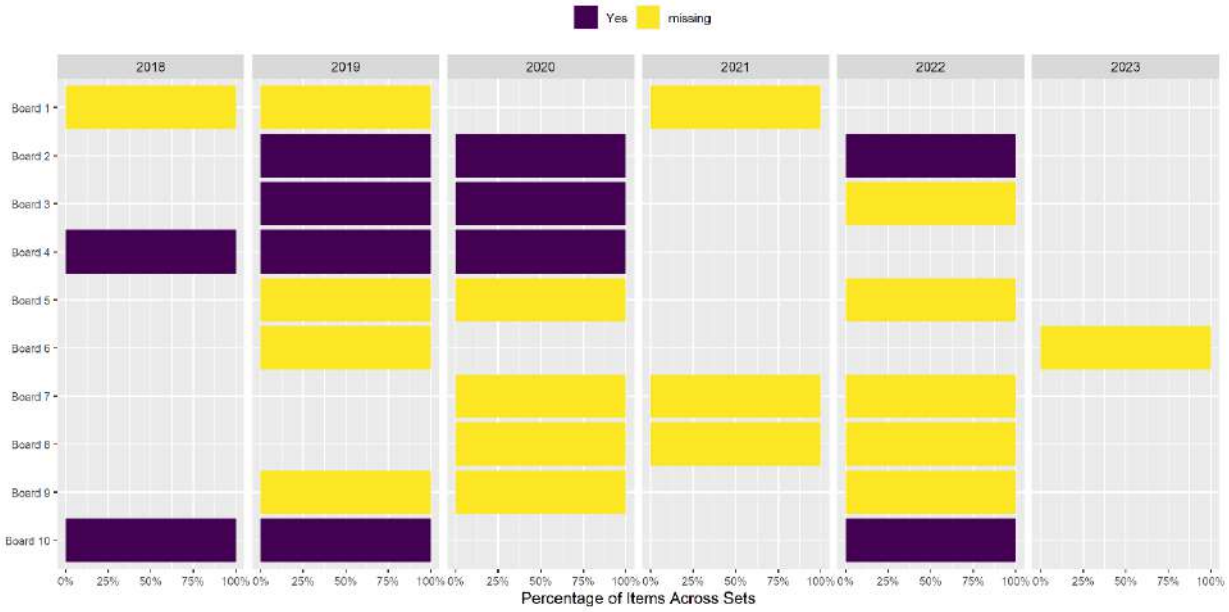



*Figure 20: Percent of Items Linked to the Provided Assessment Framework*

*Note: Yes = Linked to the assessment framework; no = not linked to the assessment framework; unclear = unclear whether item is linked to the assessment framework.*
*Note: Interpret summaries of pilot data with caution.*

## CLASSIFICATION OF READING PASSAGES

For items that had reading passages associated with them, we asked raters a series of questions about the passage. Raters recorded whether the reading passages were provided in the question paper. The raters were asked to classify the passages as informational or literary. Informational passages are non-fictional writings. An example is shown in Figure 21. Literary passages are fictional writings or literary non-fiction. An example is shown in Figure 22.

Do you know old clothes which are thrown as waste not only fill the landfill site but also produce very harmful greenhouse gas. So, it is very important that we reuse old clothes in whatever way we can.
The picture given below on the right, shows a footmat (rug) made out of old t-shirts yarn. Observing the picture, you will notice that a number of stitches in circular rows are making a pattern : 6, 12, 18, 24, ...

*Figure 21: An Example of an Informational Reading Passage*

*Source: CBSE (2022). Basic Mathematics Question 13, Set 1, 430/1/1.*

98 Mathematics items had reading passages associated with them (3%). These items all came from the question papers of just one board. All of the reading passages that were provided were informational in nature and on topics related to Mathematics, and all were judged to be at grade level.

## SCIENCE RESULTS

Table 7 shows the pilot boards, years, and number of sets of question papers with ratings for Science.

**Table 7: Pilot Boards, Years, and Number of Sets of Question Papers**

| Board | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|
| CBSE | | 15 | 16 | | 9 | |
| HARYANA | 4 | 4 | | 4 | | |
| ICSE | 2 | 2 | 2 | | | |
| J&K | | 3 | | | 6 | |
| KARNATAKA | | 4 | 4 | | 2 | |
| KERALA | 2 | 2 | | | | |
| MAHARASHTRA | | | 1 | | 1 | |
| MIZORAM | 1 | | | 1 | 1 | |
| NAGALAND | | | 1 | 1 | | |
| UTTAR PRADESH | | 1 | | | | 1 |

We collected data on 4,733 Science items. One subject matter expert rated approximately 70% of the items and another rated 30% of the items. Across boards, years, and sets, the number of items on the question papers ranged from 24 to 93. In this tally, each part of a multipart question is counted separately, and learner choice is not accounted for. The pilot data revealed variability in the ways that learners are given choices among items; we are using this information to revise the item inventory template to collect detailed information about how learners are given choices among items during the full board data collection.

The duration of the exams ranged from 90 to 195 minutes. The total marks per question paper ranged from 30 to 84. Duration and total marks were consistent across sets within years for all boards.

## ITEM TYPES

Raters were asked to judge the length of answers using the following definition that was developed after rater try-outs: a very short answer consists of fewer than 20 words, a short answer ranges between 20 to 50 words, and a long answer ranges between 100 to 120 words. Figures 23-27 describe the item types, competencies measured by the items, percentages of items measuring Higher-Order and Lower-Order Thinking Skills and estimated item difficulty. In this preliminary report, we have combined items across all sets in a given year. In general, there appears to be variability across boards in item types.

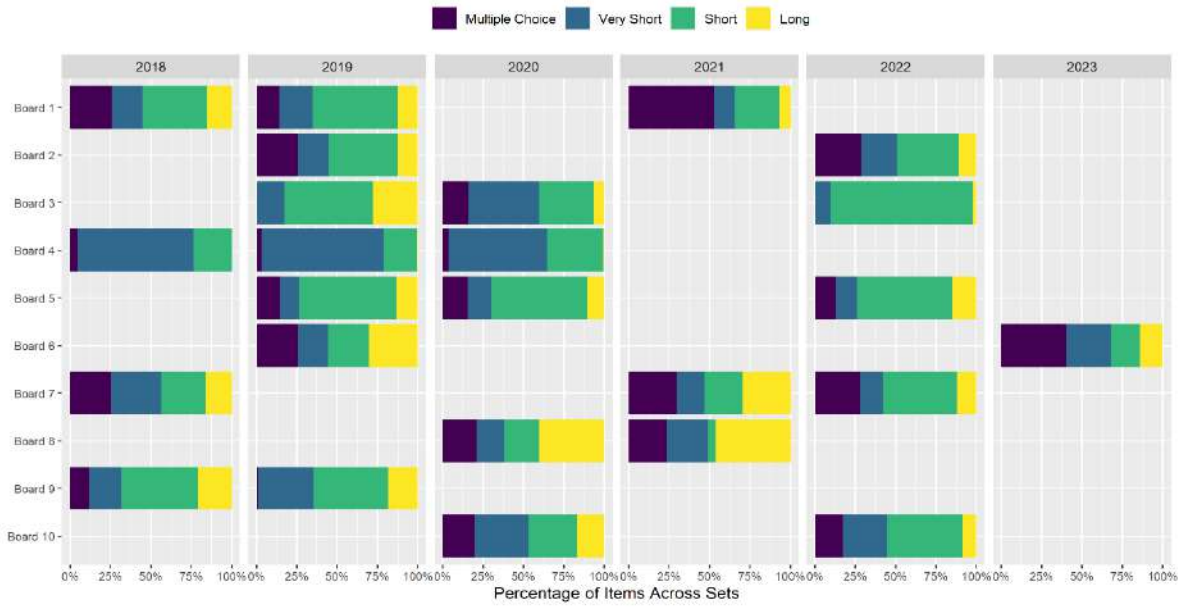



*Figure 22: Science Item Types*

*Note: Interpret summaries of pilot data with caution.*

## ITEM COMPETENCIES AND LOWER- VS. HIGHER-ORDER THINKING SKILLS

Raters were asked to judge the competencies being measured by items from a choice of six competencies (remembering, understanding, applying, analysing, evaluating, and creating). The first three competencies map to Lower-Order Thinking Skills (LOTS); the latter three map to Higher-Order Thinking Skills (HOTS). As shown in Figure 2, raters judged that almost all items measured remembering, understanding, or applying, which are all Lower-Order Thinking Skills. This is also illustrated in Figure 3 almost all of the items were judged to measure Lower-Order Thinking Skills (LOTS).

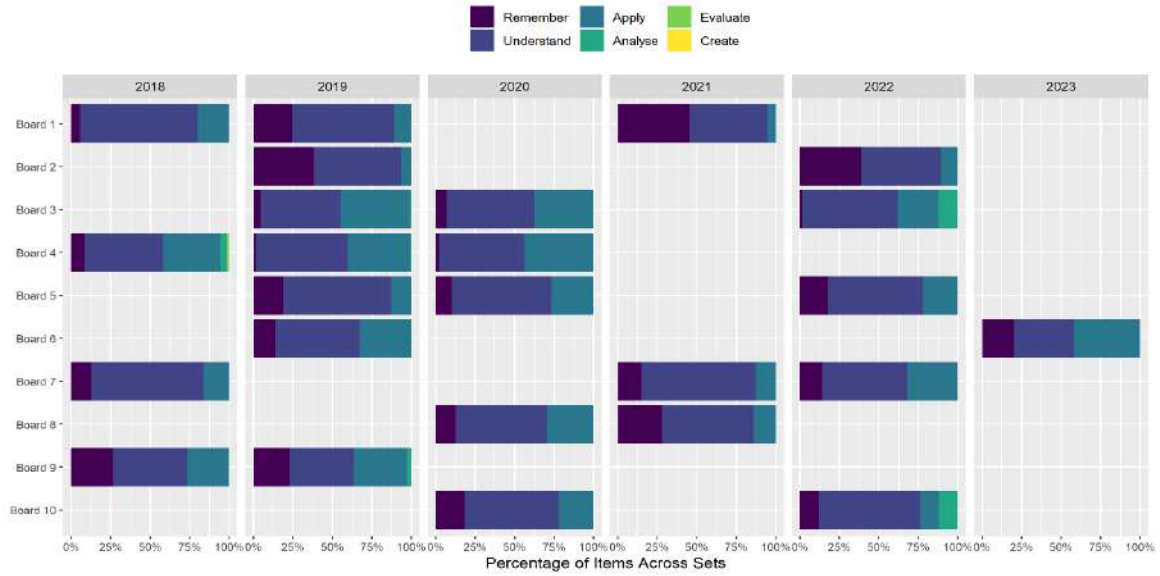



*Figure 23: Science Item Competencies*

*Note: Interpret summaries of pilot data with caution.*

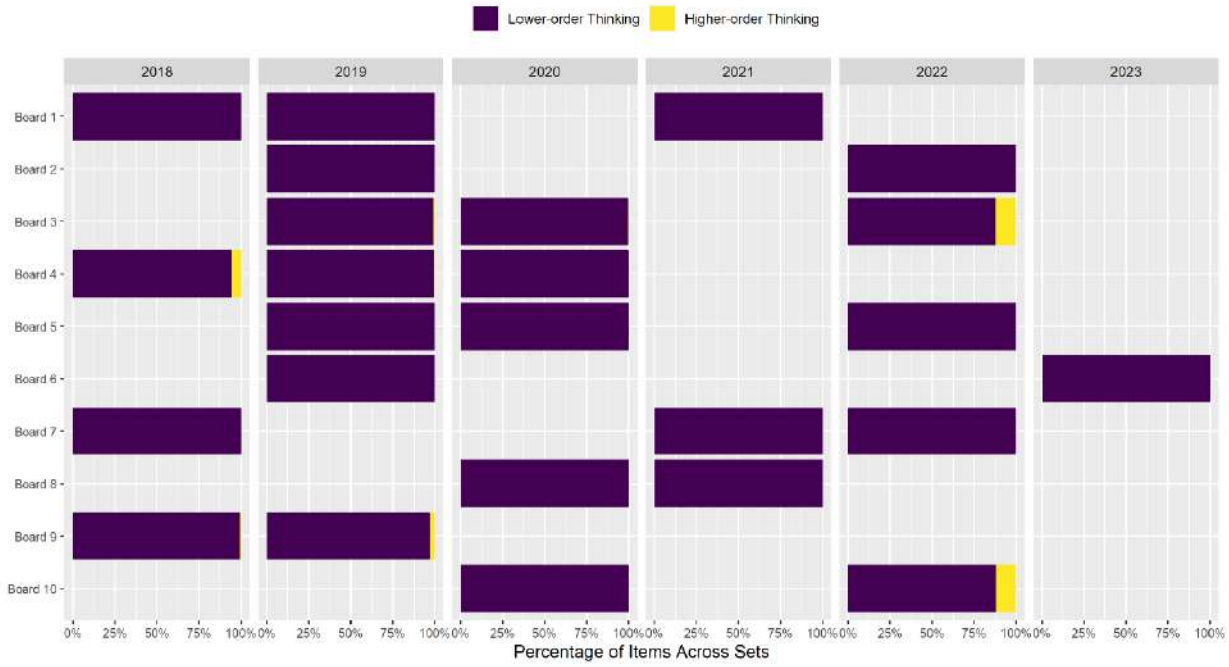



*Figure 24: Science Item HOTS/LOTS*

*Note: Interpret summaries of pilot data with caution.*

## EXPERT-JUDGED DIFFICULTY

We asked raters to use their experience as teachers and in the field of education to provide their judgment on whether each item would be easy (E), medium (M) or difficult/hard (H) for Grade 10 learners. Easy items are those that a large majority of learners exposed to relevant learning

opportunities would be expected to answer correctly. Hard items, on the other hand, would be expected to be solved only by a minority of learners exposed to relevant learning opportunities. As shown in Figure 4, raters judged most of the items overall to be either easy or medium, with variability across boards in the percentage of easy and medium.

Please note, that these expert-based ratings are inherently subjective and should be interpreted with caution. Also, these ratings may or may not align with empirical difficulty ratings. While they provide a first insight into the potential variation of difficulty across question papers from different boards, results from this pilot should only be interpreted with caution. For making inferences about item difficulty from the full QPT across 62 boards, ratings by two independent, trained raters may contribute to greater accuracy of results, although predicting empirical difficulty has been shown as a very difficult task in practice and research literature. Having multiple raters may improve difficulty ratings, but these ratings cannot replace empirical difficulty estimates.

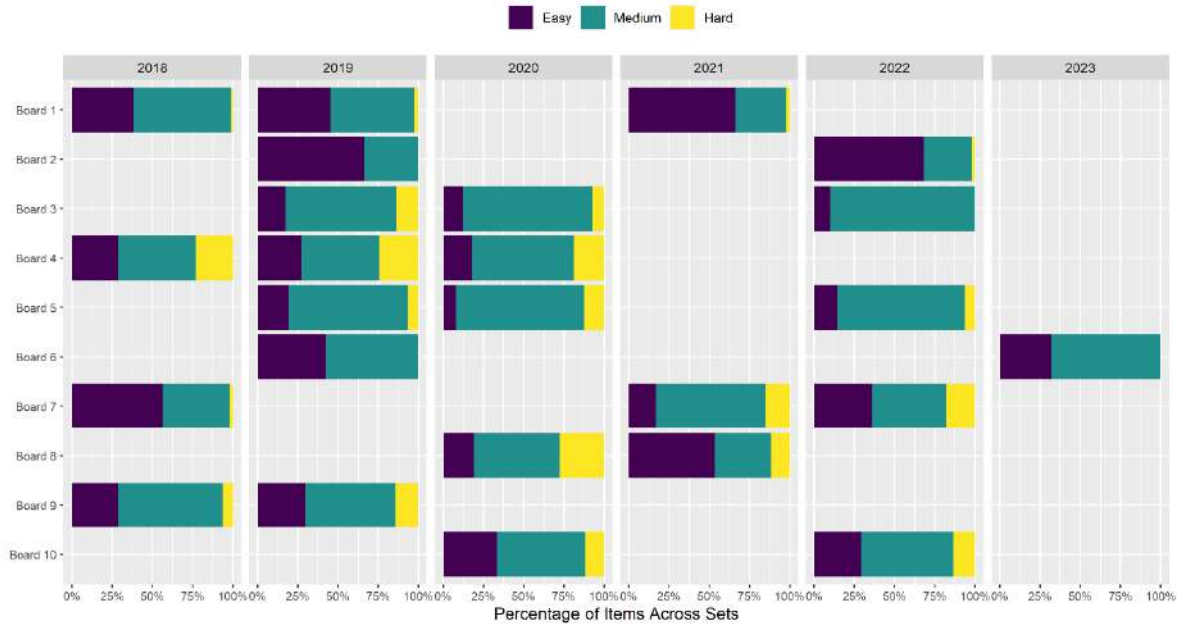



*Figure 25: Science Item Difficulty*

*Note: Interpret summaries of pilot data with caution.*

## APPROPRIATENESS OF MARKING

We asked raters to provide their subjective judgment about whether the marks awarded seemed appropriate for the question. Raters judged most of the items to have appropriate marks, although there were some exceptions. See Figure 5 for details regarding the appropriateness of item marks.

Please note, that these expert-based ratings are inherently subjective and should be interpreted with caution.

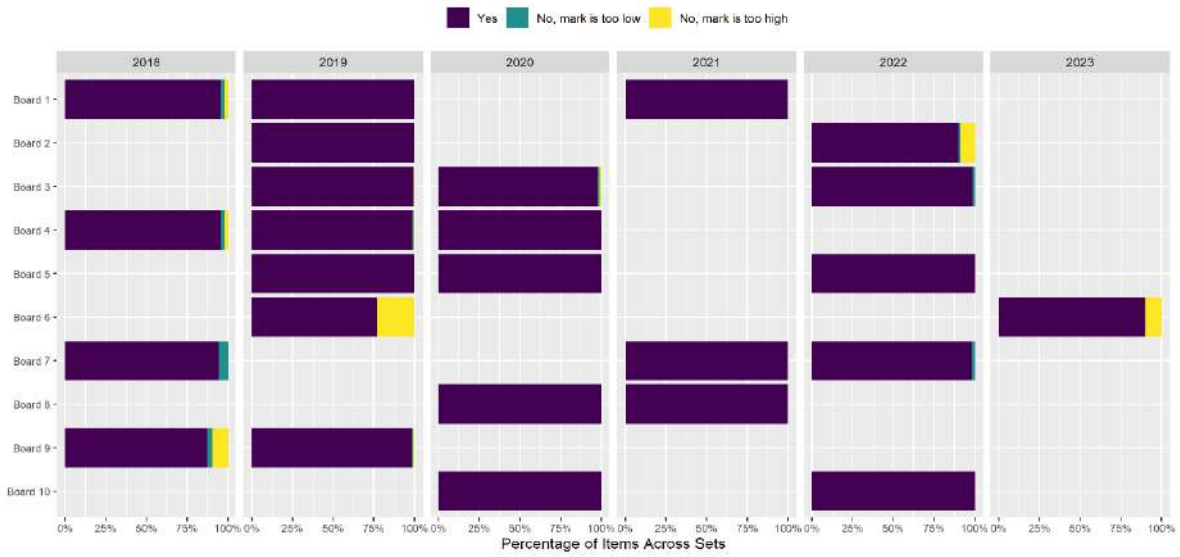



*Figure 26: Appropriateness of Science Item Marks*

*Note: Interpret summaries of pilot data with caution.*

## ITEM CONTENT & FRAMEWORK COVERAGE

Raters were asked to judge the high-level content and sub-topic being measured by each item. We left this open in the pilot to encompass the breadth of content measured by the range of assessments. To summarize the pilot data and to refine the data collection template for full board data collection, we combined the data with theories of science education to define an item classification schema for rating the content and sub-topic measured by each item. The schema is shown in Table 8. See Figure 28 for a summary of content coverage.

**Table 8: Science Content and Sub-topic Item Classification Schema**

| Content Topic | Subtopic |
|---|---|
| Biology | Adaptation |
| | Biodiversity and Humans |
| | Common Ancestry and Diversity |
| | Growth and Development |
| | Inheritance of Traits |
| | Interdependent Relationships |
| | Matter and Energy Flow in Organisms |
| | Natural Selection |
| | Social Interactions |
| | Structure and Function |
| Chemistry | Chemical Reactions |
| | Structure and Properties of Matter |

| | |
|---|---|
| Engineering | Technology Design |
| Chemistry/Physics | Defining Energy |
| | Energy Conservation and Transfer |
| | Wave Properties |
| Environmental Science | Earth Materials and Systems |
| | Human Impact on Earth |
| | Natural Resources |
| Physics | Defining Energy |
| | Energy Conservation and Transfer |
| | Forces and Motion |
| | Relationship Between Energy and Forces |
| | Structure and Properties of Matter |
| | Wave Properties |
| Astronomy | Earth and the Solar System |

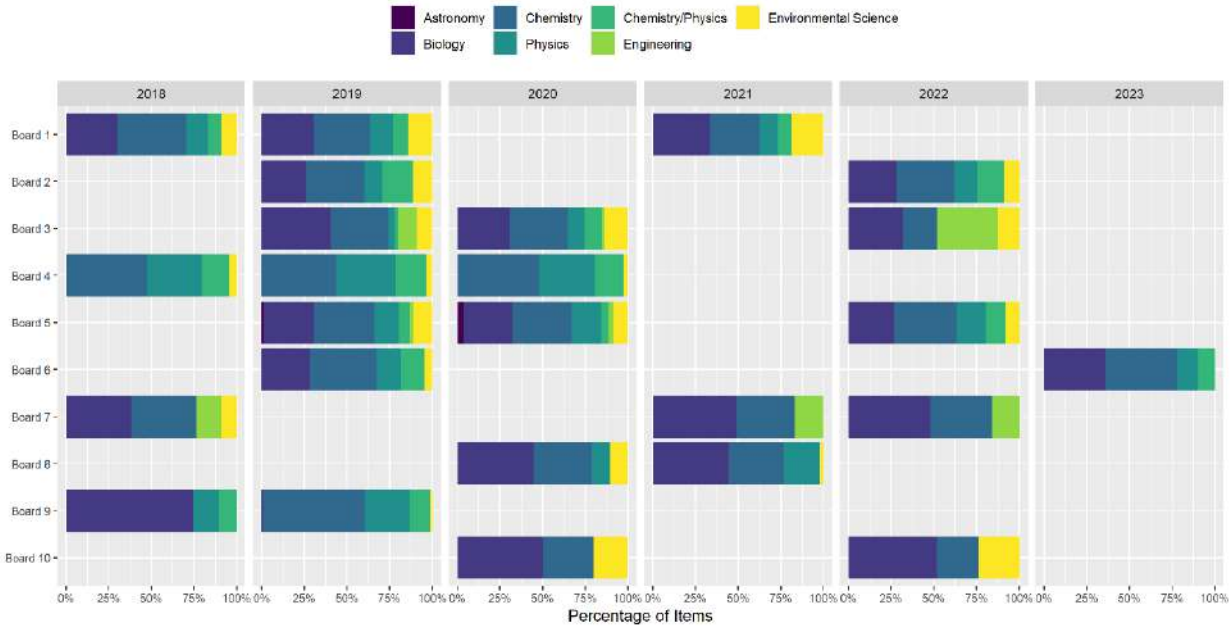



*Figure 27: Content Measured by Science Items*

*Note: Interpret summaries of pilot data with caution.*

Each item was also classified according to its linkage to the boards' assessment framework, if available. For question papers where raters had access to an assessment blueprint, they were asked to rate yes, no, or unclear. If there was no assessment blueprint available, we asked them to choose NA. See Figure 29.

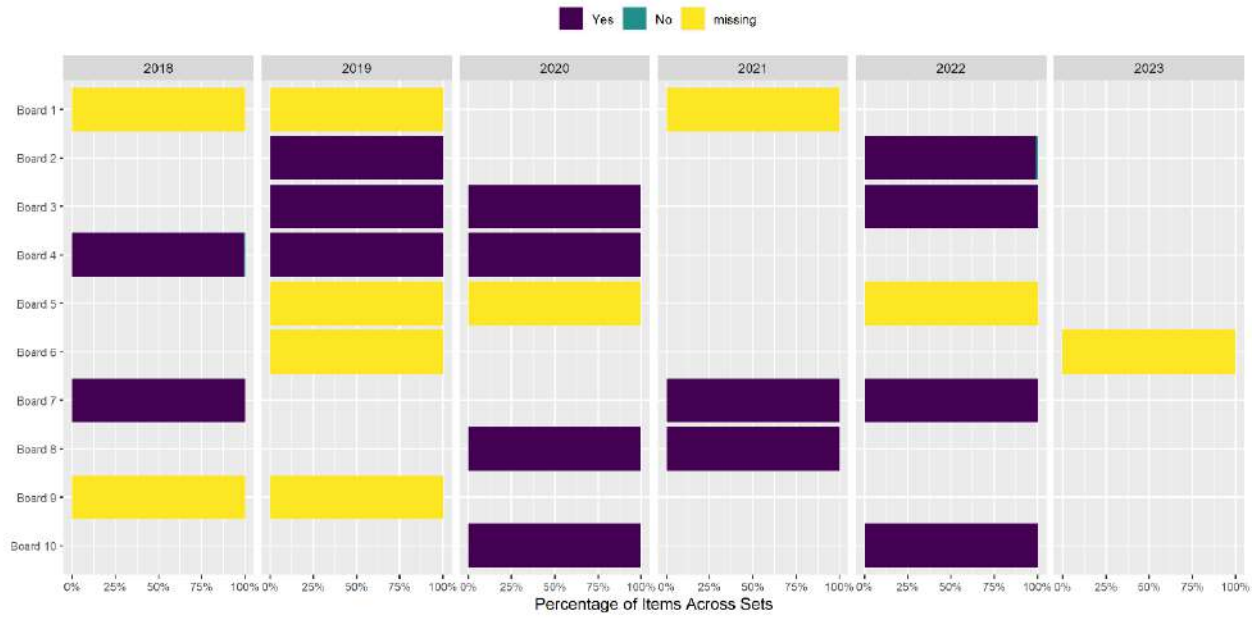



*Figure 28: Percent of Science Items Linked to the Provided Assessment Framework*

*Note: Yes = Linked to the assessment framework; no = not linked to the assessment framework; unclear = unclear whether item is linked to the assessment framework.*
*Note: Interpret summaries of pilot data with caution.*

## CLASSIFICATION OF READING PASSAGES

For items that had reading passages associated with them, we asked raters a series of questions about the passage. Raters recorded whether the reading passages were provided in the question paper. The raters were asked to classify the passages as informational or literary. Informational passages are non-fictional writings. An example is shown in Figure 30. Literary passages are fictional writings or literary non-fiction. An example is shown in Figure 31.

Geothermal energy is the energy produced by the heat of molten rocks formed in the deeper hot regions of the earth's crust. This energy is harnessed to generate electricity. When water is made to flow deep underground in the rocks it returns as steam (or hot water, which is later converted to steam) to drive a turbine on an electric power generator.

In India, exploration and study of geothermal fields started in 1970. The Geological Survey in India has identified 350 geothermal energy locations in the country. The most promising of these is in Puga valley of Ladakh. The estimated potential for geothermal energy in India is about 10000 MW. There are seven geothermal provinces in India namely the Himalayas, Sohna, West coast, Cambay, Son-Narmada-Tapi; Godavari and Mahanadi. Most power stations in India produce Alternating Current (A.C).

*Figure 29: An Example of an Informational Reading Passage*

*Source: CBSE (2020). Science, 31/1/1, Question 3.*

90 science items had reading passages associated with them (2%). These items all came from the question papers of two of the ten boards. All of the reading passages that were provided were informational and on topics related to science. Raters judged the passages to be at grade level.

## SOCIAL SCIENCE RESULTS

Table 9 shows the pilot boards, years, and number of sets of question papers with ratings for Social Science.

**Table 9: Pilot Boards, Years, and Number of Sets of Question Papers**

| Board | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|
| CBSE | | 15 | 15 | | 12 | |
| HARYANA | 3 | 3 | 3 | | | |
| ICSE | | 3 | 3 | | 9 | |
| J&K | | 4 | 4 | | 2 | |
| KARNATAKA | | 1 | 1 | | 1 | |
| KERALA | | 1 | 1 | | 1 | |
| MAHARASHTRA | 1 | 1 | 1 | 1 | 1 | |
| MIZORAM | 1 | 1 | 1 | 1 | 1 | |
| NAGALAND | | 1 | | | | 1 |
| UTTAR PRADESH | | 15 | 15 | | 12 | |

We collected data on 4,612 social science items. One subject matter expert rated approximately three-quarters of the items and another rated one-quarter. Across boards, years, and sets, the number of items on the question papers ranged from 19 to 109. In this tally, each part of a multipart question is counted separately, and learner choice is not accounted for. The pilot data revealed variability in the ways that learners are given choices among items and we are using this information to revise the item inventory template to collect detailed information about how learners are given choices among items during the full board data collection.

The duration of the exams ranged from 120 to 195 minutes. The total marks per question paper ranged from 40 to 100. Duration and total marks were consistent across sets within years for 9 of the 10 boards. One board varied the duration and total marks between regular and private schools.

## ITEM TYPES

Raters were asked to judge the length of answers using the definition that was developed after rater try-outs: a very short answer consists of fewer than 20 words, a short answer ranges between 20 to 50 words, and a long answer ranges between 100 to 120 words. Figures 32-36 describe the item types, competencies measured by the items, percentages of items measuring Higher-Order and Lower-Order Thinking Skills and estimated item difficulty. In this preliminary report, we have combined items across all sets in a given year. In general, there appears to be variability across boards in item types, with very short items most common across boards.

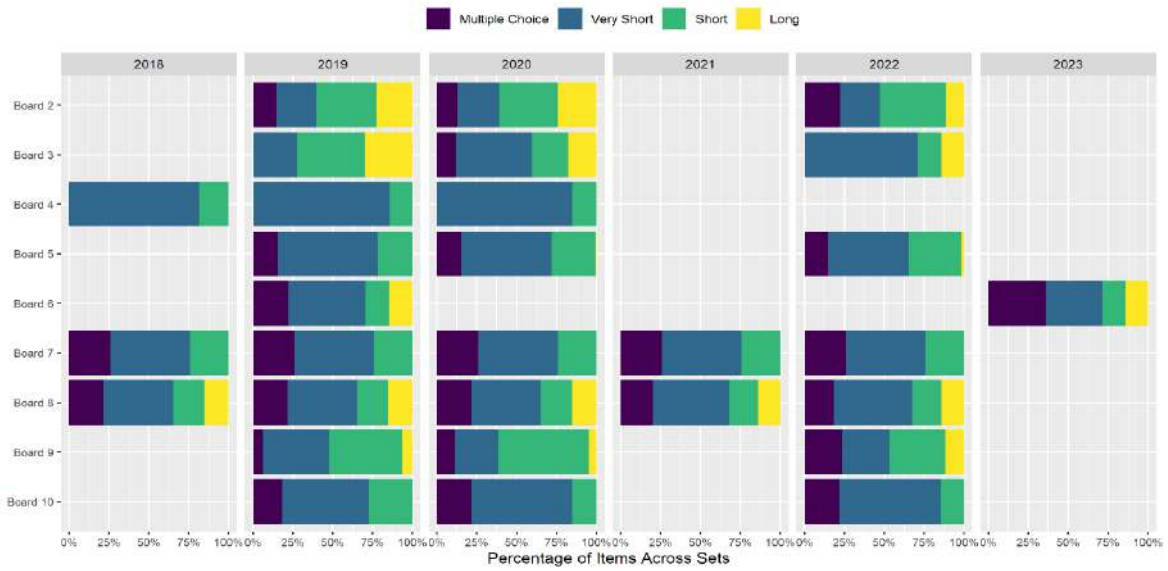



*Figure 30: Social Science Item Types*

*Note: Interpret summaries of pilot data with caution.*

## ITEM COMPETENCIES AND LOWER- VS. HIGHER-ORDER THINKING SKILLS

Raters were asked to judge the competencies being measured by items from a choice of six competencies (remembering, understanding, applying, analysing, evaluating, and creating). The first three competencies map to Lower-Order Thinking Skills (LOTS); the latter three map to Higher-Order Thinking Skills (HOTS). As shown in Figure 2, raters judged the majority of items as measuring remembering or understanding, which are both Lower-Order Thinking Skills. This is also illustrated in Figure 3 where there was almost always a higher percentage of items measuring Lower-Order Thinking Skills (LOTS) than Higher-Order Thinking Skills (HOTS).

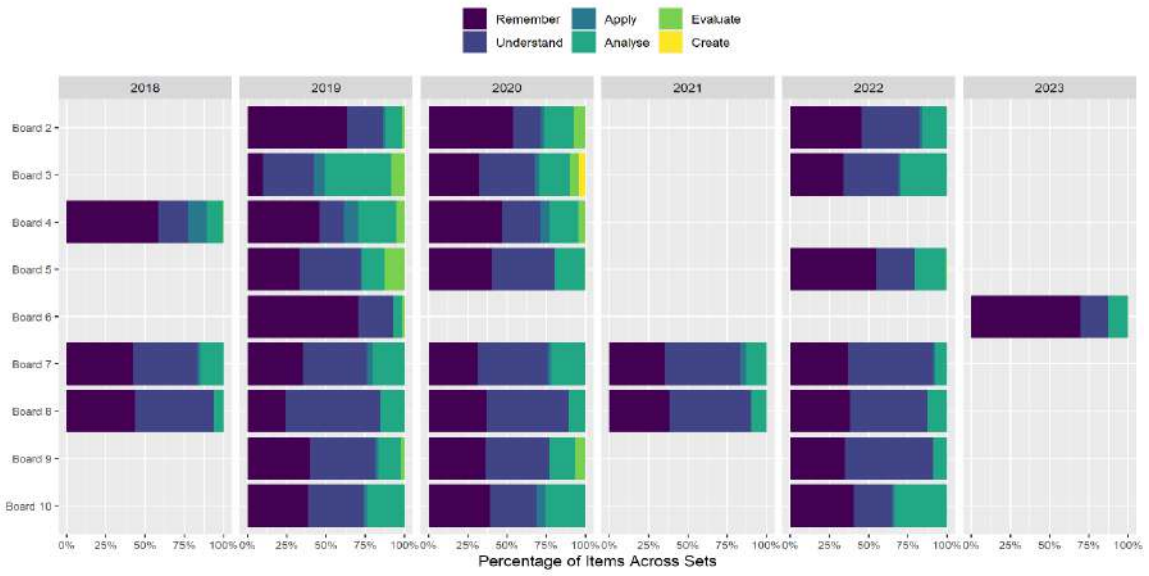


*Figure 31: Social Science Item Competencies*

*Note: Interpret summaries of pilot data with caution.*

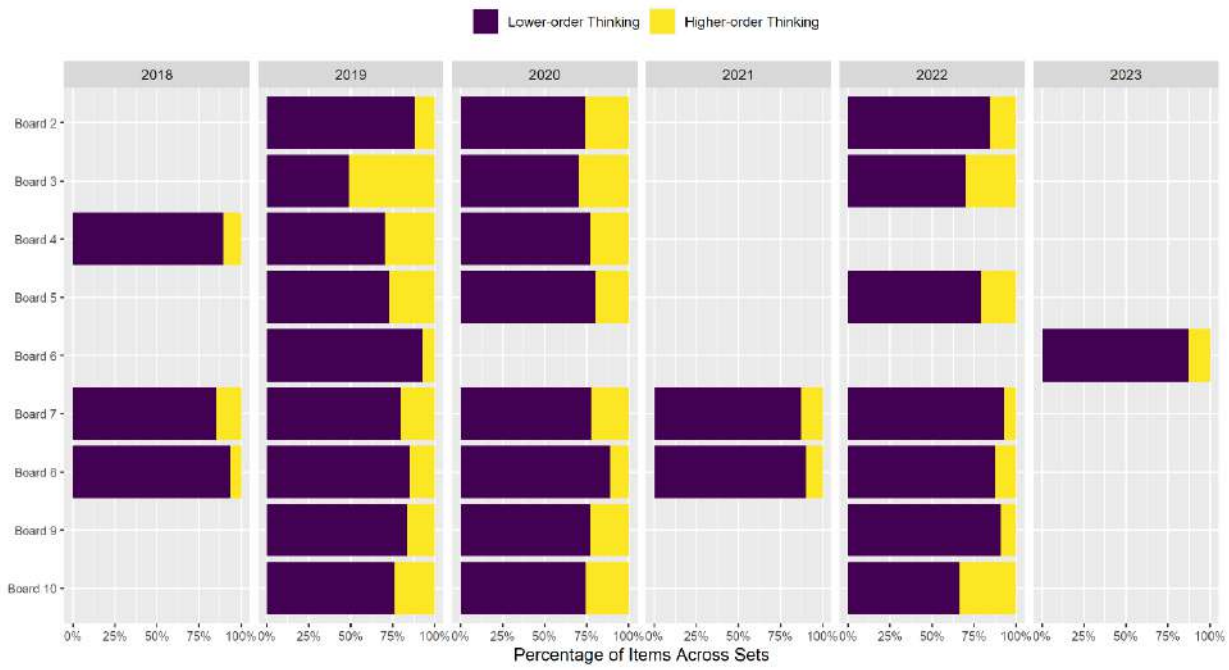



*Figure 32: Social Science Item HOTS/LOTS*

*Note: Interpret summaries of pilot data with caution.*

## EXPERT-JUDGED DIFFICULTY

We asked raters to use their experience as teachers and in the field of education to provide their judgment on whether each item would be easy (E), medium (M) or difficult/hard (H) for Grade 10 learners. Easy items are those that a large majority of learners exposed to relevant learning opportunities would be expected to answer correctly. Whereas, hard items, are expected to be answered by only a minority of learners exposed to relevant learning opportunities. As shown in Figure 4, raters judged most of the items overall to be either easy or medium, with variability across boards in the percentage of easy and medium.

Please note that these expert-based ratings are inherently subjective and should be interpreted with caution. Also, these ratings may or may not align with empirical difficulty ratings derived from actual data on learner performance. While they provide a first insight into the potential variation of difficulty across question papers from different boards, results from this pilot should only be interpreted with caution. For making inferences about item difficulty from the full QPT across 62 boards, ratings by two independent, trained raters may contribute to greater accuracy of results, although predicting empirical difficulty has been shown both as a very difficult task in practice and research literature. Having multiple raters may improve difficulty ratings, but these ratings cannot replace empirical difficulty estimates.

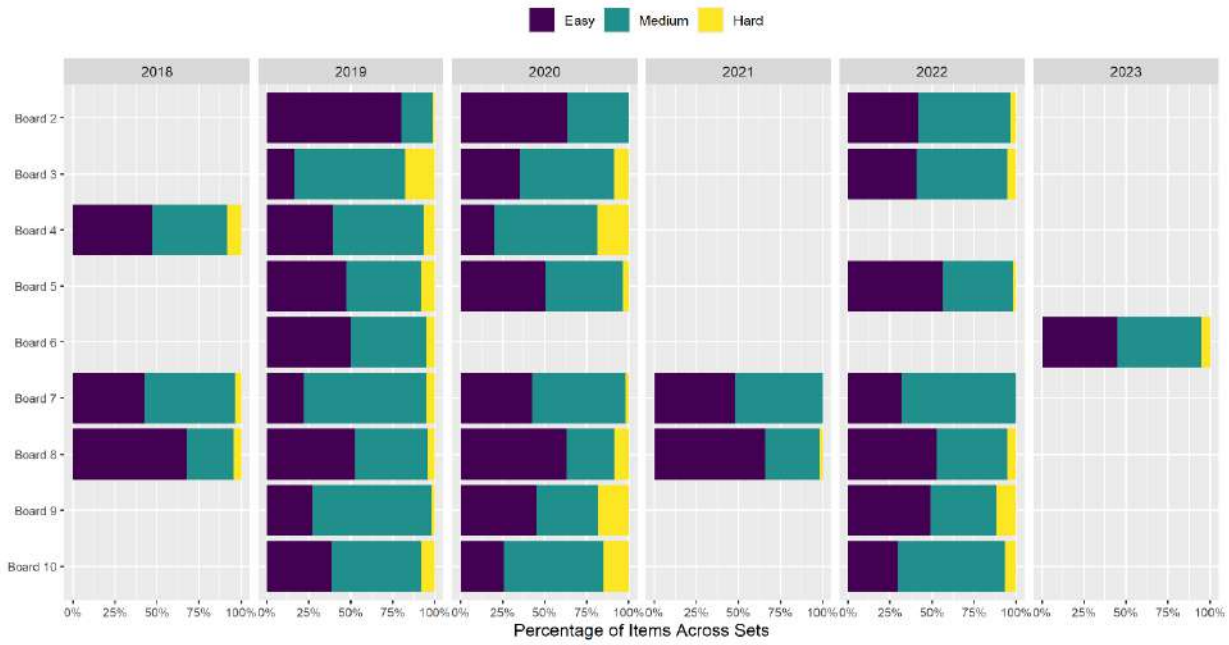



*Figure 33: Social Science Item Difficulty*

*Note: Interpret summaries of pilot data with caution.*

## APPROPRIATENESS OF MARKING

We asked raters to provide their subjective judgment about whether the marks awarded seemed appropriate for the question. Raters judged most of the items to have appropriate marks, although there were some exceptions for two Education Boards. Very few items with errors were identified across the 10 pilot boards. See Figure 5 for details regarding the appropriateness of item marks.

Please note, that these expert-based ratings are inherently subjective and should be interpreted with caution.

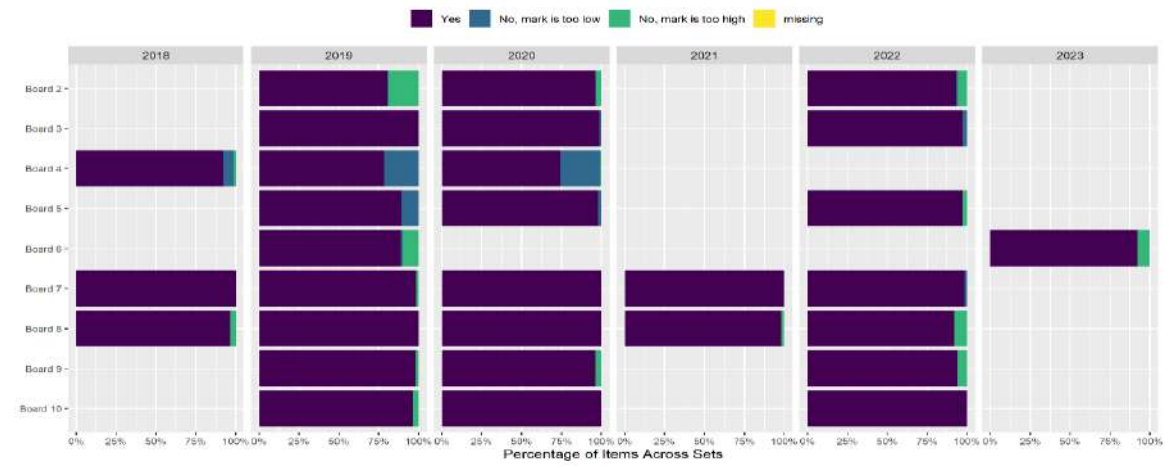



*Figure 34: Appropriateness of Social Science Item Marks*

*Note: Interpret summaries of pilot data with caution.*

## ITEM CONTENT & FRAMEWORK COVERAGE

Raters were asked to judge the high-level content and sub-topic being measured by each item. We left this open in the pilot to capture the breadth of content measured by the range of assessments. To summarize the pilot data and to refine the data collection template for full board data collection, we combined the data with theories of social science education to define an item classification schema for rating the content and sub-topic measured by each item. The schema is shown in Table 10. See Figure 37 for a summary of content coverage.

**Table 10: Social Science Content and Sub-topic Item Classification Schema**

| Content Topic | Subtopic |
|---|---|
| History | Indian History—Ancient/Classical to ca. 700 CE |
| | Indian History—ca 700 CE-1500 CE |
| | Indian History—ca. 1500 CE-to 1947 CE |
| | Indian History—1947 CE to present |
| | British History |
| | History of Other Countries |
| | Global History |
| | Local History (India) |
| | Historical Methods, Sources, And Techniques |
| Geography/Environment | Physical Geography |
| | Political Geography |
| | Cultural Geography |
| | Economic Geography/Land Use |
| | Geographic Tools (Maps, GIS, Etc.) |
| | Geographic Concepts and Techniques |
| | Environmental Issues and Problems |
| Politics/Political Science | Government Structure, Institutions, And Functions |
| | Indian Constitution |
| | Democracy, Institutions and Practices |
| | Civic Participation/Engagement and Civil Rights |
| | Political Parties/Important Political Events in India |
| | International Relations |

| Content Topic | Subtopic |
|---|---|
| | Comparative Government |
| Economics | Economic Concepts and Principles |
| | Economic Development |
| | Economic Policy |
| | Trade and Exchange |
| | Finance/Banking/Insurance |
| | Globalisation |
| | Economic Systems (Free-Market, Planned Economy Etc.) |
| Psychology/Sociology/ Anthropology | Social Institutions and Their Functions |
| | Social Stratification and Hierarchies |
| | Gender Issues |
| | Societal Issues and Challenges |
| | Evolution of Human Societies |
| | Youth and Development |
| | Education |
| Other | |

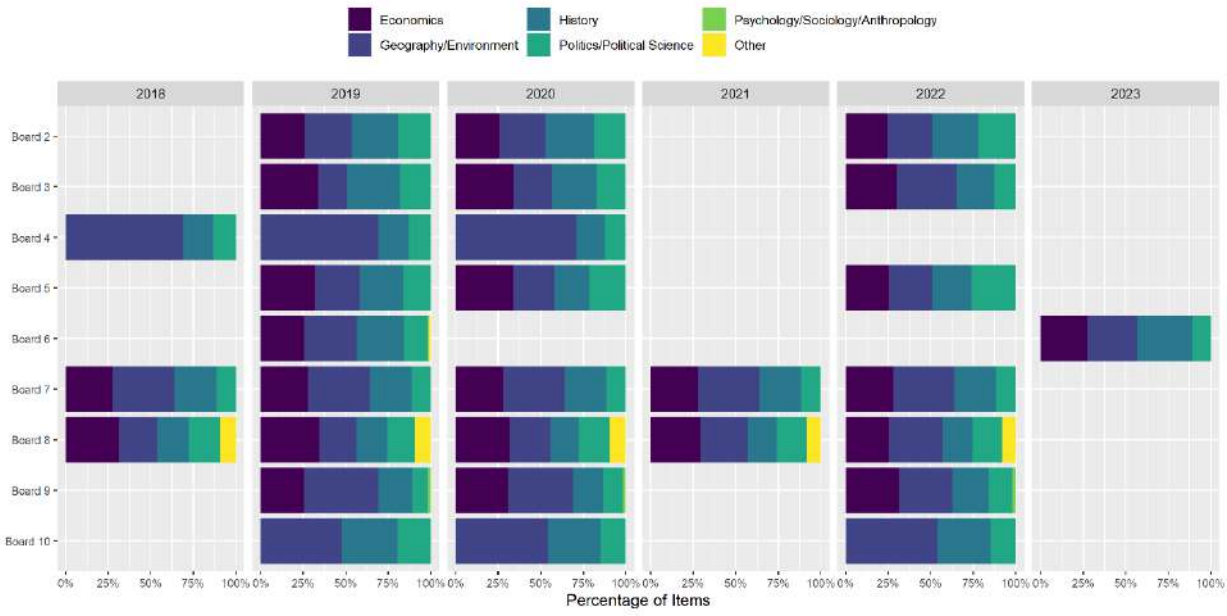



*Figure 35: Content Measured by Social Science Items*

*Note: Interpret summaries of pilot data with caution.*

Each item was also classified according to its linkage to the boards' assessment framework, if available. For question papers where raters had access to an assessment blueprint, they were asked to rate yes, no, or unclear. If there was no assessment blueprint available, we asked them to choose NA. See Figure 38.

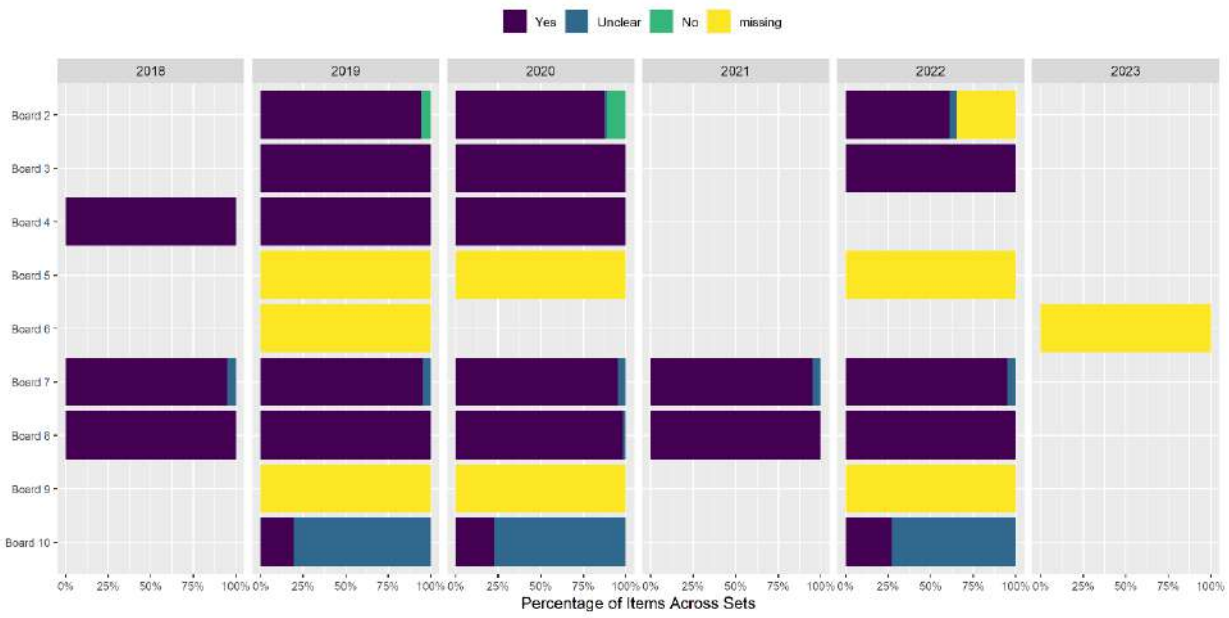



*Figure 36: Percent of Social Science Items Linked to the Provided Assessment Framework*

*Note: Yes = Linked to the assessment framework; no = not linked to the assessment framework; unclear = unclear whether item is linked to the assessment framework*
*Note: Interpret summaries of pilot data with caution.*

## CLASSIFICATION OF READING PASSAGES

For items that had reading passages associated with them, we asked raters a series of questions about the passage. Raters recorded whether the reading passages were provided in the question paper. Raters were asked to classify the passages as informational or literary. Informational passages are non-fictional writings. An example is shown in Figure 37. Literary passages are fiction writings or literary non-fiction.

By the end of 19th century, a new visual culture was taking shape.

With the setting up of an increasing number of printing presses,

visual images could be easily reproduced in multiple copies. Painters like Raja Ravi Verma produced images for mass circulation. Poor wood engravers who made wood blocks set up shop near letter presses, and were employed by print shops.

In Punjab, too, a similar folk literature was widely printed from the early 20th century. Ram Chaddha published the fast-selling Istri Dharm Vichar to teach women how to be obedient wives. The Khalsa Tract Society published cheap booklets with a similar message. Many of these were in the form of dialogues about the qualities of a good woman.

*Figure 37: An Example of an Informational Reading Passage*

*Source: Jammu and Kashmir (2022). Social Science Question 16.*

129 social science items had reading passages associated with them (3%). These items all came from the question papers of three of the ten boards. All of the reading passages were informational and on topics related to social science. Raters judged the passages to be either at or below grade level, with no passages judged to be above grade level. See Figure 38.

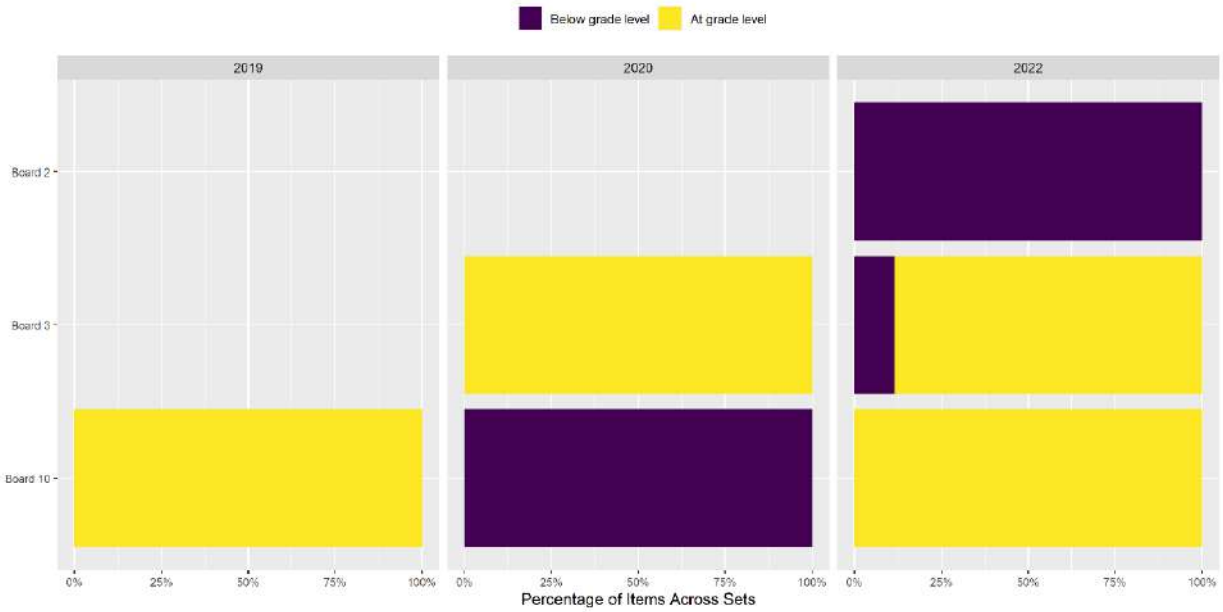



*Figure 38: Passage Reading Level Judgments*

## RATER JUDGEMENTS ON ITEM ERRORS (ALL SUBJECTS)

We asked raters to indicate if they saw any errors in the question papers and to describe them. A small percentage of all rated items (1.7 per cent) were identified as having errors. The summary below combines errors across all four subjects. One subject matter expert applied thematic coding to the open-ended comments from raters describing the errors. 58% of the errors were described as language errors, which included mostly grammatical errors and some spelling errors. 17% of the errors were described as the item providing multiple correct responses. 13% of the errors pertained to lack of clarity. This included not providing enough information to answer the question, ambiguity, and lack of clarity. 12% of the errors were conceptual. This included factual errors and questions about content irrelevant to the topic of the test.

**Table 11: Types of Item Errors Across English, Mathematics, Social Science, and Science**

| Error Type | Percent of total errors | Percent of total items |
|---|---|---|
| Language Errors | 58% | 1% |
| Multiple Correct Responses | 17% | .3% |
| Lack of Clarity | 13% | .2% |
| Conceptual Errors | 12% | .2% |

## RATERS' ITEM NOTES AND COMMENTS, ALL SUBJECTS

We provided raters with space to write notes or comments about individual items. Across all boards, years, sets, and subjects, raters left comments on 7.5% of the items. One subject matter expert applied thematic coding to the raters' notes and comments. The most common notes and comments (72%) pertained to clarity about the item marks. Specifically, raters noted that the distribution of marks within multipart items was not clear. Fourteen per cent of the notes indicated that particular items were designed for learners with visual impairment. Other themes include lack of clarity on the types of question (4%), general rater observations/clarification (4%), competencies that are different than what was programmed in the item inventory template (3%), repetition (2%) and errors (<1%).

## RATERS' SUMMARISED IMPRESSIONS

We asked raters to summarise their overall impressions about the review of the question papers. For each of the four subjects, raters shared a range of comments, organised by boards, and within years, when applicable. Raters gave their general impressions on patterns they observed in the categories in the item inventory. The overall impressions are aligned with the summaries of the item-level notes and contents and are stored as an annexure to the raw item level data.

## POST-PILOT FEEDBACK AND MODIFICATIONS

The pilot study proved to be a valuable endeavour, as it provided us with valuable insights and feedback on the existing question paper data collection template. Based on the feedback received and our own analysis, significant modifications to the template were made. These changes involved incorporating additional features and add-ons to enhance the overall quality of the tool.

Key improvements made were the inclusion of maps and diagram-based questions to add to, the reading comprehension-based questions; schemas for rating the content categories and sub-categories of items from Grade 10 question papers, and adjustments to the user experience when working with the tool. The former has allowed for finer-grained data on exam questions that reflect learners' understanding and application of knowledge. By expanding the range of question types, the aim is to capture the progress that boards are already making towards creating a more balanced and effective evaluation system and measure the distance they have yet to go.

## PILOT STUDY SUMMARY

One of the priorities of PARAKH is to establish equivalency in assessments across all recognised Education Boards in India. Analysing the current patterns of assessments and the variation of key assessment specifications across Education Boards constitutes an important step towards an initial quantification of the current state of assessment patterns and a starting point for efforts towards equivalency.

PARAKH researchers developed a tool to collect information on how Education Boards are assessing learners and to answer the question: What are the similarities and differences in what and how boards currently assess? Development was informed by best practices in assessment and item review. The initial list of elements was adapted to be appropriate and relevant for current assessments in India, and further refined based on national and international resources that support PARAKH's priorities on equivalence. Given that boards are still in the process of working toward the goals of the NEP 2020, we developed the tool to ascertain the extent to which boards would need to change their assessment patterns to align with the NEP.

The pilot study report summarizes findings from data collection and analyses of question papers for Grade 10 from 10 recognised school boards across India. The subjects were English, Mathematics, Social Science, And Science and approximately 20,000 items were rated. The purpose of the pilot was to evaluate the usability of the data collection tool, the fidelity of the procedures followed by human raters, and the quality of measurement. Insights about items from the question papers are:

- Variation across subjects and boards in terms of the item types and expert-judged item difficulty was seen.

- Variation across boards in alignment with assessment frameworks and length, duration, and content coverage was apparent.
- Regarding Lower and Higher-Order Thinking Skills measured, we see the largest variation in English question papers and the greatest balance of Lower-Order and Higher-Order Thinking skills in Mathematics. In social science, the majority of the items were judged to measure Lower-Order Thinking Skills. In science, only very few questions across all boards studied in the pilot address Higher-Order Thinking Skills.
- The variability suggested in the pilot study is one aspect that threatens the comparability of board examination results across boards.

Based on the pilot analyses, further refinements to the question paper review template were made. Data on question papers for all recognised boards is being collected. Both the quantitative and qualitative data will be analysed, and results will be summarized in a follow-up report to this one. The follow-up report will include supporting literature to contextualize the findings. The follow-up report will serve as a resource for developing an equivalence framework by describing the landscape of assessments across India in recent years.

Through the question paper pilot, we collected quantitative and qualitative data on a large number of items across a variety of boards in India. The pilot data revealed that the item inventory template was usable by raters and supports the aggregation of item-level information. The pilot revealed variation across boards on how sets are identified, how items are numbers, and if and how learners are given choices among items. We used this variation to refine the item inventory template ensuring that raters can record the information as intended. The pilot data also revealed a range of content areas and subtopics measured by the items that we used to recommend a schema for judging the items' content. The graphical summaries of the pilot data provide a snapshot of the ratings and can be used to quickly identify areas to explore in the raw item-level to troubleshoot the data collection.

The pilot study was designed to provide insight into the usability of the item inventory template and to explore whether raters could use the template to provide information as intended. While the summaries from the pilot data should be interpreted with caution and claims about boards' current practices with regard to question papers cannot be made from the pilot data, the initial information from the pilot study will be used as a starting point to facilitate the creation of an initial set of draft standards for equivalence.

# QUESTION PAPER TEMPLATE ANALYSIS

After the pilot study, an analysis of the question paper templates for Grade 10 and Grade 12 provided by the Educational Boards was conducted with the intention of acquiring a deeper understanding of their quality, pertinence, and effectiveness. The analysis was done in two subjects, namely, English and Mathematics.

The objective of this analysis was to gauge the congruence of these question papers with established learning standards, to ascertain the levels of difficulty and appropriateness of the questions, to investigate the presence of multiple-choice options, and to explore the spectrum of cognitive demands encompassing critical thinking and problem-solving skills, among other aspects. This endeavour sought to meticulously scrutinize these question papers in order to reveal the distinctions and commonalities across various educational boards. The ultimate goal was to facilitate the formulation of guidelines for achieving equivalence.

The attempt here is to identify trends and patterns in the formation of question papers across educational boards in India and to suggest best practices and recommendations to attain an equivalence. With this regard, the following graphs suggest the findings of the research.

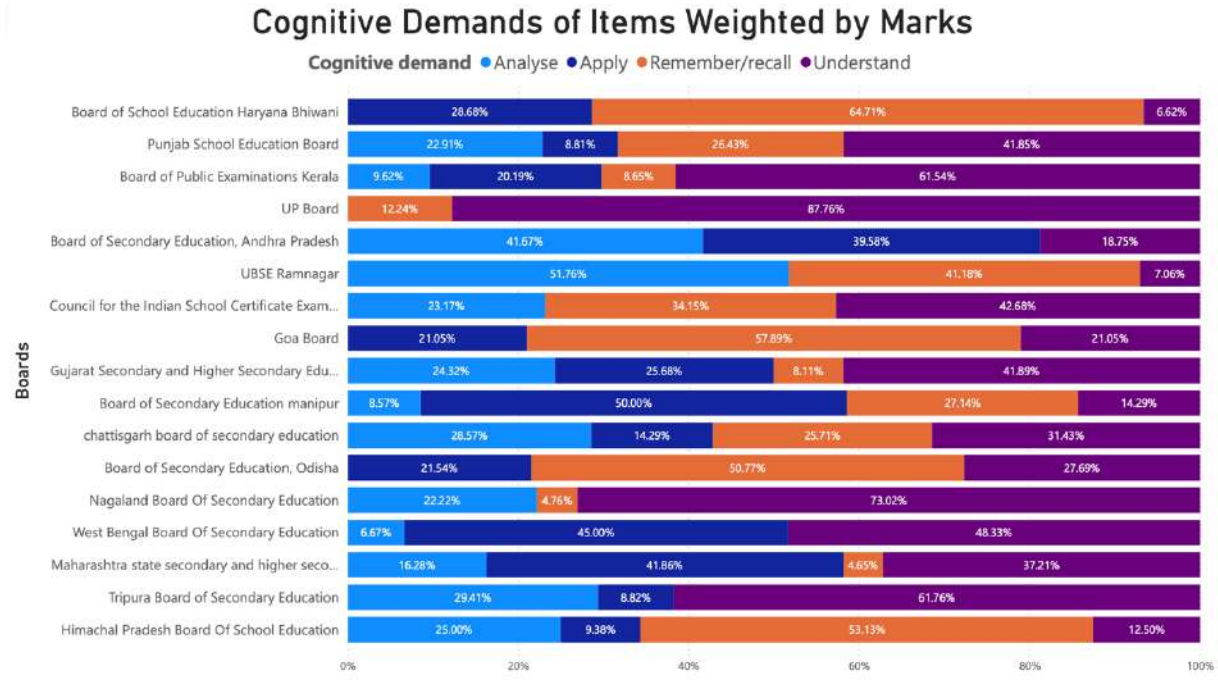



*Figure 1: Cognitive Demands of Items Weighted by Marks*

Figure 1 gives us the nature of items according to the weightage of marks for cognitive demands. It is observed that some of the boards place a significant emphasis on remembering/recalling type of questions. Conversely, there are other boards which put a higher emphasis on application and analysing knowledge. The variation in the distribution of cognitive demands across different educational boards is evident from the graph. To restrict items assessing the rote memorization skills of the learners to a minimum, it is suggested, in alignment with the NEP 2020 and the consecutive documents, that the Remembering/Recalling-based items be reduced and question items testing Application, Evaluation, and Creative prowess of the learners be increased in the question papers.

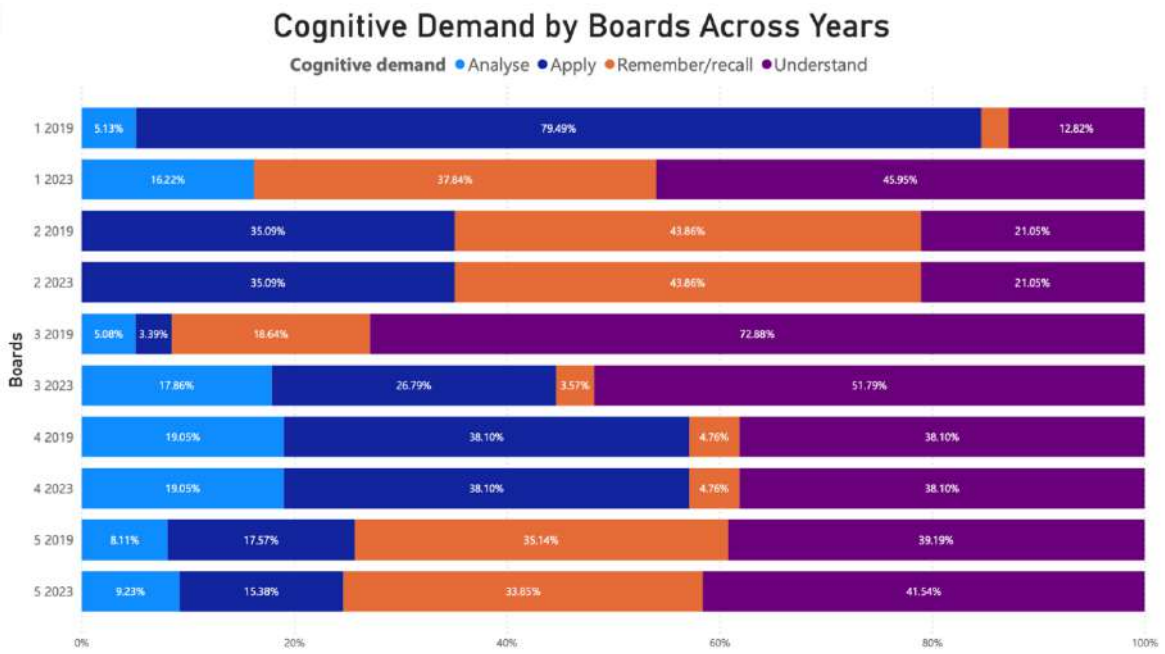



*Figure 2: Cognitive Demands of Items Across Years*

In Figure 2, the nature of items across years has been graphically represented. The recurrence of a high percentage of remember/recall-based items suggests that boards would need to make more changes to become aligned with the NEP 2020 in asking more higher-order questions. It has to be mentioned that a definite increase in Application and Analysis items in some boards is observable in the graph, but it is complemented by a decrease in the percentage of these items in other boards. Therefore, a definite reform is aspired for.

Assessments and teacher training play an important role in providing opportunities for learners to demonstrate a range of competencies. Teachers are the primary individuals involved in creating, administering, and scoring assessments on 16 boards. Out of the boards that participated in the study, 24 boards noted that teachers are required to take part in subject-specific training in affiliated schools, 28 boards require assessment development training, and 21 require professional development generally. However, fewer than half of the respondents indicated that their board provides capacity building of teachers including preparation for

undertaking *assessment as learning and assessment for learning.* Further, many of the items on the question papers rated for this study require Lower-Order Thinking Skills. While the share of total marks for items with Lower-Order Thinking Skills tends to be lower, most boards are not asking many questions that require Higher-Order Thinking Skills. For example, many boards administer question papers in Mathematics and English with 50% or more of the marks allocated to knowledge and memorization skills.

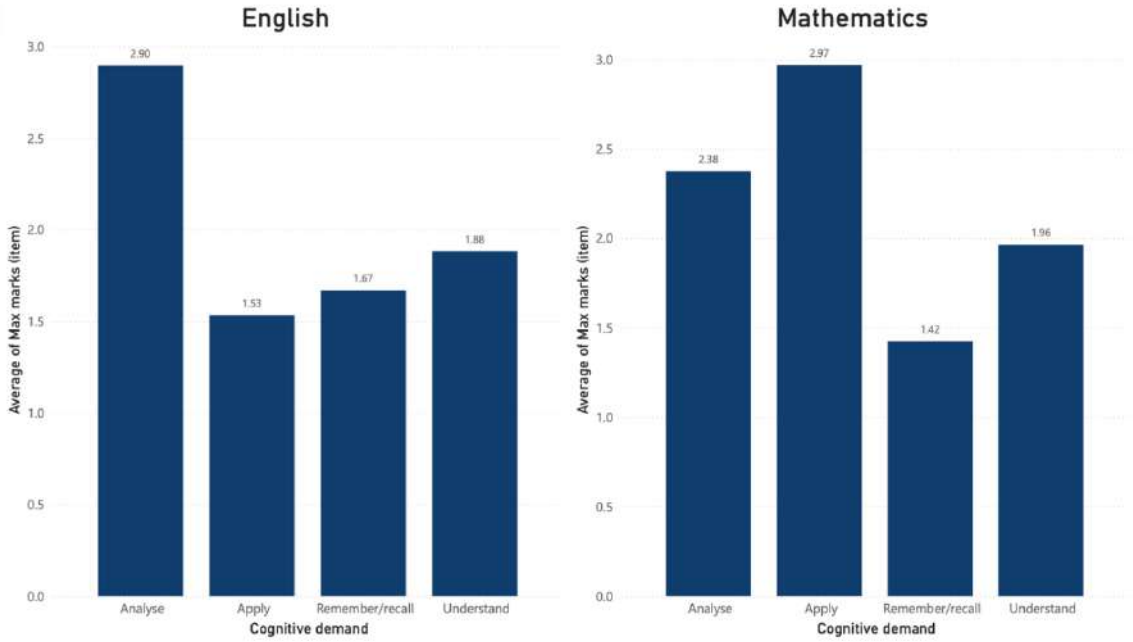



*Figure 3: Marks-Weighted Average of Items with Various Cognitive Demand Levels*

Boards are assessing learners with items that span the range of cognitive demand (Figure 3). On comparing the averages in English, the highest weightage is given to questions that require analysis, followed by understanding, remembering/recalling, and application. In Mathematics, the highest weightage is given to application-type questions, followed by analysis, understanding, and remembering/recalling. It was observed that different boards emphasise different cognitive skills. English places a higher emphasis on analysis, while Mathematics focuses more on application.

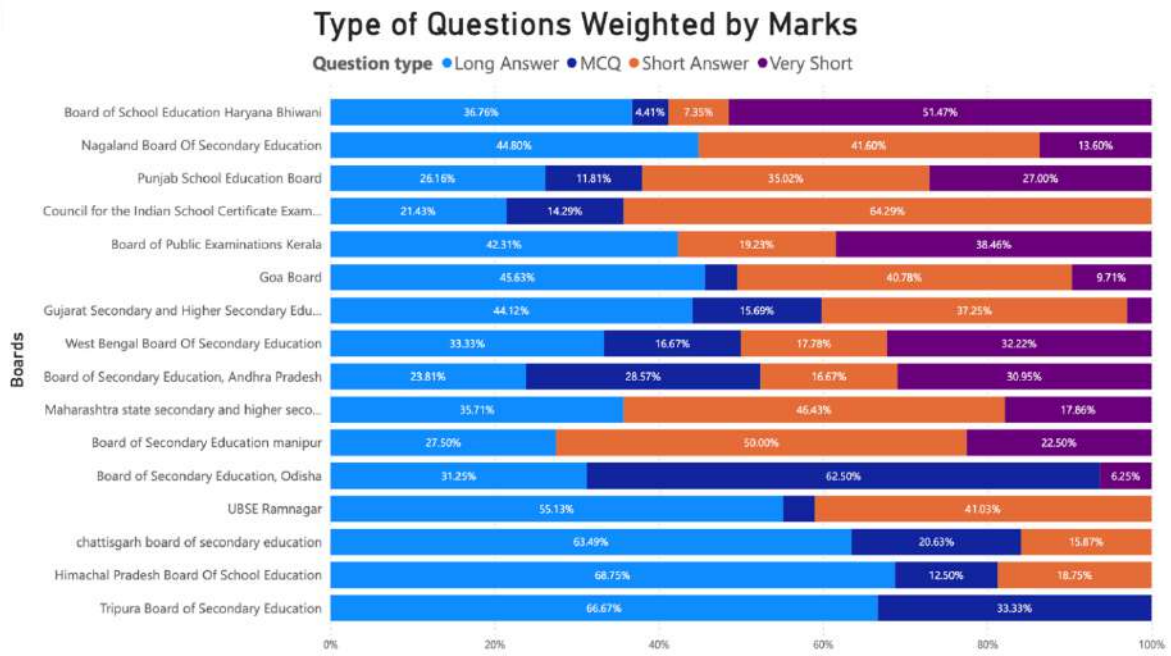



*Figure 4: Marks-Weighted Percentage of Type of Questions*

Figure 4 showcases the percentage of different types of items weighted by marks in a subject in a graphical manner. Looking at the different types of questions posed by the boards in the question paper, it was observed that most boards emphasised short and very short items in their papers. There are only a few boards that show uniform types of items in their paper. A disproportionate ratio of multiple choice, very short, short, and long questions was observed in many boards. Here, a high percentage of both multiple-choice and long items are incorporated, along with a few very short items.

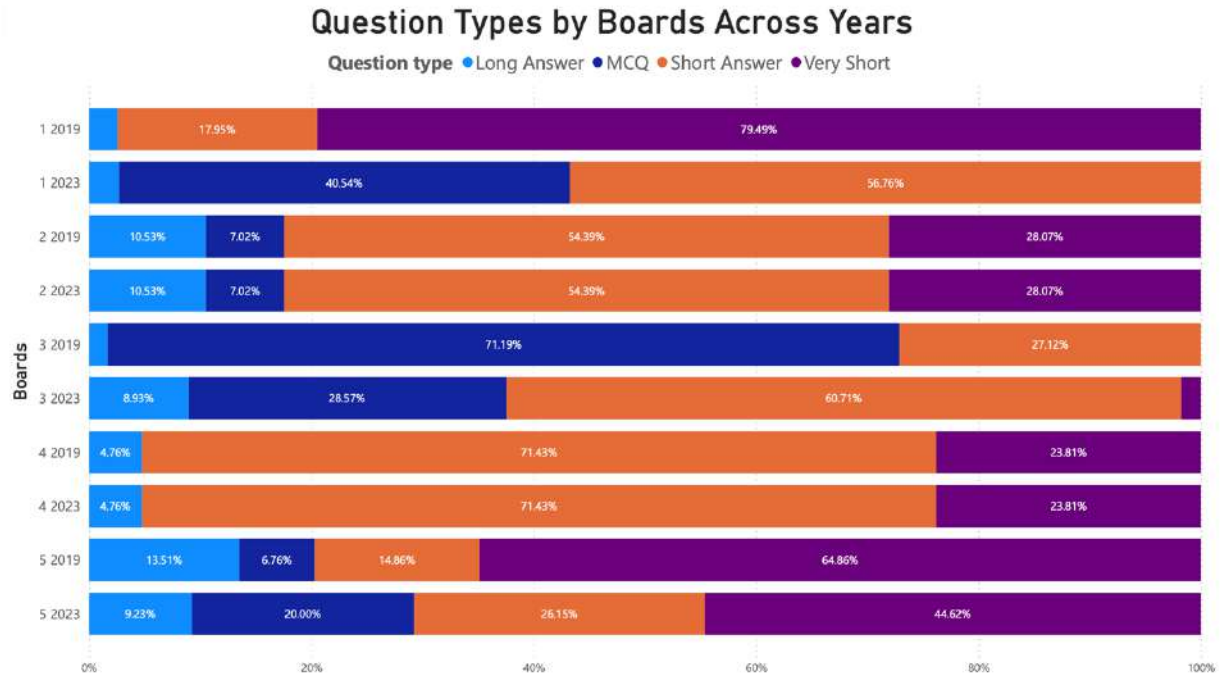


*Figure 5: Marks-Weighted Percentage of Type of Questions by Boards across Years*

In Figure 5, the type of items by boards across years is represented. It was observed that while a proportional ratio of multiple choice, very short, short, and long questions is generally followed, many boards have entirely omitted at least one type of these questions. To ensure a well-rounded assessment, question papers must include all types of questions.

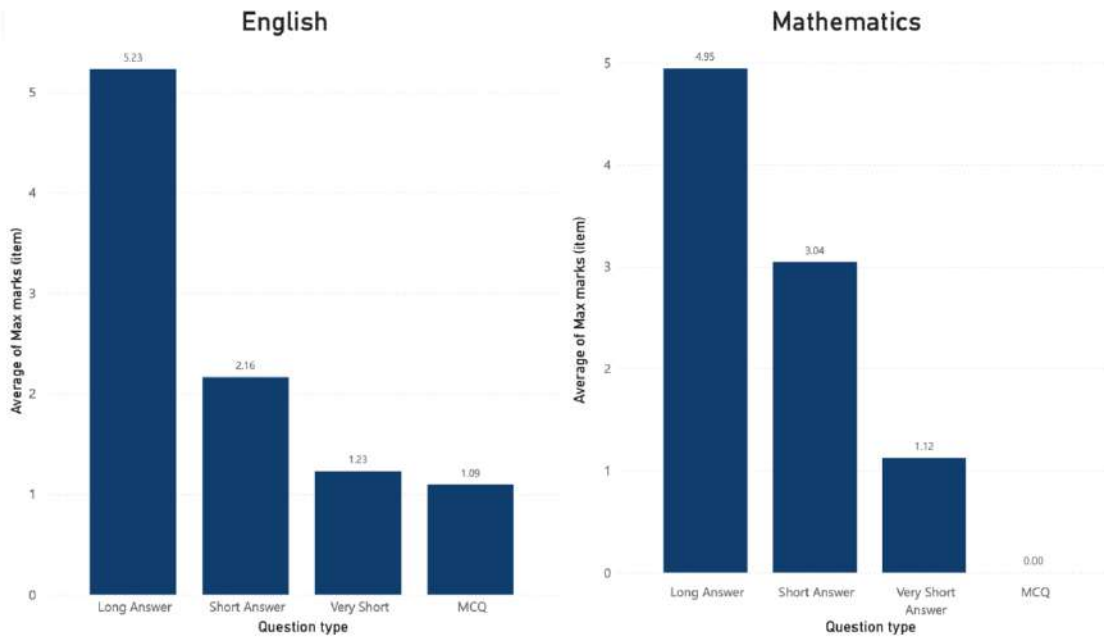



*Figure 6: Marks-Weighted Average of Different Item Types*

From cumulative analysis, it is observed that there is an opportunity for most boards to shift their practices to create and administer assessments that provide opportunities rather than serve as barriers to future education and employment opportunities, fairness and equity. The weightage of marks increases as the items get longer (Figure 6). The share of multiple-choice questions is less than those that require constructed responses. As such, learners' scores are heavily influenced by questions that are less standardised and may be subject to more threats to validity. This has implications for consistency and fairness in scoring, rater bias, as well as resources that are needed to score the question papers. A review of best practices for item writing, item design, rater training and scoring, could help bring equivalence to the assessment process.

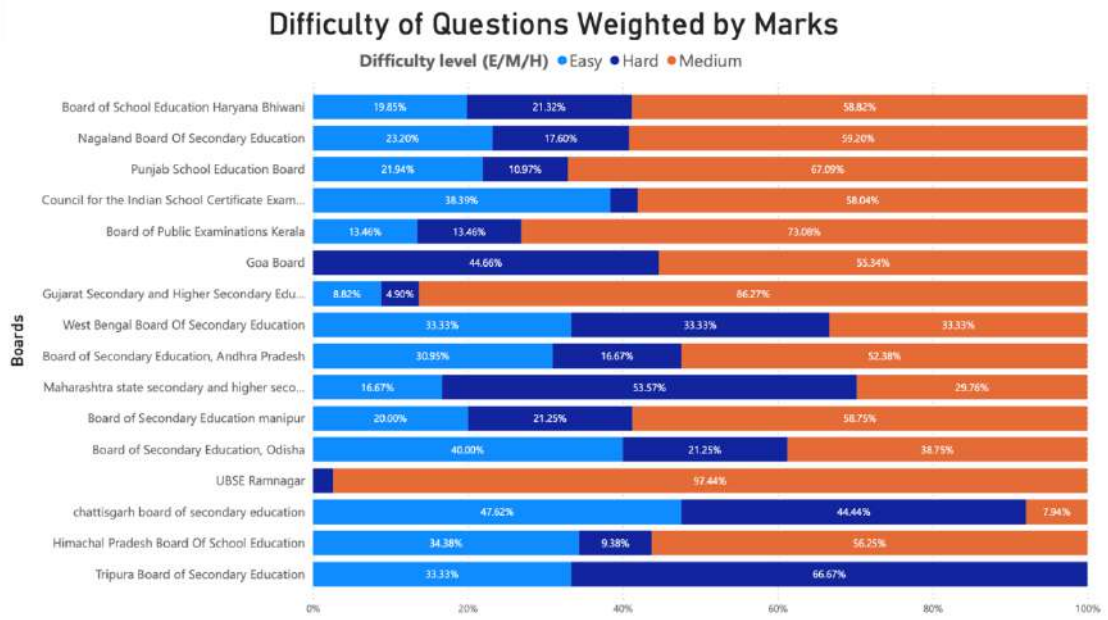



*Figure 7: Marks-Weighted Percentage of Items with Various Difficulty-Levels of Questions*

Figure 7, gives us a graphical representation of the difficulty level of questions weighted by marks across different boards. In the question papers of different Educational Boards, it was observed that the questions asked were mostly ranging from easy to medium difficulty level. There could be many reasons for this, but this does not help the learners to attain a higher standard. Hence the boards should be advised to prepare question papers that would help learners to be creative as well as imaginative. The proportion of the distribution of question types should be appropriately balanced to effectively support learners' development.

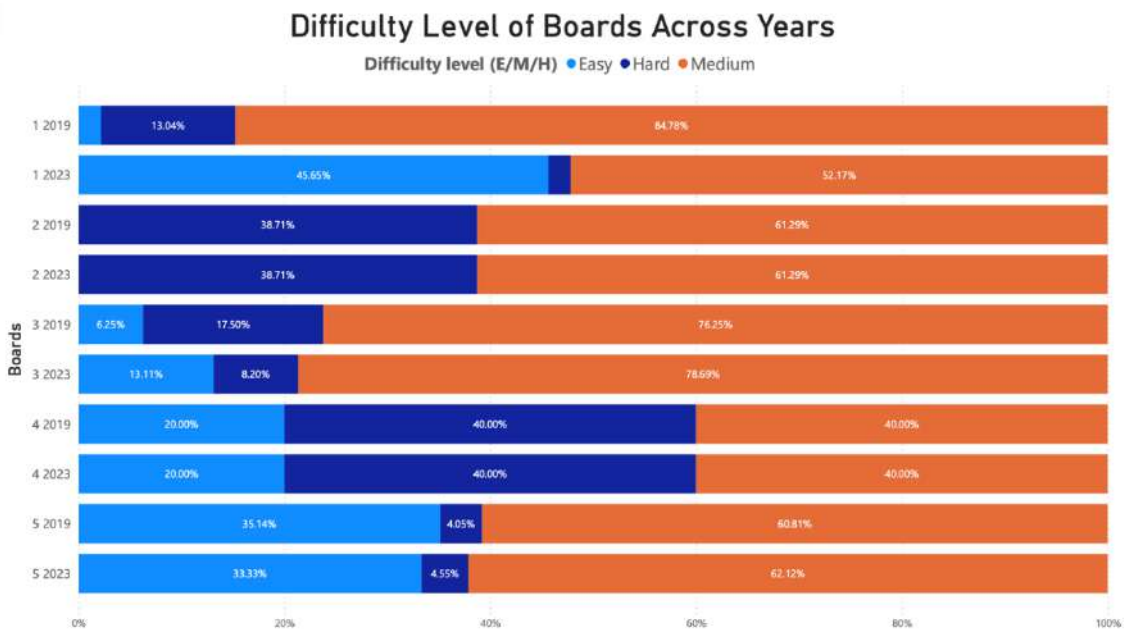



*Figure 8: Marks-Weighted Percentage of Items with Difficulty Level of Boards across Years*

Figure 8 showcases that most of the questions of Board 1 in 2019 had medium-difficulty items. On the other hand, the same board had a high percentage of relatively easy items in 2023, with only 2.18% of high-difficulty items. Similarly, another board had more than 60% of the questions of medium-difficulty level and had less than 5% of high-difficulty items in both years, 2019 as well as in 2023. A balanced paper would be best to judge the learners to perform better in the future. Therefore, a proportion of easy, medium, and difficult items is a must in a question paper.

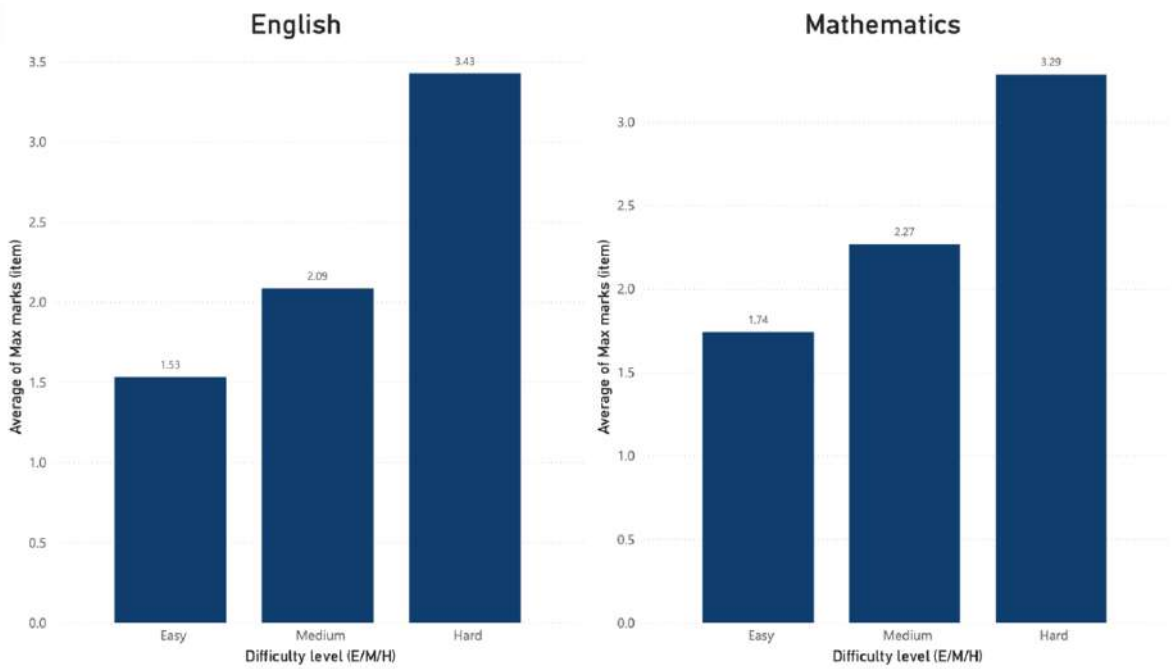



*Figure 9: Marks-Weighted Average of Items with Various Difficulty Levels*

From Figure 9, it is evident that in English, the distribution of max marks indicates an increasing trend from easy to hard questions, with the hardest questions having the highest weightage. Similarly, in Mathematics, the difficulty level increases from easy to hard, with a slightly more balanced distribution across difficulty levels as compared to English. Both subjects exhibit an increase in the maximum marks assigned as the difficulty level increases, with hard questions receiving the highest weightage. The patterns are similar but not identical.

A cumulative analysis of the scenario suggests that in terms of item difficulty, Grade 12 exams had more difficult items than Grade 10. Notably, English had a low percentage of easy items. The NEP includes statements about providing learners with opportunities to learn and demonstrate their knowledge. To increase the percentage of easy items while promoting holistic education, boards should provide opportunities for learners to learn higher-order skills and provide workshops and training to teachers to construct test items that are intended to be easily solved by learners who have learned the competencies while still maintaining the integrity of the assessment.

## KEY FINDINGS:

A few trends and patterns are thus highlighted through this analysis of the question papers of Grade 10 and Grade 12 of the educational boards:

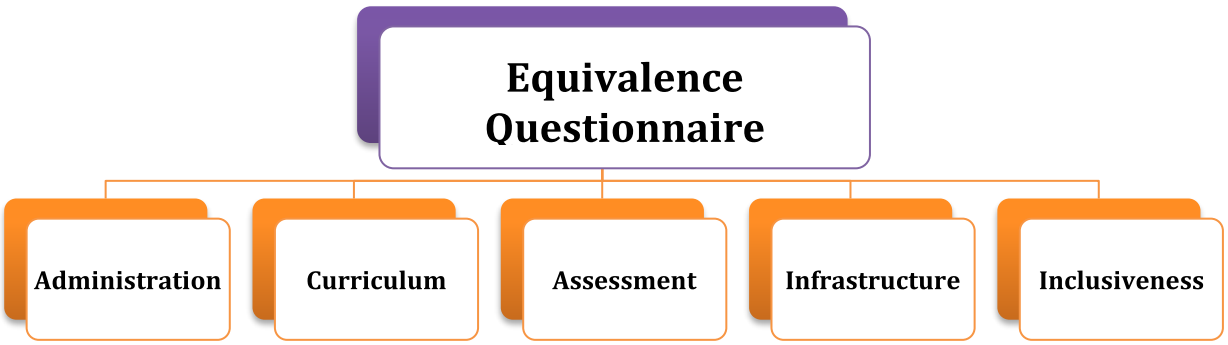
**a)** Around 29% of the school boards put close to 40% weightage on remembering/recalling-based questions in different subject domains. Such a high percentage casts a light on the shortfalls in the assessment procedures as highlighted by the NEP 2020 and the NCF-SE 2023, i.e., the prevalence of rote or memory-based learning and assessment. It was observed that a few boards didn't have any creative questions for languages, which can be an alarming factor in emphasising the said point.

**b)** The data also projects how 25% of the school boards put a weightage of 50% or more on Multiple-Choice Questions (MCQs) in Mathematics which were recall-based. It was observed that one of the Boards had only MCQ-type questions in their Mathematics question papers. This could have a severe impact on the marks received by the learners as the scoring emphasises the final response instead of critical and mathematical procedures. For languages too, it was observed that a couple of boards had about 50% or more MCQs in the question papers. Thirty-two per cent of the boards put 40% or more weightage on very short type questions for languages. This reduces the efficacy of the question papers in testing the achievement of learning standards attained by the learners while, simultaneously, distorting the relative marks obtained by them across school boards.

**c)** For a couple of school boards, the subject matter experts deemed more than 90% of the questions in languages to be easy, while a few school boards had close to 50% difficult items paired with about 30% or more medium difficulty level items. This highlights the stark disparity in the level of difficulty of the question papers resulting in a glaring dissonance in the marks received by learners across Boards.

# EQUIVALENCE QUESTIONNAIRE: GRADING FRAMEWORK AND RESULTS

As a part of the process to attain equivalence across educational boards in India, the recommendations made by the Standard Operating Procedure for Equivalence of Qualifications of Indian School Boards, in alignment with the New Education Policy 2020 and the National Curriculum Framework 2023, are to be adhered to. The survey conducted in the regional workshops on school assessments and examination practices and equivalence of boards has acted as a tool to understand the present status of educational boards in India with respect to the aspired goals. To assess the current standings of the boards and to suggest relevant reforms, a grading system has been devised.




For the purpose of analysis and grading, the survey – having 58 questions in total – has been divided into five broad categories: Administration, Curriculum, Assessment, Infrastructure, and Inclusiveness. All the questions were clubbed according to their focus areas. For instance, a question such as whether the board develops textbooks, learning materials, software applications, etc. has been clubbed under the broad category of Administration, whereas a question determining whether the board provides examination bylaws, assessment framework, question paper blueprints, etc. has been put under Assessment. A question asking if the learning outcomes include gender sensitivity and other constitutional values such as tolerance and empathy has been clubbed under Inclusiveness.

Initially, the 58 questions of the survey were divided into three sections. The first section, dealing with questions related to the functions of Education Boards, school membership within Education Boards, and funding sources of the boards, has been clubbed, mostly, under the category of Administration. The third section, dealing with the questions regarding schools in the board and their surrounding communities, trying to determine the facilities, opportunities, and resources of the board, has been clubbed, partially, under Infrastructure and Curriculum. For instance, a question asking whether the schools under a particular board have facilities like running water, accessible toilets, sinks or handwashing stations, etc. has been put under Infrastructure, whereas a question asking if the learners are provided with information about internships, future careers, learner financing, university admissions exam preparation, etc. by the board has been put under Curriculum. The second section of the questionnaire, dealing with questions related to the curriculum in schools of the board, as well as how learners are taught, how they learn, and how their learning is assessed, has mixed questions falling under all the five categories: Administration, Curriculum, Inclusiveness, Infrastructure and Assessment. The questions of Inclusiveness have been picked from all the sections of the Questionnaire. Therefore, Inclusiveness would include aspects of Administration, Curriculum, Infrastructure, or Assessment that inspire an inclusive spirit. For instance, a question asking whether the Board provides books in braille, audiobooks, and Indian sign language books in their school libraries has been clubbed under Inclusiveness even though it is an aspect of Infrastructure. This is done in order to gauge how the boards fare in promoting an inclusive spirit for all its learners as prescribed by the NEP 2020 and the NCF-SE 2023.

**Note:** *The questionnaire had some variables that are specific to Class X and some that are specific to Class XII. For boards that only offer Class X, the questions meant for Class XII were not considered in the scoring. Similarly, for boards that only offer Class XII, the questions specific to Class X were not counted in the scoring. For boards that offer both classes, marks from both sets of questions were included in the scoring. Therefore, separate points have been allocated for each of the three categories (Common Boards, Higher Secondary Boards, and Secondary Boards). Also, open schools were kept out of the Grading system as their Academic and Administrative responsibilities were seen to be different from other Higher Secondary and Secondary Boards of the country.*

## ADMINISTRATION

Points have been allocated to the questions based on their importance according to the required equivalency standards. The total points allocated to Assessment Variables for each category of boards are given below.

Total points allocated to Administration Variables for Common Boards: 38 Points (14 variables)

Total points allocated to Administration Variables for Higher Secondary Boards: 36 Points (14 variables)

Total points allocated to Administration Variables for Secondary Boards: 36 Points (14 variables)

## Common Boards (X and XII)

| | Administration Variables | Points |
|---|---|---|
| 1. | If the Boards perform periodic reviews of particular aspects of its affiliated schools. | 7 |
| 2. | Language Policy of the schools affiliated to the Board. | 4 |
| 3. | Sources of Funding for the Boards | 3 |
| 4. | If the Board has a specific process for an existing school to become affiliated with the Board. | 1 |
| 5. | If there is a particular process for starting a new school under the Education Board. | 1 |
| 6. | Establishment of the School Board | 1 |
| 7. | If there are specified Guidelines or Bylaws for the given aspects of its affiliated schools. | 8 |
| 8. | If the Board is involved in administrative tasks, as specified, apart from conducting Board exams. | 5 |
| 9. | If the Board plays a role in providing formal observations of teaching staff within its schools. | 1 |
| 10. | If the teachers in the Board are required to take part in activities involving Professional Development, Subject-specific Training, etc. | 3 |
| 11. | If the Board requires Subject-specific expertise when hiring teachers for Grades 10 or 12. | 1 |
| 12. | If the Board collaborates with State or National institutions for Teacher Training. | 1 |
| 13. | If the Board has initiated capacity building of teachers including preparation of professional online training modules and manual/handbooks. | 1 |
| 14. | If the Board has initiated capacity building of paper setters, moderators, and evaluators of Boards examination. | 1 |
| | TOTAL Points | 38 |

## Higher Secondary Boards (XII only) and Secondary Boards (X only)

| | Administration Variables | Points |
|---|---|---|
| 1. | If the Boards perform periodic reviews of particular aspects of its affiliated schools. | 7 |
| 2. | Language Policy of the schools affiliated to the Board. | 2 |
| 3. | Sources of Funding for the Boards | 3 |
| 4. | If the Board has a specific process for an existing school to become affiliated with the Board. | 1 |
| 5. | If there is a particular process for starting a new school under the Education Board. | 1 |

| | | |
|---|---|---|
| 6. | Establishment of the School Board | 1 |
| 7. | If there are specified Guidelines or Bylaws for the given aspects of its affiliated schools. | 8 |
| 8. | If the Board is involved in administrative tasks, as specified, apart from conducting Board exams. | 5 |
| 9. | If the Board plays a role in providing formal observations of teaching staff within its schools. | 1 |
| 10. | If the teachers in the Board are required to take part in activities involving Professional Development, Subject-specific Training, etc. | 3 |
| 11. | If the Board requires Subject-specific expertise when hiring teachers for Grades 10 or 12. | 1 |
| 12. | If the Board collaborates with State or National institutions for Teacher Training. | 1 |
| 13. | If the Board has initiated capacity building of teachers including preparation of professional online training modules and manual/handbooks. | 1 |
| 14. | If the Board has initiated capacity building of paper setters, moderators, and evaluators of Boards examination. | 1 |
| | TOTAL Points | 36 |

***Note:*** *Some of the variables here encapsulate individual sub-variables bearing particular points resulting in a, seemingly, variegated distribution of points across variables. All the variables and sub-variables have been enclosed in the Checklist added to the report for better understanding.*

While analysing the results of the periodic reviews made by the boards of their Affiliated Schools it was found that 64% of the boards reviewed the School-Based Assessments and the Internal Assessment Practices (Figure 1).

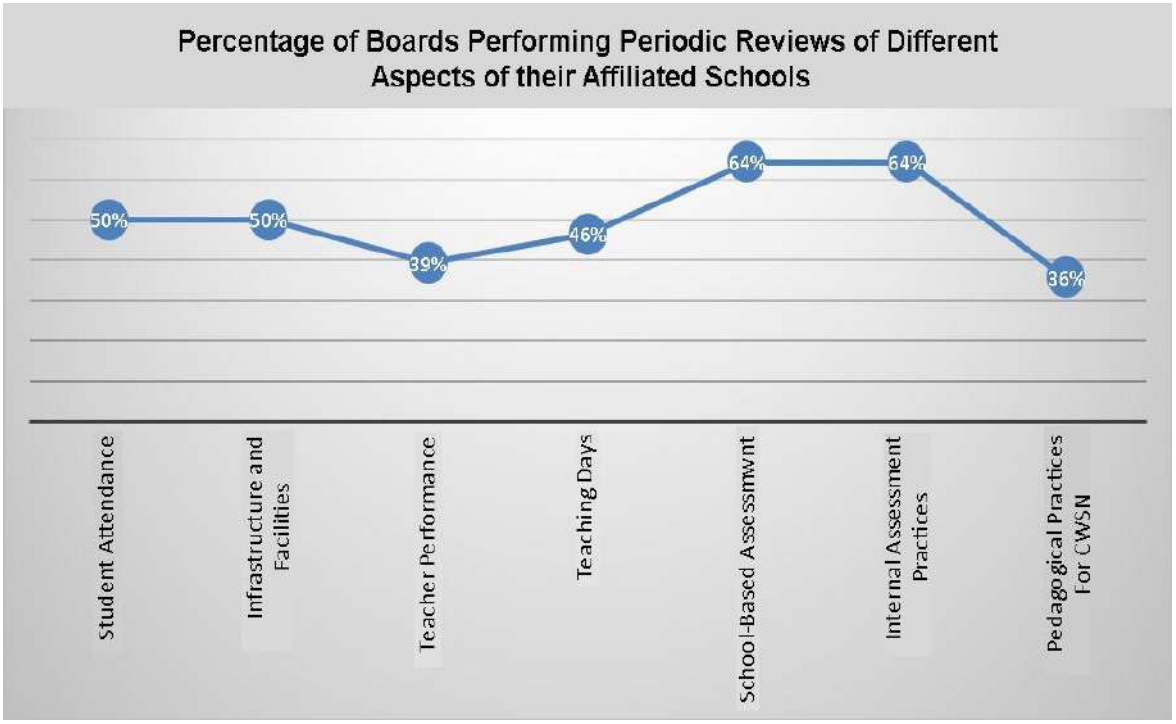



*Figure 1: Percentage of Boards Performing Periodic Reviews*

Only 39% of the boards reviewed teacher performance in their affiliated schools. Half of the boards (50%) indicated that they periodically review learners' attendance and infrastructure and facilities. Teaching days are reviewed by 46% of the boards, whereas, pedagogical practices for Children with Special Needs (CWSN) are reviewed by only 36% of the boards.

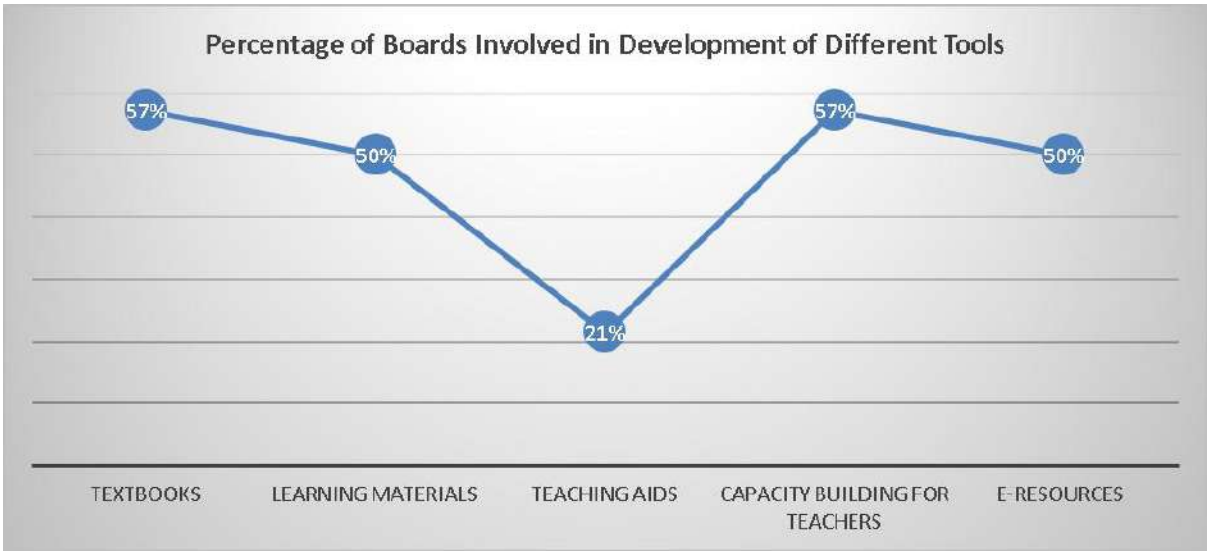



*Figure 2: Percentage of Boards Involved in Other Educational Practices*

The Remodeling of School Education Boards Report by Amrik Singh has clearly stated that the Education Boards in India should aspire to not be only examination-conducting bodies. Rather, they should act as educational bodies as per the international practices. In alignment with this idea, a question item was asked about the involvement of the boards in the development of different tools related to the curriculum and academic resources. It was observed that an average

of 50%, i.e., half of the educational boards present for the survey took part in other "educational practices", such as the development of textbooks, learning materials, teaching aids, capacity building for teachers, and e-resources, apart from conducting examinations. Notably, only 21% of the boards indicated that they were involved in the development of teaching aids. When asked about initiating capacity building for teachers to create professional online training modules and manuals/handbooks for *Assessment as Learning and Assessment for Learning*, 57% of the boards responded affirmatively. This suggests that while there is some progress, there remains a notable gap in prioritizing these initiatives, despite their high demand as highlighted in NCF-SE 2023.

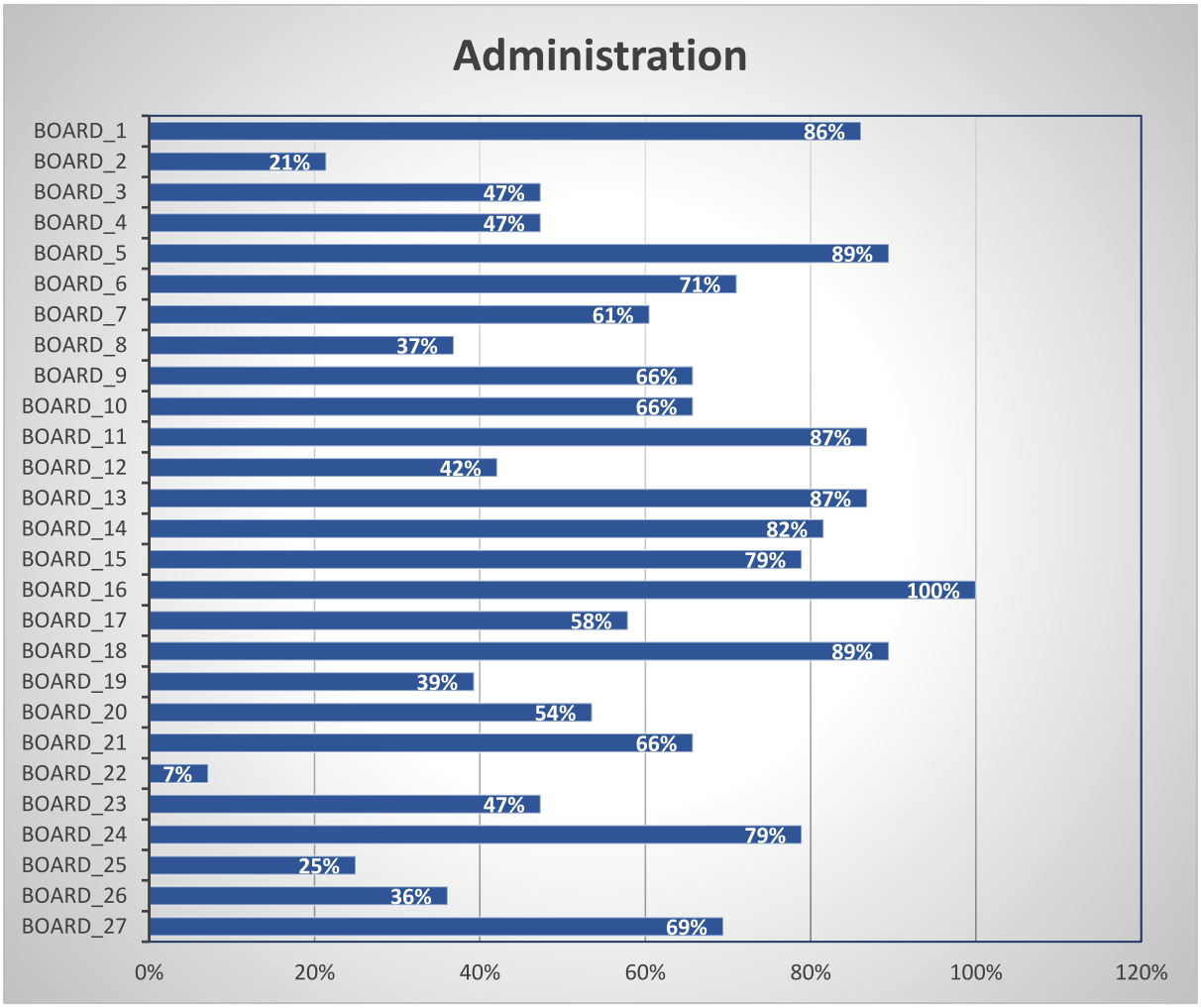



*Figure 3: Overall Performance of the Boards in the Category of Administration*

Assimilating the complete results for the points allocated to Administration for each category of boards, it was found that only one of the boards secured 100% points in this category. Among the 27 boards assessed, 9 boards scored above 75%, indicating a positive trend. However, 10 boards scored below 50%, highlighting that significant progress still needs to be made.

## CURRICULUM

With regards to the Curriculum, the NEP 2020 and the NCF-SE 2023 suggest major reforms in the nature of knowledge acquired. The general idea is that assessments should be redesigned to encourage holistic development and promote learning. The total points allocated to Curriculum Variables for each category of boards are given below.

Total points allocated to Curriculum Variables for Common Boards: 57 Points (9 variables)

Total points allocated to Curriculum Variables for Higher Secondary Boards: 48 Points (7 variables)

Total points allocated to Curriculum Variables for Secondary Boards: 55 Points (8 variables)

### Common Boards (X and XII)

| | Curriculum Variables | Points |
|---|---|---|
| 1. | If Vocational Subjects and Optional Subjects including Entrepreneurial, Sports, etc. are offered by the Board for Grade X learners. | 4 |
| 2. | If Vocational Subjects and Optional Subjects including Entrepreneurial, Sports, etc. are offered by the Board for Grade XII learners. | 2 |
| 3. | If Schools in the Board offer Health and Wellness instruction (including courses involving Nutrition, Adult Education, etc.) to the learners. | 1 |
| 4. | If the amount of time dedicated to particular subjects is in alignment with the minimum requirements specified by the NCF-SE 2023. | 5 |
| 5. | If Holistic development of learners is taken care of through innovative pedagogies, experiential learning, creativity, and critical thinking. | 1 |
| 6. | If the Learning Outcomes are fine-tuned to introduce Learning Outcome based assessment in all grades. | 1 |
| 7. | If courses like Drawing, Printmaking, Photography, Ceramics, or Film are provided by the Board. | 19 |
| 8. | If Vocational Courses like Automotive Repair, Bookkeeping, Carpentry, etc. are offered by the Schools in the Board. | 17 |
| 9. | If the Board provides information about internships, future careers, job placement assistance, etc. to the learners. | 7 |
| | TOTAL Points | 57 |

### Higher Secondary Boards (XII only)

| | Curriculum Variables | Points |
|---|---|---|
| 1. | If Vocational Subjects and Optional Subjects including Entrepreneurial, Sports, etc. are offered by the Board for Grade XII learners. | 2 |

| | | |
|---|---|---|
| 2. | If Schools in the Board offer Health and Wellness instruction (including courses involving Nutrition, Adult Education, etc.) to the learners. | 1 |
| 3. | If Holistic development of learners is taken care of through innovative pedagogies, experiential learning, creativity, and critical thinking. | 1 |
| 4. | If the Learning Outcomes are fine-tuned to introduce Learning Outcome based assessment in all grades. | 1 |
| 5. | If courses like Drawing, Printmaking, Photography, Ceramics, or Film are provided by the Board. | 19 |
| 6. | If Vocational Courses like Automotive Repair, Bookkeeping, Carpentry, etc. are offered by the Schools in the Board. | 17 |
| 7. | If the Board provides information about internships, future careers, job placement assistance, etc. to the learners. | 7 |
| | TOTAL Points | 48 |

## Secondary Boards (X only)

| | Curriculum Variables | Points |
|---|---|---|
| 1. | If Vocational Subjects and Optional Subjects including Entrepreneurial, Sports, etc. are offered by the Board for Grade X learners. | 4 |
| 2. | If Schools in the Board offer Health and Wellness instruction (including courses involving Nutrition, Adult Education, etc.) to the learners. | 1 |
| 3. | If the amount of time dedicated to particular subjects is in alignment with the minimum requirements specified by the NCF-SE 2023. | 5 |
| 4. | If Holistic development of learners is taken care of through innovative pedagogies, experiential learning, creativity, and critical thinking. | 1 |
| 5. | If the Learning Outcomes are fine-tuned to introduce Learning Outcome based assessment in all grades. | 1 |
| 6. | If courses like Drawing, Printmaking, Photography, Ceramics, or Film are provided by the Board. | 19 |
| 7. | If Vocational Courses like Automotive Repair, Bookkeeping, Carpentry, etc. are offered by the Schools in the Board. | 17 |
| 8. | If the Board provides information about internships, future careers, job placement assistance, etc. to the learners. | 7 |
| | TOTAL Points | 55 |

*Note: Some of the variables here encapsulate individual sub-variables bearing particular points resulting in a, seemingly, variegated distribution of points across variables. All the variables and sub-variables have been enclosed in the Checklist added to the report for better understanding.*

With this regard, an analysis of the subjects being taught by the boards in addition to the Primary, Mathematics, Language, Science, and Social Science, has been made.

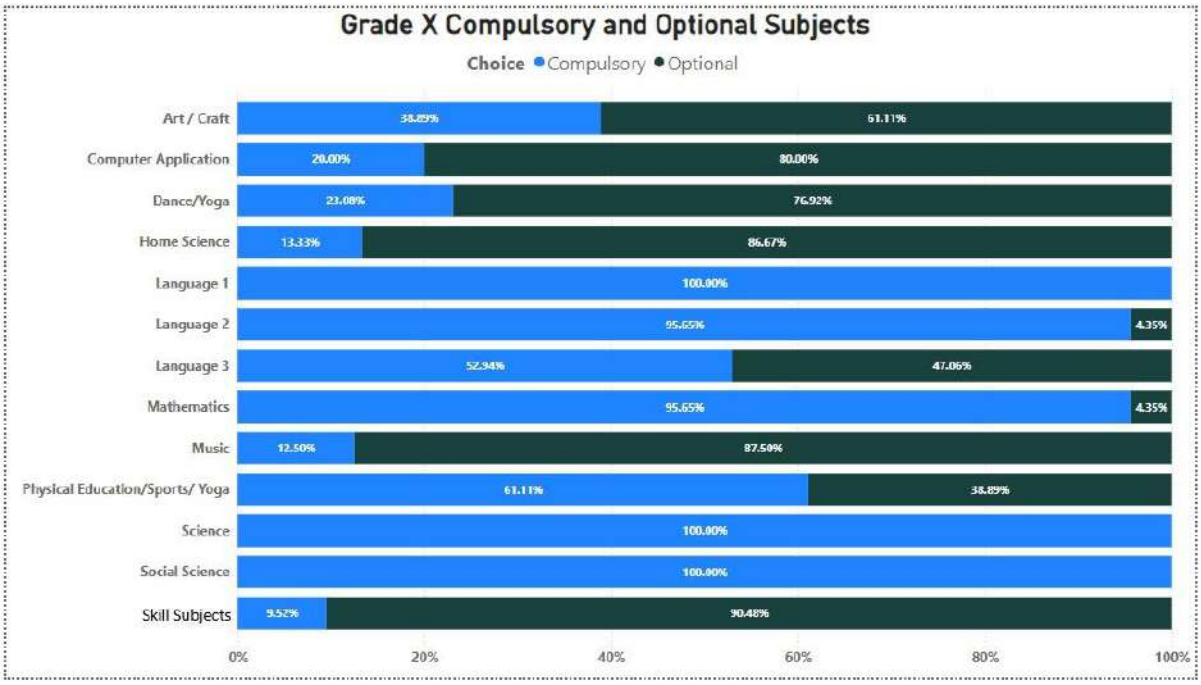



*Figure 4: Grade X Compulsory and Optional Subjects*

The data (illustrated in Figure 4) tells us that in Grade 10, 38.89% of the boards have Art/Craft as compulsory subjects in their curriculum, and 61.11% of boards provide Physical Education/Sports/Yoga as a compulsory subject. Ninety per cent of boards indicated that they are providing Vocational Education in Grade 10 as an optional subject, whereas 9.52 per cent of boards have made the curricular area compulsory. At this juncture, it is important to take a glance at what the NCF-SE 2023 says about Vocational Education in the secondary stage of education. It states that in Grade 9 and Grade 10, "learners will be given exposure to six vocations (two from each form of work) spread over two years. These will be at least equivalent to NSQF Levels 1 and 2, where relevant." (NCF-SE 9.3.2.3) It also goes on to state that "Vocational Education will also draw from and build on the competencies developed in other curricular areas." (NCF-SE 9.1) Thus an interdependence is established among different curricular areas making all the areas important for the holistic development of the learner. The NEP 2020 states,

> "Learners will be given increased flexibility and choice of subjects to study, particularly in secondary school - including subjects in physical education, the arts and crafts, and vocational skills – so that they can design their own paths of study and life plans. (NEP 2020, 4.9)"

Keeping the above NEP recommendations in perspective, it is apparent that a clear dissonance exists between the aspired educational standard and the current state of the school boards in this respect.

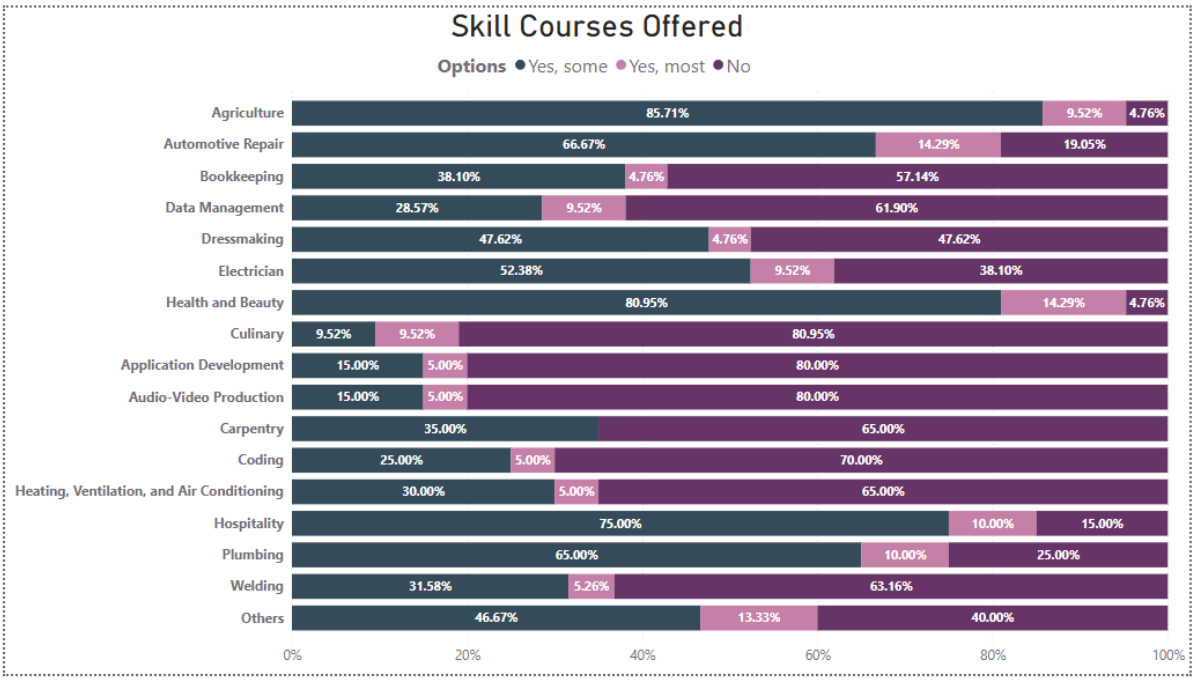



*Figure 5: Different Skill Programs provided by the Boards*

The schools affiliated with the boards are providing various Skill Courses. It is seen from Figure 5 that more than 80% of the boards provide courses on Health and Beauty and Agriculture. Courses like Automobile Repair and Hospitality were also taught by a high percentage of the boards. On the other hand, courses like Coding, Application Development, and Audio-Video Production are taught by very few boards. In alignment with the present trends of exponential growth in technology, it is imperative that skill courses pertaining to machine learning, artificial intelligence, data science, cybersecurity, blockchain technology, and cloud computing be inculcated for better future employability of the learners.


*Figure 6: Boards Offering Health and Wellness Courses*

Health and Wellness occupy an important position in the school curriculum, serving as the foundation for learners' overall well-being and academic success. Integrating health and wellness education helps learners develop healthy habits that can last a lifetime. It encompasses various

aspects such as physical fitness, mental health, nutrition, and hygiene, ensuring that learners understand the importance of maintaining a balanced lifestyle. Lessons on nutrition educate learners about making healthier food choices, which can prevent lifestyle-related diseases.

It was found that about 82% of the boards offered Health and Wellness courses, i.e., courses involving nutrition, sex education, or physical activities, to the learners (Figure 6). This has to be taken as a positive, but there is still room for improvement.

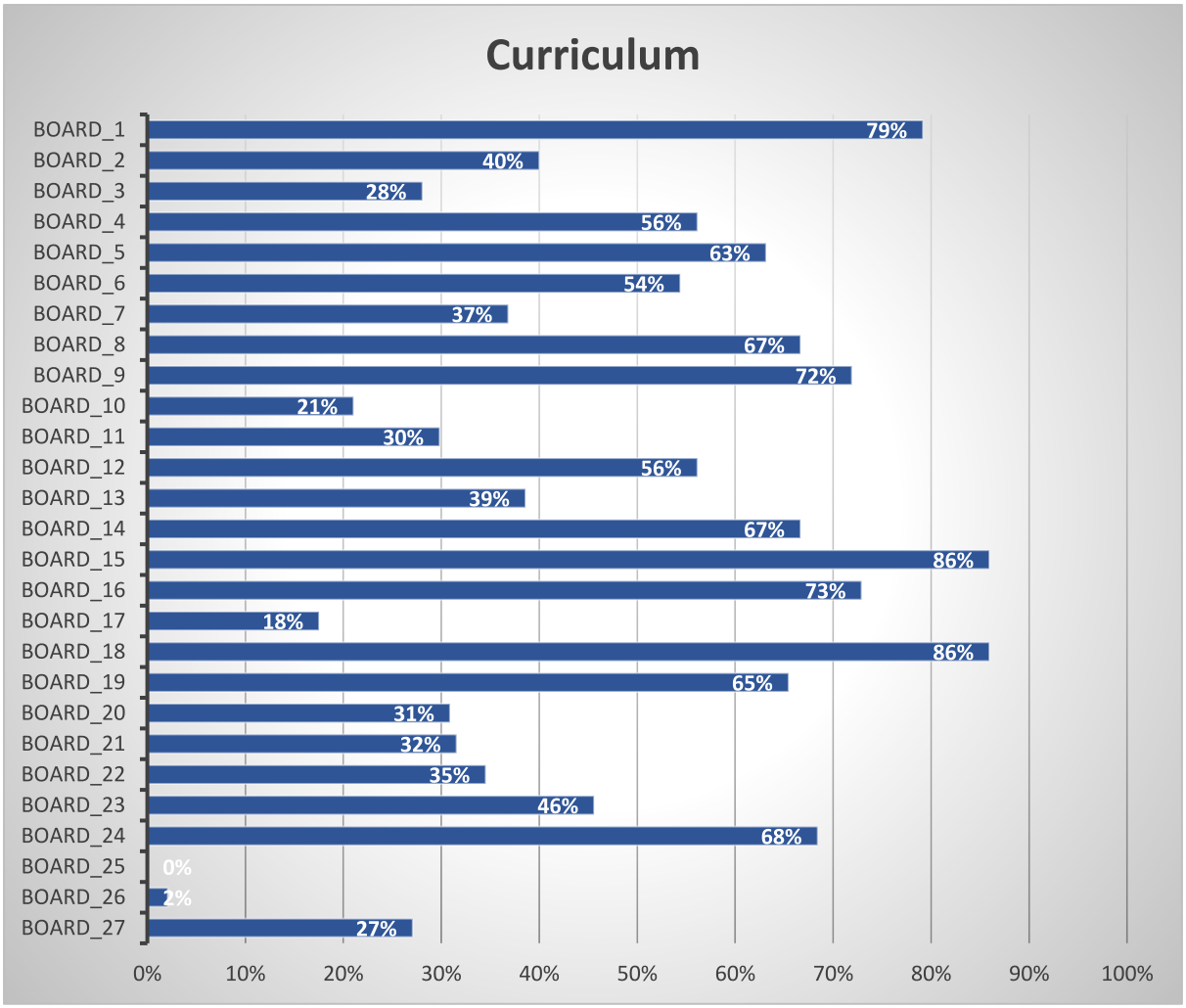



*Figure 7: Overall Performance of the Boards in the Category of Curriculum*

A comprehensive account of Curriculum shows that a total of 3 Boards scored more than 75% in the category (Figure 7). Nearly 52% of the boards scored below 50%. A need for reformation in this regard is highly sought after. One of the boards responded that they only conduct examinations, and therefore they did not attempt the questions related to the curriculum domain.

# ANALYSIS OF THE SECONDARY CURRICULUM OF THE COUNCIL FOR INDIAN SCHOOL CERTIFICATE EXAMINATIONS (CISCE) IN ALIGNMENT WITH THE NCF-SE 2023

NEP 2020 has divided the Secondary Stage of School Education into two phases. The first phase includes Grade 9 and Grade 10 and the second phase comprises Grade 11 and 12. Looking into the suggestions pertaining to Phase 1 of the secondary stage given by the NCF-SE 2023, the first important point that comes to the fore is regarding the study of 3 Languages. In Grades 9 and 10, the document suggests to, "study 3 Languages — R1, R2, R3 — at least two of which are native to India," (NCF-SE, 78). With this regard, a divergence is observed in the ICSE curriculum. The ICSE curriculum has made it compulsory for a third language to be taught but from Grade 5 to Grade 8 and not till Grade 10. In Grades 9 and 10, the curriculum proposes two languages to be compulsory, namely, English and a Second Language. Furthermore, according to the ICSE curriculum, till Grade 8 the third language is being assessed by Internal Examination, which is in contrast to the suggestion made by the NCF-SE 2023. The document suggests that all three languages, referred to as R1, R2, and R3, should be assessed by External Examination in Grade 10.

Apart from the 3 languages, NCF-SE 2023 suggests that 7 subjects, namely Mathematics and Computational Thinking, Social Science, Science, Art Education, Physical Education and Well-being, Vocational Education, and Interdisciplinary Areas, be taught in Grades 9 and 10. Additionally, the document mentions that "each of these subjects will be a well-integrated and coherent study of multiple disciplines," (NCF-SE, 78). That is to say that a subject like Science can be divided into Biology, Chemistry, Physics, and Earth Science, so on and so forth. The categorization of the ICSE curriculum is at odds with such a division. The syllabus of ICSE has been divided into 3 groups where the 1$^{st}$ Group comprises the compulsory subjects, i.e., English, Second Language, and History, Civics & Geography (which can be understood as Social Science), and the 2$^{nd}$ and 3$^{rd}$ Groups include the optional subjects like Mathematics, Science (Physics, Chemistry, Biology), Economics, Art, Performing Studies, Home Science, Cookery, among others. Of all the subjects offered in Group 2 and 3, a total of 5 subjects can be opted for by the learners. Thus, a learner can take a maximum of 8 subjects (including the compulsory subjects) according to the ICSE syllabus. But, the NCF-SE 2023 recommends a total of 10 subjects to be taught and assessed for awarding the 10$^{th}$ Board Certification to learners. Observing the possibility of the range of subjects offered under Group 3 of the ICSE syllabi to be aligned with categories of subjects such as Art Education, Physical Education & Well-being, Vocational Education, and Interdisciplinary Areas, recommended by the NCF-SE 2023, it is suggested that the same be mapped according to the prescribed syllabi.

Moreover, it is recommended by the document that the assessment schemes for Art, Physical Education and Well-being, and Vocational Education be prepared by the respective Examination Board, and both the assessment and evaluation be done locally at the school level with external examiners. This can also be implemented by the board.

In Phase 2 of Secondary Education, the NEP 2020 has clearly stated a move away from the current practice of dividing into streams of Science, Commerce, and Arts/Humanities. Instead, it suggests that learners choose subjects across Curricular Areas enabling learner engagement with a variety of subjects across different streams.

The NCF-SE 2023 has divided the curricular structure in Grades 11 and 12 into four groups. From Group 1, it is suggested that 2 languages be chosen, out of which one is supposed to be a native Indian language. From Groups 2, 3, and 4, four subjects are suggested to be chosen (with an optional fifth) from at least two of the groups. It is desired, in the longer run, "for learners to have to take subjects from all three Groups above to develop well-rounded thinking." (NCF-SE, 80) With regards to the ISC syllabus, it is hence suggested that a more diverse range of subjects be provided for the learners to choose from, such that the idea of a "well-rounded" education to be acquired by the learners can be made possible. The subjects can be categorized in a group-wise manner as suggested by the NCF-SE 2023. Furthermore, it is observed that the ISC syllabus provides only English as the compulsory language, whereas it is suggested by the NCF-SE 2023 for 2 languages to be made compulsory, out of which one is to be a native Indian language.

Vocational Education is a major area of focus as mentioned by both, the NEP 2020 and the NCF-SE 2023. "Vocational capacities, knowledge, and relevant values will be developed for all learners, and this will create the possibility of their joining the workforce after school if they choose to," says the NCF-SE 2023 regarding its objectives of approach to Vocational Education. Pertaining to this, it is suggested that definitive measures be taken. Apart from the seven Vocational Subjects offered to the learners under Group III – Section B of the ICSE syllabus, it is suggested to add more subjects such that the learners have enough options to choose from. Furthermore, in Grade 11 and 12 too, the learners should be allowed the option to choose from a range of Vocational Subjects. Necessary action should be taken in this regard. Additionally, it is to be ensured that Learning Outcomes for the subjects are suitably defined and assessed effectively.

## ASSESSMENT

The holistic and the higher-order learning, consecutively, has to be assessed by the examination and assessment mechanisms of the boards providing each subject with the appropriate mode of assessment. Concerning reforms prescribed for the board examinations, NCF-SE 2023 states that the marking schemes are, "as important as the test items themselves." (3.4.12.2h)

The total points allocated to Assessment Variables for all three categories of boards: Common Boards (Grades 10 and 12), Higher Secondary Boards (Grade 12 only), and Secondary Boards (Grade 10 only), are the same i.e., 25 points.

**Common Boards (X and XII), Higher Secondary Boards (XII only), and Secondary Boards (X only)**

| | Assessment Variables | Points |
|---|---|---|
| 1. | If the Board provides Examination Bylaws, Assessment Framework, Model Answer Paper, etc. with regards to Board Examination. | 6 |
| 2. | If the Board has the provision for Online and On-demand Examinations. | 2 |
| 3. | Number of Supplementary/Compartment board examinations that the learners are permitted to take. | 1 |
| 4. | If the Board conducts Semester Examinations | 1 |
| 5. | Different examination-related activities like Paper Setting, Exam Moderation, etc. taken up by the Board | 4 |
| 6. | In the Board Examinations, if various roles are appointed to School personnel, Board Representatives, or Moderators. | 8 |
| 7. | In the Board Examinations, the different kinds of training that the Board provides to the Administration Staff. | 1 |
| 8. | If the Assessment patterns for both Formative and Summative assessments are in accordance with the NCF-SE 2023. | 1 |
| 9. | If Holistic Progress Cards for 360-degree assessment have been piloted in the Board. | 1 |
| | TOTAL Points | 25 |

*Note: Some of the variables here encapsulate individual sub-variables bearing particular points resulting in a, seemingly, variegated distribution of points across variables. All the variables and sub-variables have been enclosed in the Checklist added to the report for better understanding.*

Analysing data received from the questionnaire reveals that the boards have varied approaches regarding the total marks for Board Examinations at both, Grade 10 and Grade 12. While most Education Boards remained inside the bracket of 500 – 700 marks (according to the received data) as the total for board exams (67.6% i.e., 23 boards at Grade 10 and 64.7% i.e., 22 boards at Grade 12), there were a few boards that had different approaches. Although an equivalence is sought after across the boards, it is also to be noted, as the concept note of the EQQ states, that equivalence is "not to be confused with cloning." Therefore, in the attempt to bring an equivalence in terms of the marking schemes across boards, it is essential to see whether the learner's "achievement of competencies" (NCF-SE 3.4.12.2) and learning outcomes are measured by the assessments effectively across the different boards. If such an equivalence is attained, then the total marks, regardless of their value, will become an efficient indicator of the curricular goals accomplished by the learners.

The NCF-SE 2023 makes a clear distinction between the two types of assessment in School Education, Formative Assessment and Summative Assessment. While the former "is used as a part of and as input to the teaching-learning process," the latter "is about the evaluation of achievement of learning over a period of time." (NCF-SE 3.4.5) Thus, Formative Assessments could be seen as *Assessments for Learning* as tools by the teachers to understand the effectiveness

of the employed teaching pedagogy and *Assessments as Learning* by the learners to get a clear idea of their shortcomings and strong suits. The Summative Assessments, on the other hand, can be seen as the *Assessments of Learning* that help to gauge the achievement of competencies and learning outcomes of the learner. The NEP 2020 desires to make the culture of assessment more "regular and formative" (NEP 2020, 4.34) in the schooling system. The data revealed that a single board gives "50% of total practical marks" as weightage to Formative Assessments both, in Grade 10 and in Grade 12, none of the other boards come close to the mark. In Grade 12, 50% of the boards give either "no" or un-specific weightage to Formative Assessments. Approximately 38.2% of the boards give 20% weightage to Formative Assessments. It was observed that a Board gave only 10% weightage to the Formative Assessments. This lack of emphasis on Formative Assessments continues in Grade 12 as well. 61.76% of the boards provide 0 per cent or no specific amount of weightage to Formative Assessments in Grade 12. 23.52% of the Boards provide only 20% weightage to it. A Board provides 30% weightage to Formative Assessments in Grade 12p

In contrast to this, it is observed that 38.23% of the boards provide 80% weightage to Summative Assessments in Grade 10. Some of the Boards provide more than 80% weightage to Summative Assessments in Grade 10. In Grade 12, 29.4% of the boards put 80 per cent weightage on Summative Assessments. A Board was observed putting 100% weightage on Summative Assessments in Grade 12. On the other end of the string, it was noted that some Boards put only 20-30% weightage to Summative Assessments in both, Grade X and Grade XII. Therefore, there is a visible discordance in the emphasis laid upon Formative and Summative Assessments across Boards in both, Grade 10 and Grade 12. This is also in disharmony with the prescribed guidelines by the NEP 2020. Even the NCF-SE 2023 states that in the Secondary Stage, "regular formative assessments should be effectively practised for facilitating meaningful learning and constructive feedback." (NCF-SE 3.4.9.4) Thus, a major change is sought after across all Boards in the type of Assessment in accordance with whether the Assessment is *of Learning*, *for Learning* or *as Learning*. When asked whether the Assessment patterns for both Formative and Summative Assessments and formulated evaluation procedures are in accordance with extant NCF-SE, 73.52% of the Boards said "Yes". This might be a little reassuring considering that the patterns and procedures of assessment of Formative and Summative Assessments, notwithstanding their disproportionality as per the NEP 2020 and NCF-SE 2023, are being adhered to. Still, a push forward in this percentage is desired.

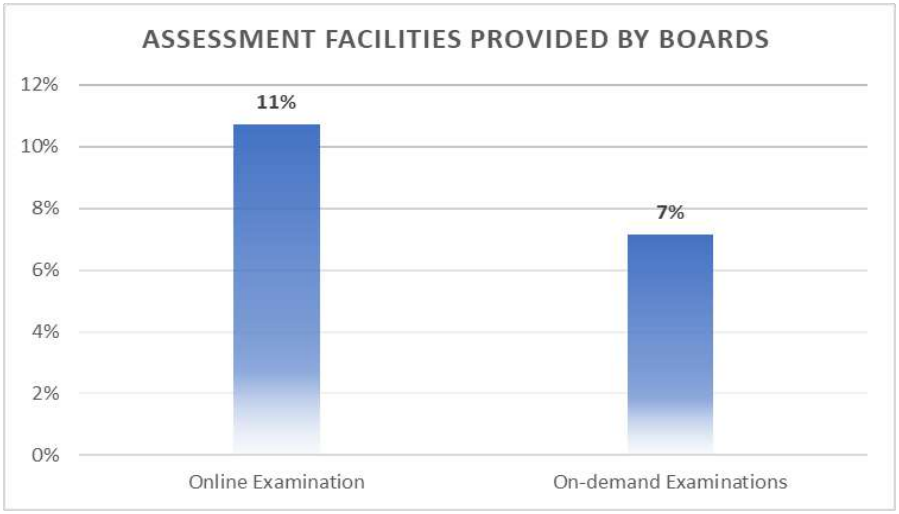



*Figure 8: Percentage of Boards Providing Assessment Facilities*

Both, the NEP 2020 and the NCF-SE 2023 have recurrent mentions of allowing for the provision of on-demand examinations so that learners can "appear for a Board examination in subjects they have completed and feel ready for." (NCF-SE 3.4.12.2d) According to the received data, 93% of the boards do not have the provision for on-demand examinations.

In accordance with the essential need to provide the learners with more opportunities to appear for the Board Examinations, as NCF-SE 2023 states its two major challenges as, "High Stakes" and giving "No Second Chances" (NCF-SE 3.4.12.1a), the provision for a greater number of Supplementary/Compartment Board Examinations will be in alignment with the aspirations of the NCF-SE 2023 and consecutively with the NEP 2020. It can provide the learners with more chances and, in consequence, reduce the high stakes of the Board Examinations.

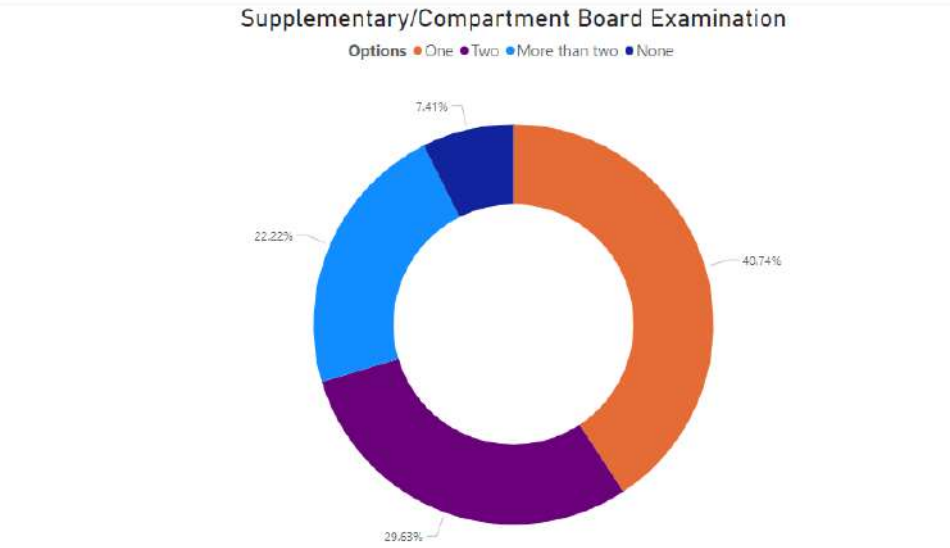



*Figure 9: Percentage of Boards Providing Supplementary/Compartment Board Examination Facilities*

From Figure 9, it is observed that 40.74% of the boards allow one Supplementary/ Compartment Board Examination to its learners and 29.63% allow two Supplementary/ Compartment Board Examinations. Nearly 22% of the boards allow more than two Supplementary/Compartment Board Examinations to their learners. However, there are 7.41 per cent boards that do not allow any Supplementary/Compartment Board Examinations to their learners.

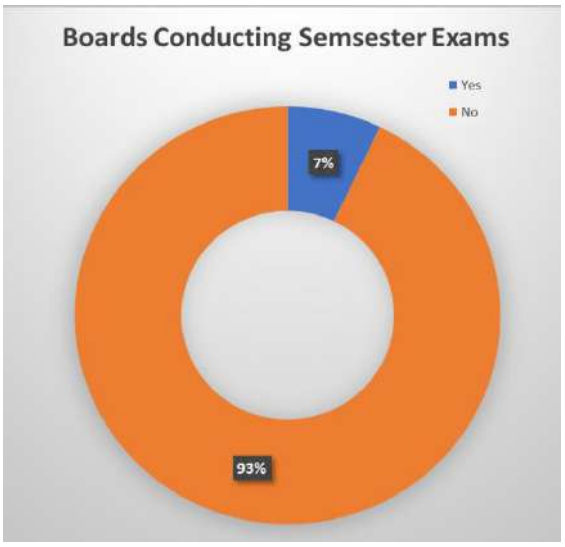



*Figure 10: Percentage of Boards Conducting Semester Exams*

The semester-wise system is aspired for according to the NEP 2020 and the NCF-SE 2023 as a step in the journey towards on-demand examinations. The NCF-SE 2023 states that:

> "All Boards should change to semester or term-based systems, where learners can test in a subject as soon as they have completed the subject, which would further reduce the content load being tested in any one examination. (NCF-SE 3.4.12.2)"

There are recurrent mentions of Holistic Progress Card in the NEP 2020 and the NCF-SE 2023. Section 3.4.10 of the National Curriculum Framework for School Education (NCF-SE) 2023, is dedicated solely to the Holistic Progress Card. It is mentioned here that the HPC is supposed to act as the "formal means of communication between the school and the home." As opposed to the comparison with others, the HPC will enable focus on the learner's progress. Thus, an emphasis is to be laid upon the piloting of HPC by all the educational boards.

PARAKH has developed the Holistic Progress Cards for the following stages:

1. Foundational
2. Preparatory
3. Middle
4. Secondary

Holistic Progress Cards incorporate multiple dimensions of learner growth, including academic performance, interpersonal skills, self-reflection, creativity, and emotional intelligence. This 360-degree assessment model aims to move beyond rote-memorization, encouraging a more holistic approach to learning and teaching. The cards include feedback from teachers, peers, and parents, ensuring a well-rounded perspective on the child's progress. By incorporating various stakeholders in the assessment process, the HPC aims to bridge the gap between home and school, making parents integral to the child's educational journey. These Holistic Progress Cards now needs to be piloted by the boards and implemented.

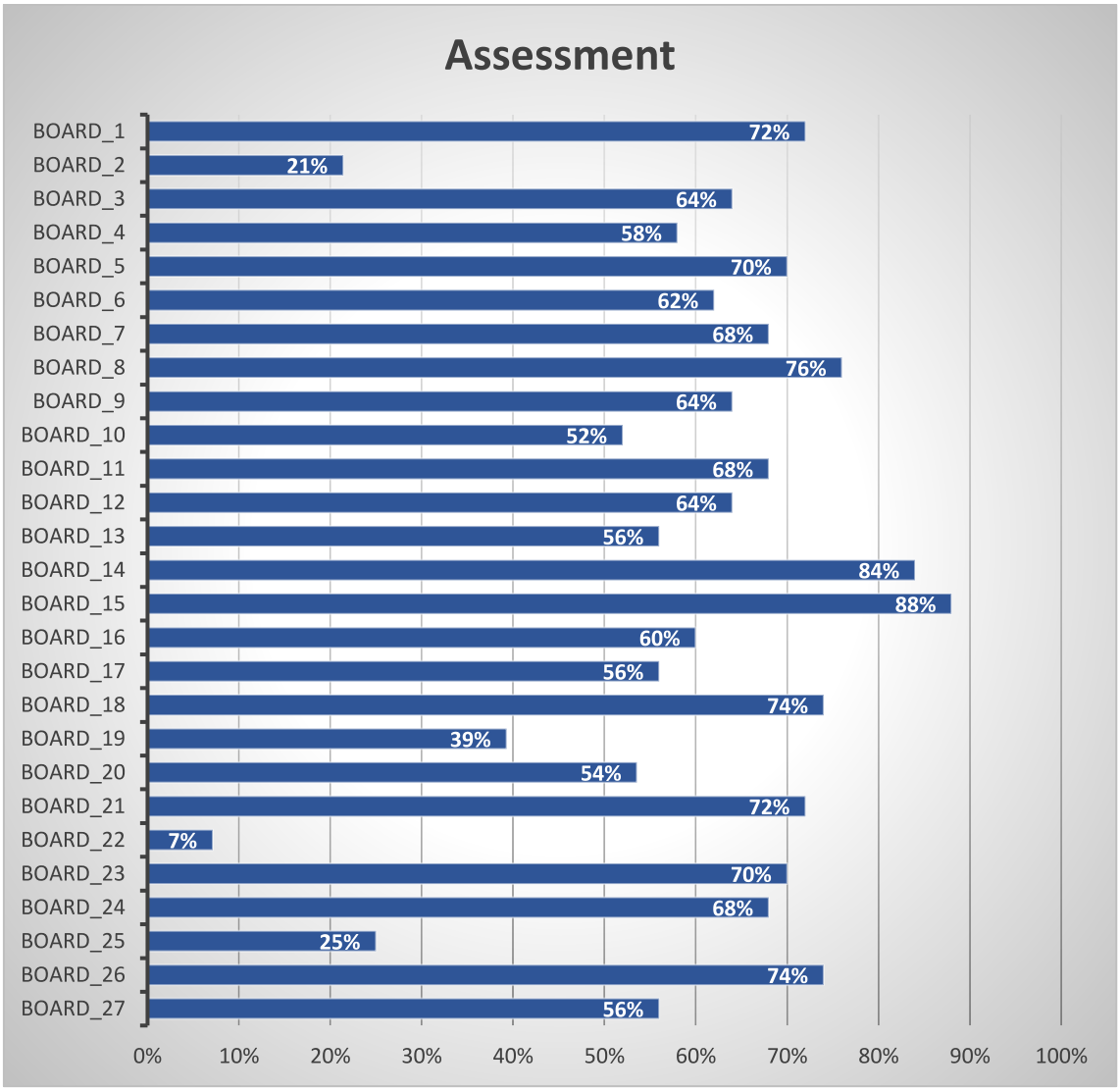



*Figure 11: Overall Performance of the Boards in the category of Assessment*

Looking at the overall score of the Boards in the category of Assessment, it was found that only 3 Boards received a score of more than 75%. On the other hand, four of the boards scored below 50%. Most of the Boards have scored between 50-75%. This is also indicative of the fact that most boards have an average performance in the category of Assessment.

## INFRASTRUCTURE

With regard to Infrastructure, 16 variables were allocated to gauge the condition of the schools affiliated with the boards with respect to the required norms. The total points allocated to Infrastructure Variables for all three categories of boards: Common Boards (Grades 10 and 12), Higher Secondary Boards (Grade 12 only), and Secondary Boards (Grade 10 only), are the same i.e., 75 points.

**Common Boards (X and XII), Higher Secondary Boards (XII only), and Secondary Boards (X only)**

| | Infrastructure Variables | Points |
|---|---|---|
| 1. | Percentage of Schools in your Board having access to electricity. | 1 |
| 2. | Percentage of Schools in your Board having access to internet. | 1 |
| 3. | Percentage of Schools in your Board equipped with other digital resources. | 3 |
| 4. | Percentage of Schools in your Board that have basic facilities like, Running Water, Indoor Plumbing, Flush Toilets, etc. | 9 |
| 5. | If the Schools in your Board have Infrastructure related to Examinations like Exam Halls, Strong Rooms, Photocopying Facilities, etc. | 5 |
| 6. | If the Schools in your Board have a defined space for Art room, Sport ground, Laboratory, Computer Lab, etc. | 8 |
| 7. | If the Schools in your Board provide Game/Sport Infrastructural facilities like Play Equipment, Qualified Teachers for Physical Activity, hold Sports Competitions. | 8 |
| 8. | Number of books available in the libraries of your Schools. | 1 |
| 9. | Number of new books prescribed by the Board to add to the libraries of its schools each year. | 1 |
| 10. | If the Libraries in the School are used for Studying/Research, Special Events, Individualized Tutoring, etc. | 6 |
| 11. | If the Computer Labs in the Schools affiliated to the Board in correct order and suitably qualified teachers are appointed to instruct computer classes. | 4 |
| 12. | If Laboratories in the Schools affiliated to the Board in correct order and suitably qualified teachers are appointed to instruct laboratory use. | 6 |
| 13. | If the schools of the Board are capable to provide compulsory Vocational Education in its schools for learners in Grade 9 or above. | 1 |
| 14. | If the Board provides opportunities like Affordable tuition fees, Home-schooling options, and career counselling to the learners. | 3 |
| 15. | If the Board plans for and regularly conducts audits for safety and security in the schools. | 1 |
| 16. | If most schools on the Board have basic infrastructure like Roof, Walls, Doors, Windows, etc. in good condition. | 17 |
| | TOTAL Points | 75 |

*Note: Some of the variables here encapsulate individual sub-variables bearing particular points resulting in a, seemingly, variegated distribution of points across variables. All the variables and sub-variables have been enclosed in the Checklist added to the report for better understanding.*

In the category of Infrastructure, there is room for improvement in areas like the availability of potable water, updated libraries, and sports facilities to ensure the holistic development of learners. From the procured data, it was found that a very low percentage of the boards have maintained basic infrastructure like running water, indoor plumbing, drinking fountains, sinks or handwashing stations, etc.

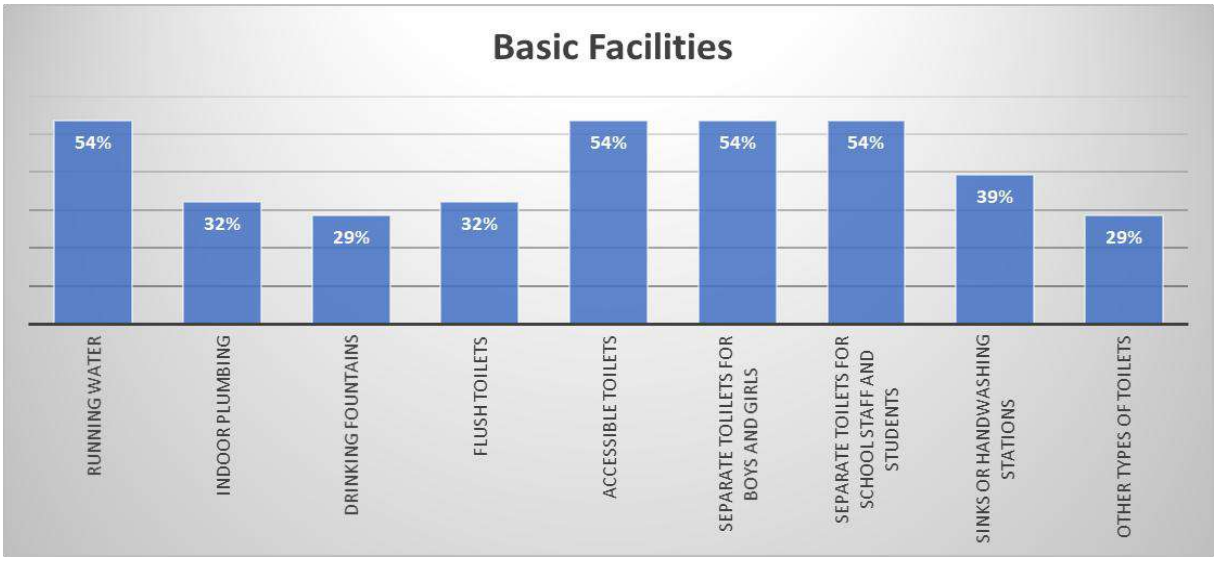



*Figure 12: Percentage of Basic Facilities provided by the Schools under the Boards*

This might have hazardous consequences for both learners and school staff. A definite initiative has to be taken to curb deficiencies in the area. This aligns with the objectives of the Swachh Bharat Abhiyan, which aims to promote cleanliness, hygiene, and sanitation across India. Ensuring clean and hygienic school environments is essential for the health and well-being of learners, and supports the broader goal of creating a cleaner and healthier nation.

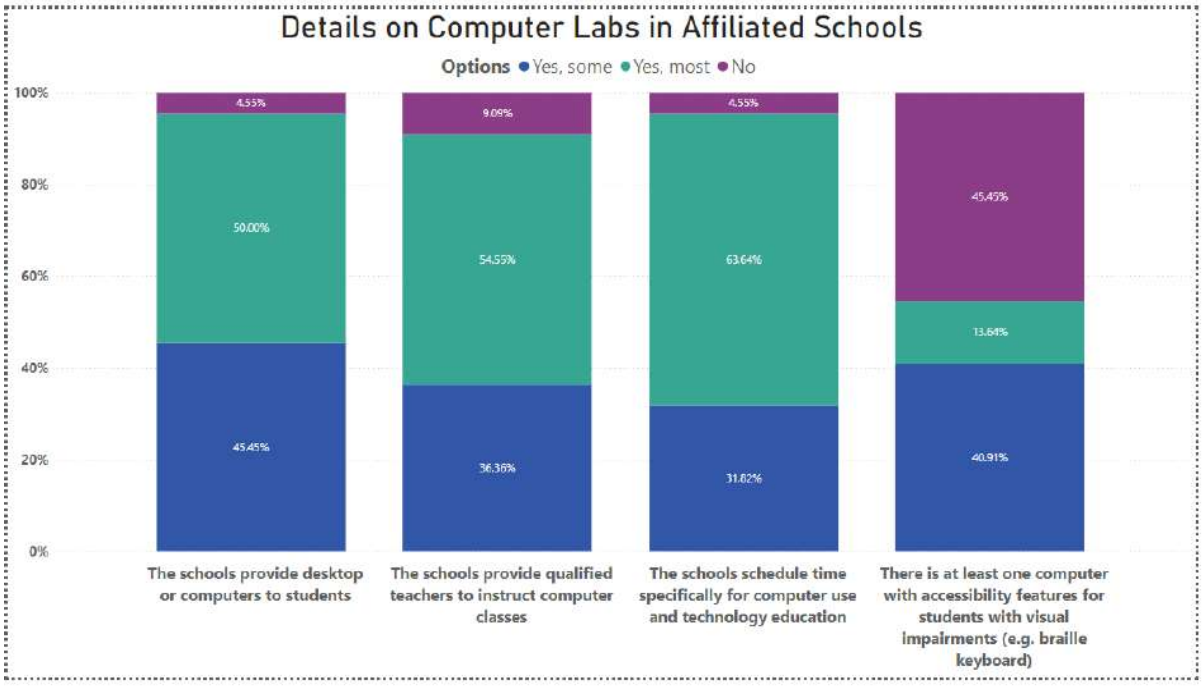



*Figure 13: Details on Computer Labs in Affiliated Schools*

Technology in education is emerging in India and it can enhance test security, objectivity, transparency, and record transfer. However, there are some schools and learners that do not have access to facilities needed for their basic education needs and many that do not have access to electricity and internet, or they are unreliable. It is apparent from Figure 13 that more than 50% of the boards have most of their schools equipped with computer labs, while 45% have some schools with such facilities. This implies that a significant majority of schools have access to computer labs to some extent.

As the education system shifts towards competency-based learning and assessment, it is crucial to ensure that the technology gap does not widen further, thereby denying opportunities for many learners to benefit. Improvements can be made to paper examinations by incorporating features of digital tests through different item types. Boards can offer workshops and training on different item types that can be used to assess the range of learners' competencies and reduce the scoring burden for more complex item types.

The primary responsibility of the boards pertains to examinations. Therefore, it is crucial that examinations are conducted as per international standards to ensure fairness and accuracy in learner assessment. This involves not only preparing and administrating the exams but also maintaining the integrity and security of the examination process.

Figure 11 represents the data on the availability of various infrastructures required for examination as reported by the school boards. The facilities considered are Exam Halls, Lighting, Photocopying Facilities, Strong Rooms, and Ventilation. For Exam Halls, 22.22% of the boards reported that some of their affiliated schools have these halls, while 77.78% reported full

availability across all their schools. Regarding lighting, 85.19% of the boards indicated full availability, whereas 14.81% reported a lack of adequate lighting. Photocopying Facilities were less available, with 44.44% of boards stating that some of their schools have these facilities, and 55.56% reporting full availability.

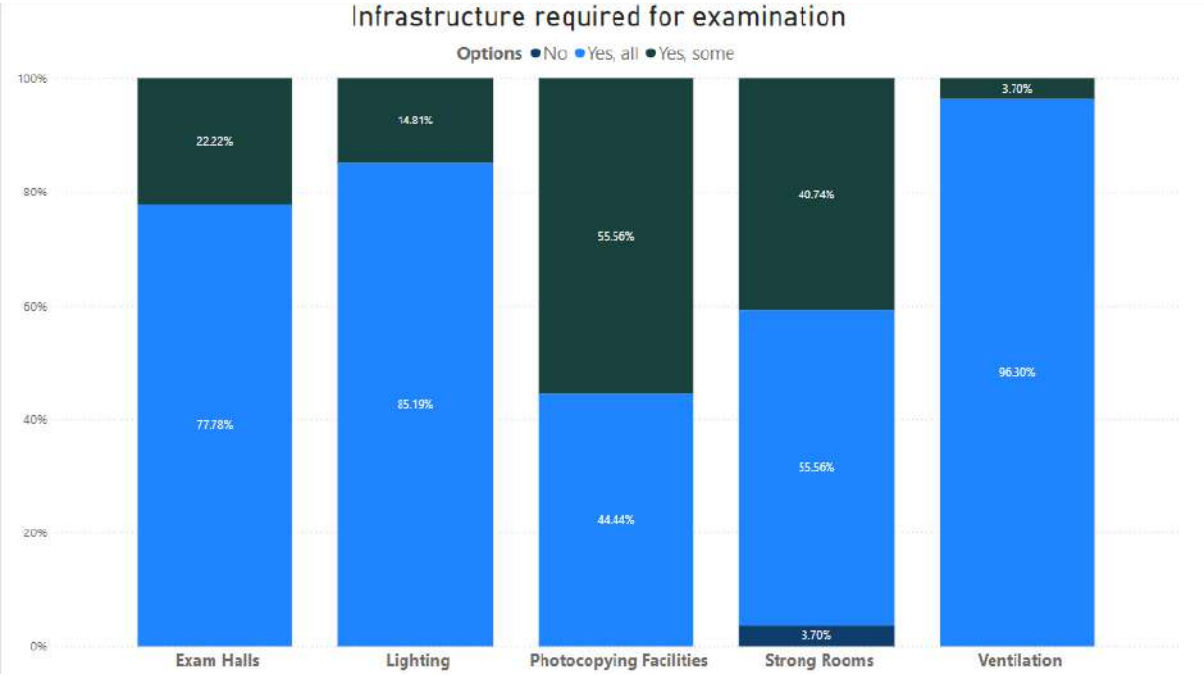



*Figure 14: Details on Infrastructures Required for Examination*

For Strong Rooms, 55.56% of the boards indicated that all their schools have strong rooms, while 40.74% reported partial availability, and 3.7% reported none. Ventilation was reported as highly available, with 96.30% of boards confirming full availability, and only 3.7% indicating a lack of adequate ventilation. Overall, it was observed that the School Boards have maintained these facilities well

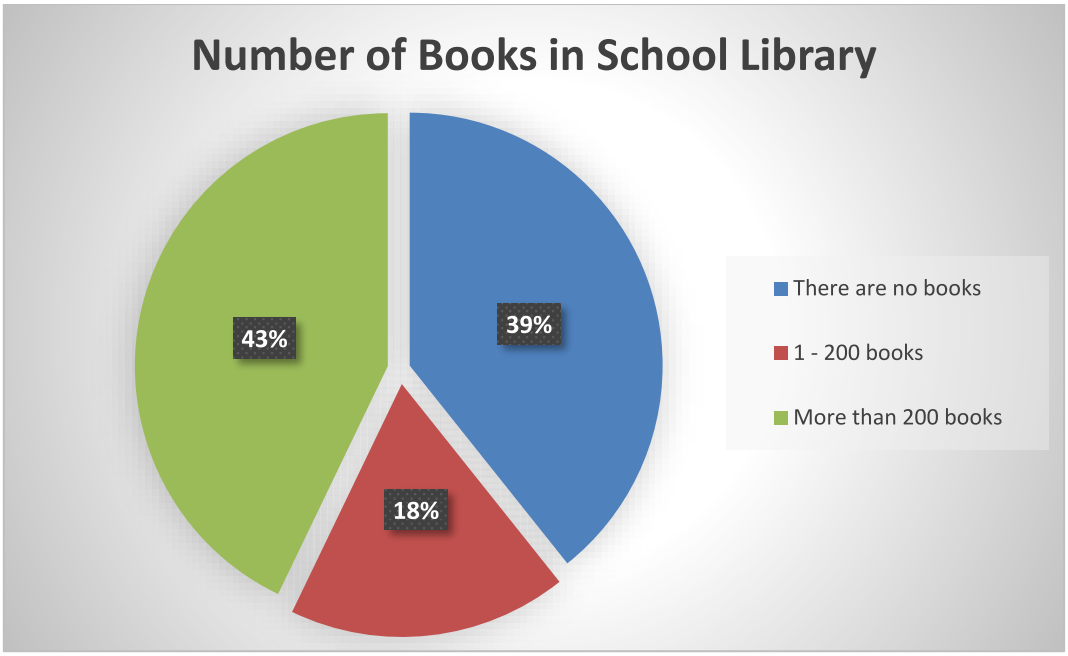



*Figure 15: Number of Books in School Library*

Libraries are considered essential for the growth and development of the learners. NCF-SE 2023 mentions "Library" in its recommended timetable up to the Middle Stage of Education. Post this, in the Secondary and the Higher Secondary levels, it states, "there is no separate Library time built into the timetable - learners may use time from the AEP (Additional Enrichment Period) for this purpose." In this context, the figure above shows that about 39% of the boards indicated that their affiliated schools do not have any books in their libraries which is a matter of concern. Forty-three per cent of the boards have more than 200 books in most of their schools, which is commendable. Only 18% of the boards have 200 or fewer books in their affiliated schools.

**Table 4. Internet Connection and Board Exams Correlation**

| | **R** | | **N** | | **p-values** | |
|---|---|---|---|---|---|---|
| | Secondary | Higher Secondary | Secondary | Higher Secondary | Secondary | Higher Secondary |
| **Internet connection for learners not available** | -0.34 | -0.46 | 11 | 8 | 0.31 | 0.25 |
| **Internet connection for learners available with interruption** | -0.42 | -0.40 | 11 | 8 | 0.2 | 0.32 |
| **Internet connection for learners available without interruption** | 0.33 | -0.24 | 14 | 12 | 0.25 | 0.46 |
| **Internet connection for teachers not available** | -0.83 | -0.68 | 11 | 8 | 0* | 0.06 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Internet connection for teachers available with interruption** | -0.76 | -0.69 | 11 | 8 | 0.01* | 0.06 |
| **Internet connection for teachers available without interruption** | 0.37 | 0.22 | 14 | 11 | 0.2 | 0.51 |
| **Internet connection for school administration staff not available** | -0.35 | -0.56 | 11 | 9 | 0.29 | 0.12 |
| **Internet connection for school administration staff available with interruption** | -0.75 | -0.63 | 11 | 9 | 0.01* | 0.07 |
| **Internet connection for school administration staff available without interruption** | 0.52 | 0.18 | 14 | 12 | 0.06 | 0.58 |

The percentage of schools with no access to electricity was negatively correlated with higher secondary performance (r = -.85, n =6, p =.86 [n.s.]). In contrast, exam performance was positively correlated to the percentage of schools with electricity, either uninterrupted or interrupted (correlations ranged from .16 to .40, n = 10 to 13, p = .25 to .6 [n.s.]). The percentage of schools with internet access was also positively correlated with performance (ranging from .24 to .44, n = 10 to 13, p = .2 to .45 [n.s.]). Reliable Internet access for teachers and learners is positively related to performance, while non-availability or interrupted availability of internet for teachers and learners is negatively related to performance. It should be noted that the correlations mentioned in this section are exploratory in nature. They suggest areas in which studies could be designed to gather stronger evidence.

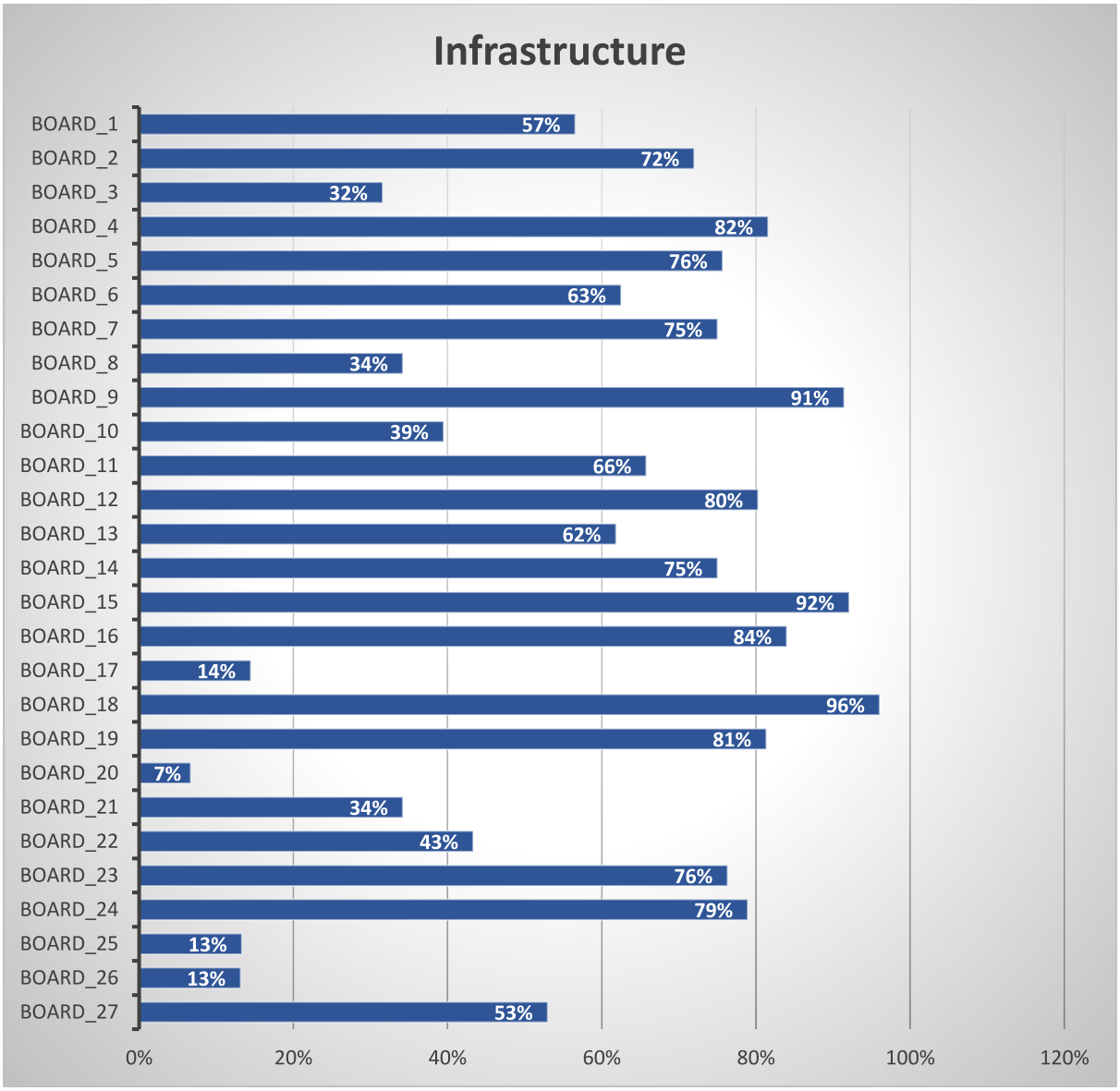



*Figure 16: Overall Performance of the Boards in the category of Infrastructure*

After a cumulative analysis, it was found that one of the boards is most closely aligned with the norms of equivalency with regard to Infrastructure. The board received a 96% score in the category. Approximately 44% of the boards have a score of 75% or above in Infrastructure whereas about 333% of the boards have scored poorly, getting a score of below 50%.

## INCLUSIVENESS

Both, the NEP 2020 and the NCF-SE 2023 have laid due emphasis on Inclusiveness. The NEP 2020 states:

> "All participants in the school education system, including Teachers, Principals, administrators, counsellors, and learners, will be sensitized to the requirements of all learners,

the notions of inclusion and equity, and the respect, dignity, and privacy of all persons. (NEP 2020, 6.19)"

The total points allocated to Inclusiveness Variables for all three categories of boards: Common Boards (Grades 10 and 12), Higher Secondary Boards (Grade 12 only), and Secondary Boards (Grade 10 only), are the same i.e., 28 points for 9 variables.

**Common Boards (X and XII), Higher Secondary Boards (XII only), and Secondary Boards (X only)**

| | Inclusiveness Variables | Points |
|---|---|---|
| 1. | If the Private schools affiliated to the Board is fulfilling the 25% reservation for Economically Weaker Sections. | 1 |
| 2. | If the Board has a policy for assessing gifted children. | 1 |
| 3. | If the Assessment Standards of the Boards covers CWSN accessible assessment. | 1 |
| 4. | If the Learning Outcomes include gender sensitivity and other constitutional values such as tolerance and empathy. | 1 |
| 5. | If the Board encourages its schools to provide an enabling environment for the enrolment of transgender children. | 1 |
| 6. | If the Board provides Books in Braille, Audio Books, and Indian Sign Language Books in their libraries. | 3 |
| 7. | If accommodations like Braille question papers, Accessible bathrooms, use of assistive devices, etc. are provided by the Boards for learners with special needs. | 17 |
| 8. | The proportion of schools in the Board that provide the accommodations for learners with special needs as mentioned above. | 2 |
| 9. | If most of the Schools affiliated to the Board have certified teachers on staff for learners with special needs. | 1 |
| | TOTAL Points | 28 |

*Note: Some of the variables here encapsulate individual sub-variables bearing particular points resulting in a, seemingly, variegated distribution of points across variables. All the variables and sub-variables have been enclosed in the Checklist added to the report for better understanding.*

The measures taken up by school boards pertaining to Inclusiveness show gaps in policies for assessing gifted children, gender sensitivity and children with special needs.

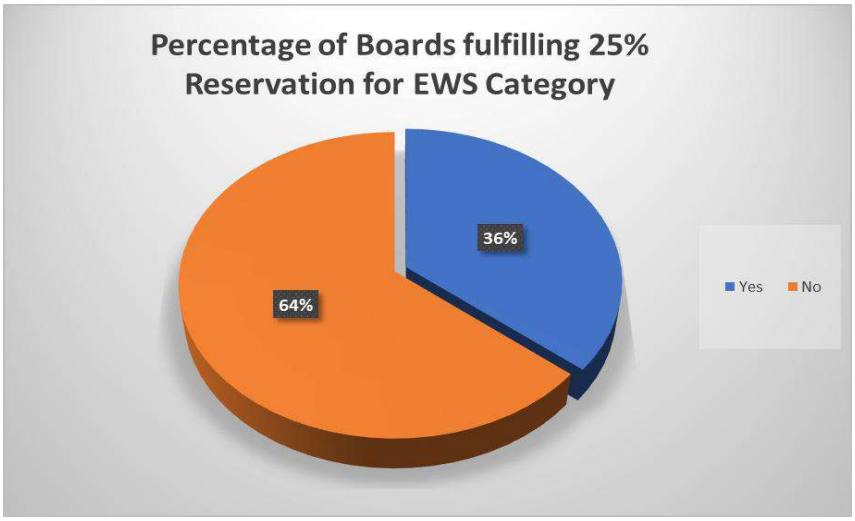



*Figure 17: Percentage of Boards fulfilling 25% Reservation for EWS Category*

While analysing the procured data, it was noted that only 36% of the boards provided 25% reservation to learners belonging to the EWS category in their private schools. This statistic was deemed to be far below the expected norm.

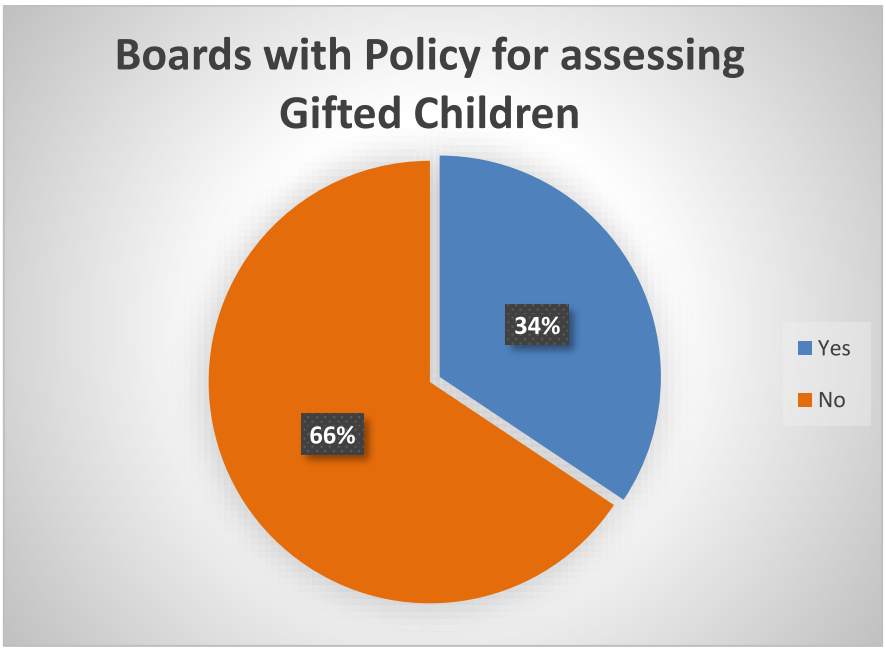



*Figure 18: Percentage of Boards with Policy for Assessing Gifted Children*

It was found that only 34.3% of the boards have a definite policy for assessing gifted children.

Sixty-two point five per cent of the boards have responded affirmatively to the inclusion of gender sensitivity and other constitutional values such as tolerance and empathy in their learning outcomes.

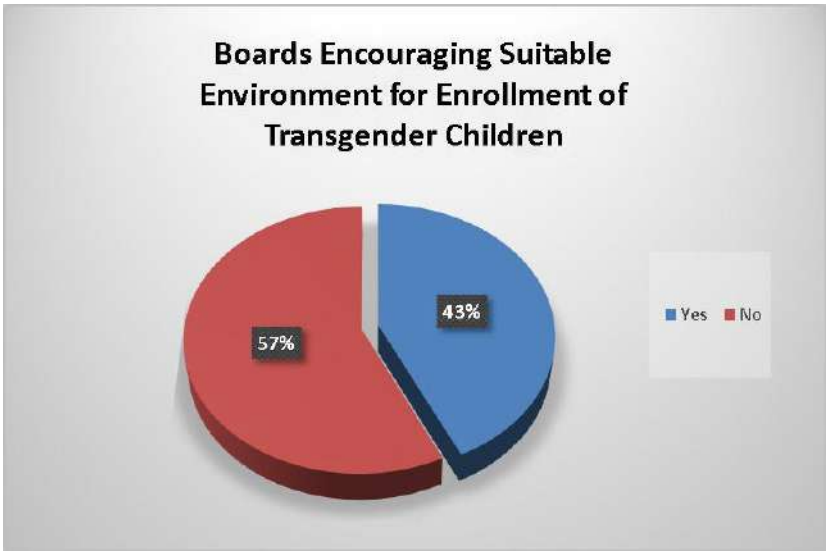



*Figure 19: Percentage of Boards Providing Suitable Environment for Transgender Children*

About 43% of the boards reported that they encourage affiliated schools to provide an enabling environment for the enrolment of transgender children in terms of awareness and sensitization among learners and staff. Such initiative to facilitate learner Inclusiveness is imperative to create awareness among learners and inculcate a sense of understanding and tolerance towards diversity.

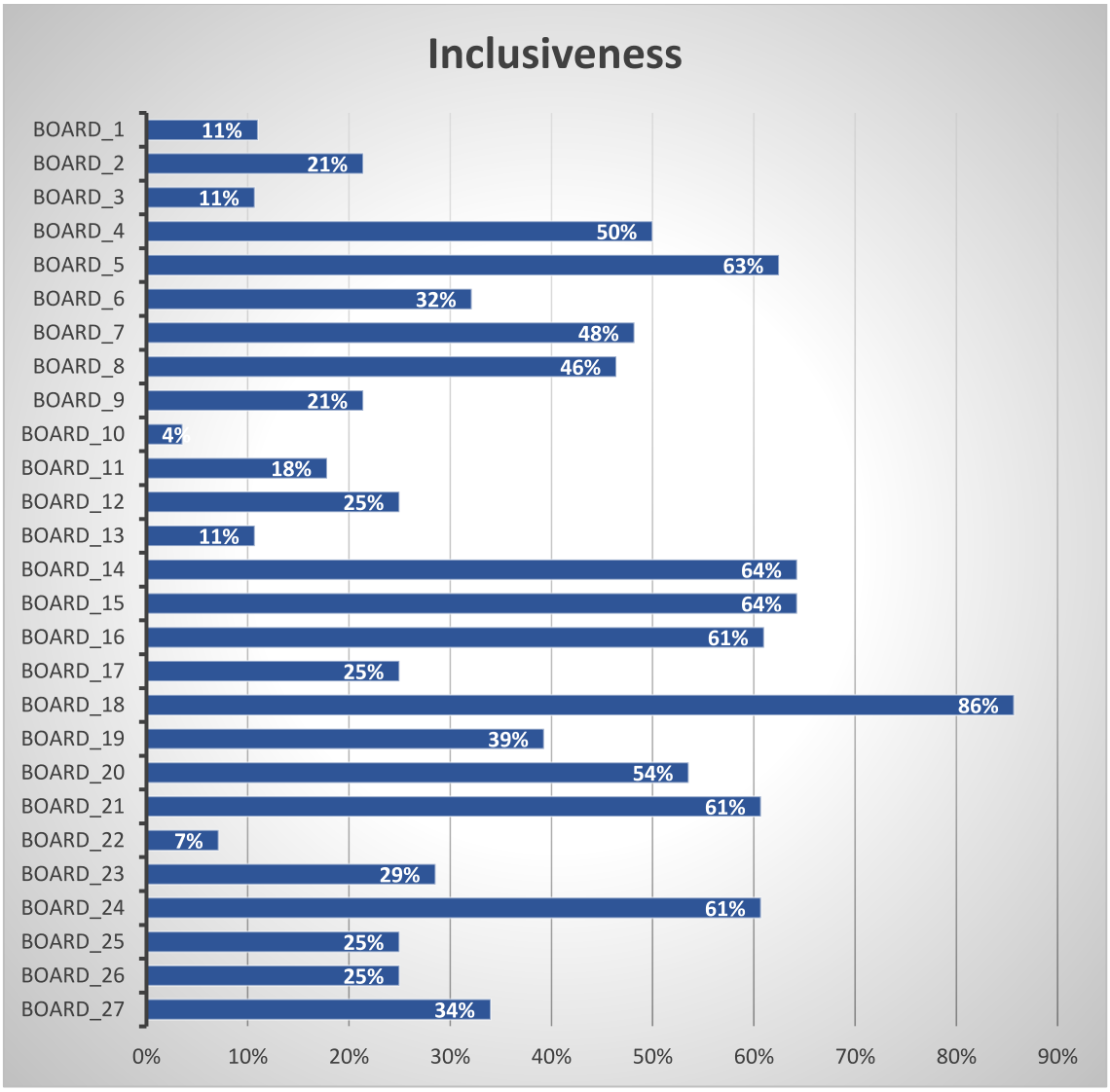



*Figure 20: Overall Performance of the Boards in the category of Inclusiveness*

All combined, one of the boards scored 86% in Inclusiveness. It was the only Board that scored above 75% in this category. Approximately 67% of the boards got an overall score of below 50% in Inclusiveness. This is indicative of the fact that radical reforms are to be brought into this category by these boards.

## PROFILE OF BOARDS

The figures below project the performance of individual Educational Boards in the 5 different categories of Administration, Curriculum, Assessment, Infrastructure, and Inclusiveness.

***Note:*** The score received by the individual Educational Boards has been converted into percentage format and then presented in the form of graphs below. Also, it is to be noted that this is an initial needs assessment based on data self-reported by the Boards.

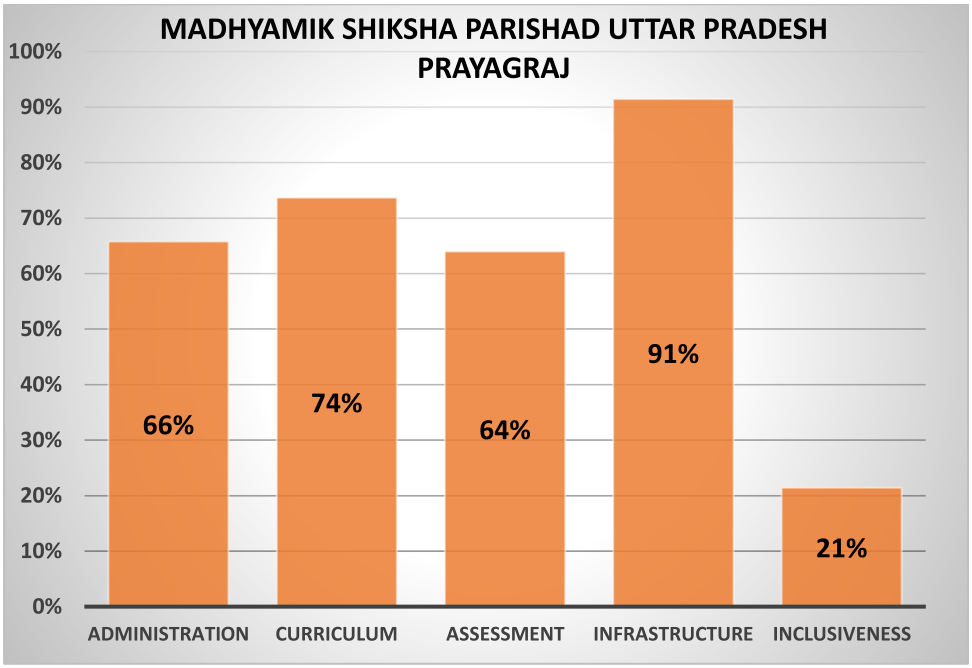



*Figure 21: Madhyamik Shiksha Parishad Uttar Pradesh*

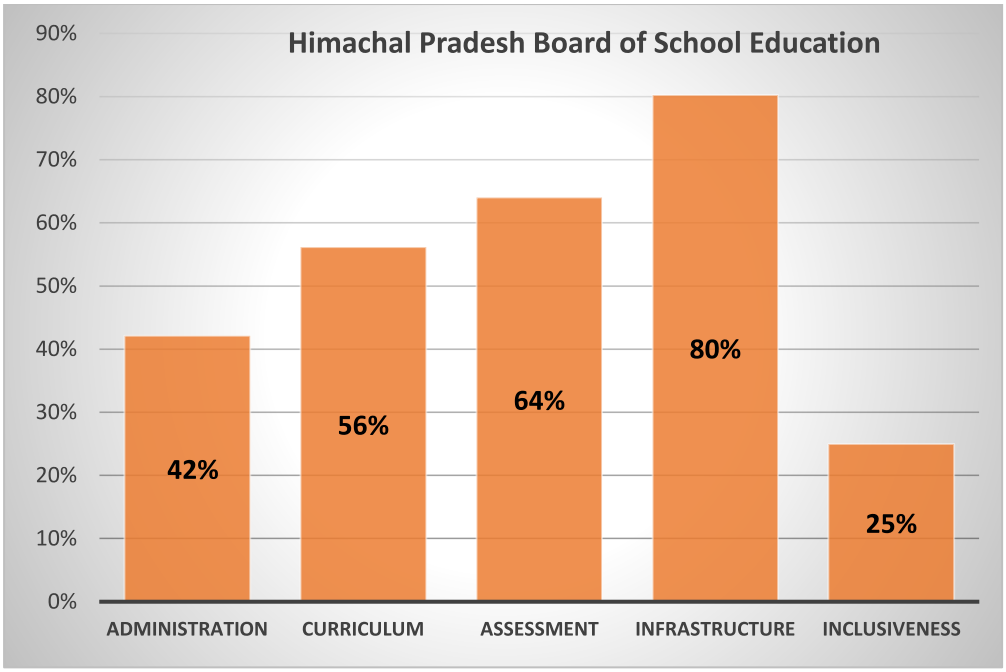



*Figure 22: Himachal Pradesh Board of School Education*

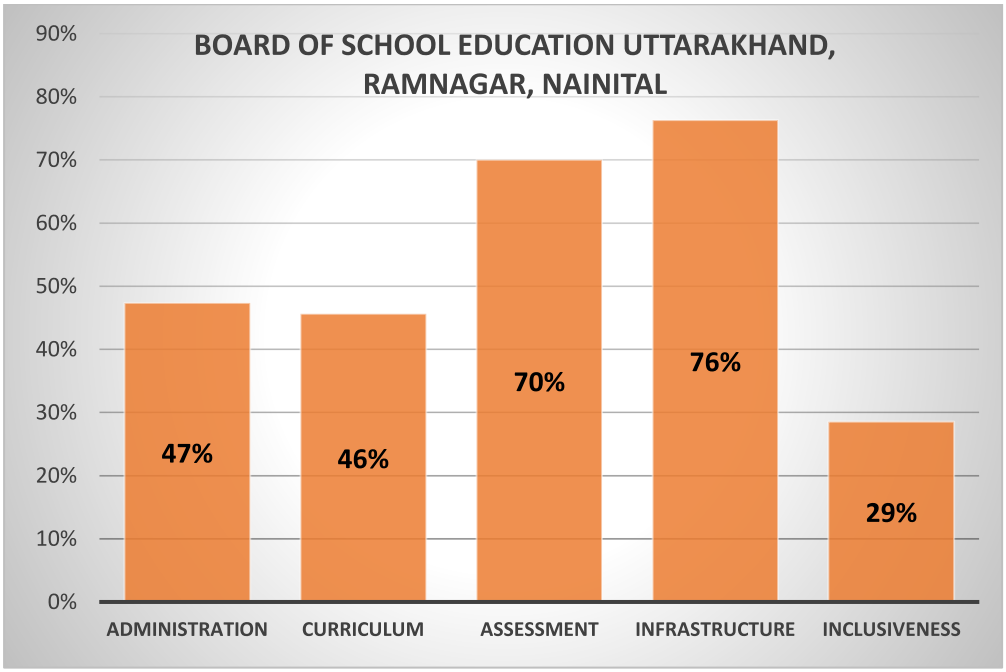



*Figure 23: Board of School Education Uttarakhand*

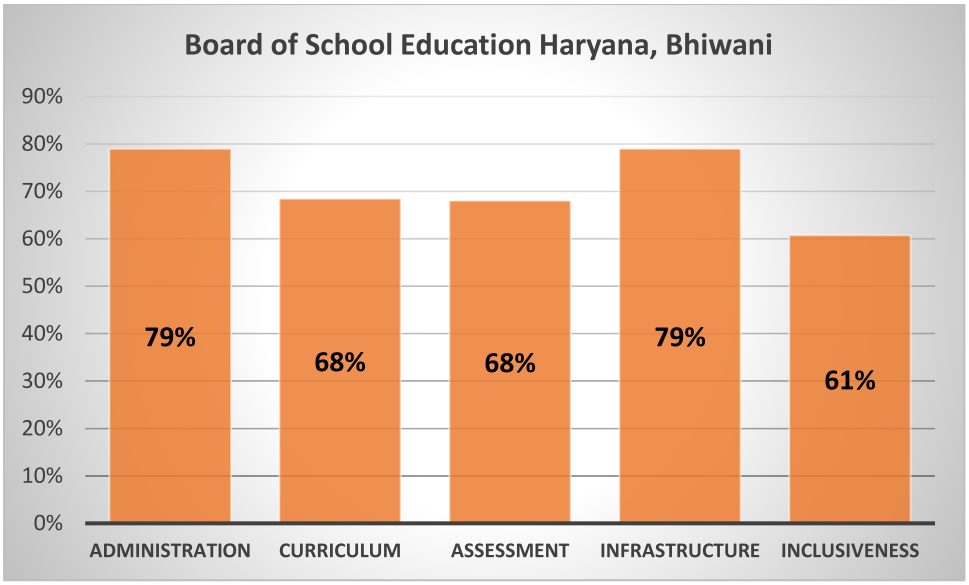



*Figure 24: Board of School Education Haryana*

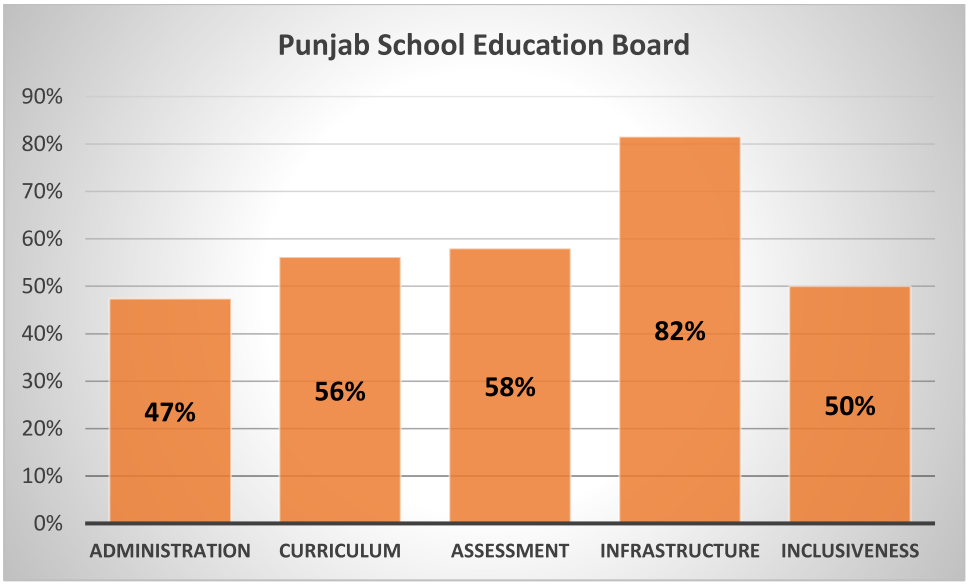



*Figure 25: Punjab School Education Board*

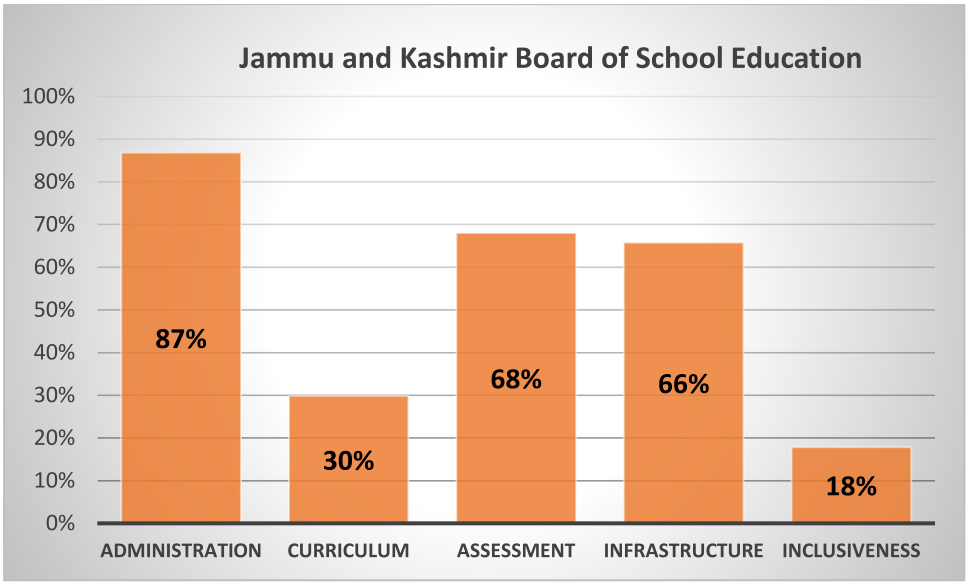



*Figure 26: Jammu and Kashmir Board of School Education*

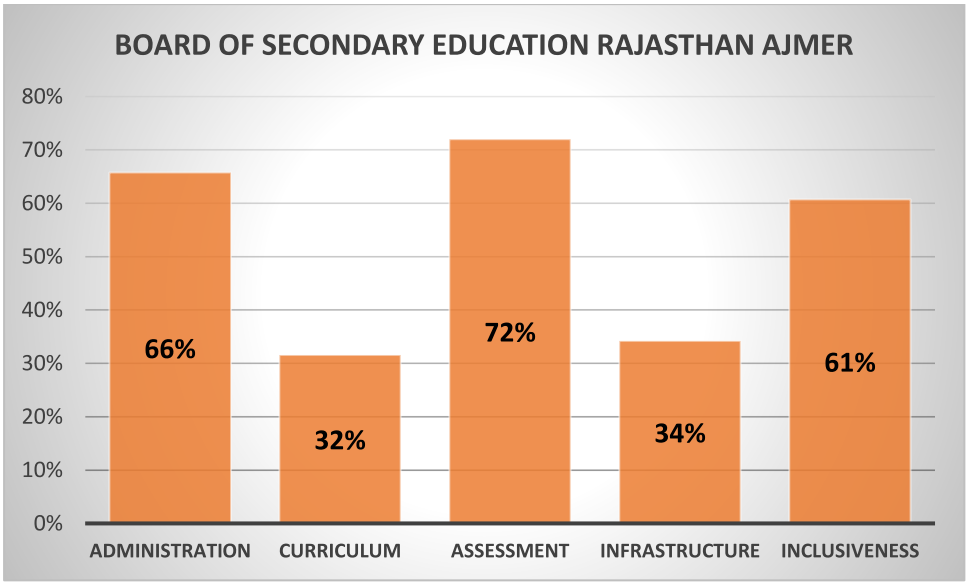



*Figure 27: Board of Secondary Education Rajasthan Ajmer*

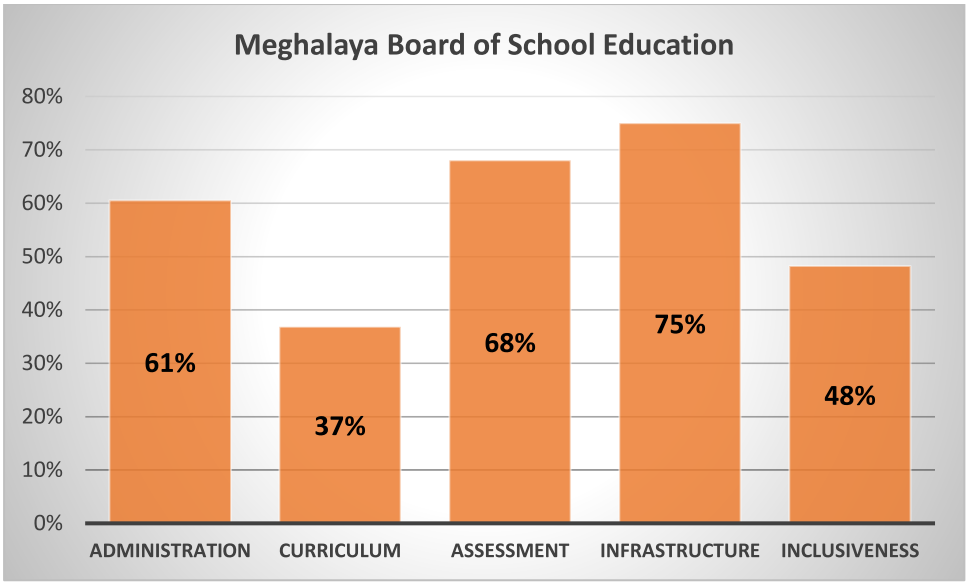



*Figure 28: Meghalaya Board of School Education*

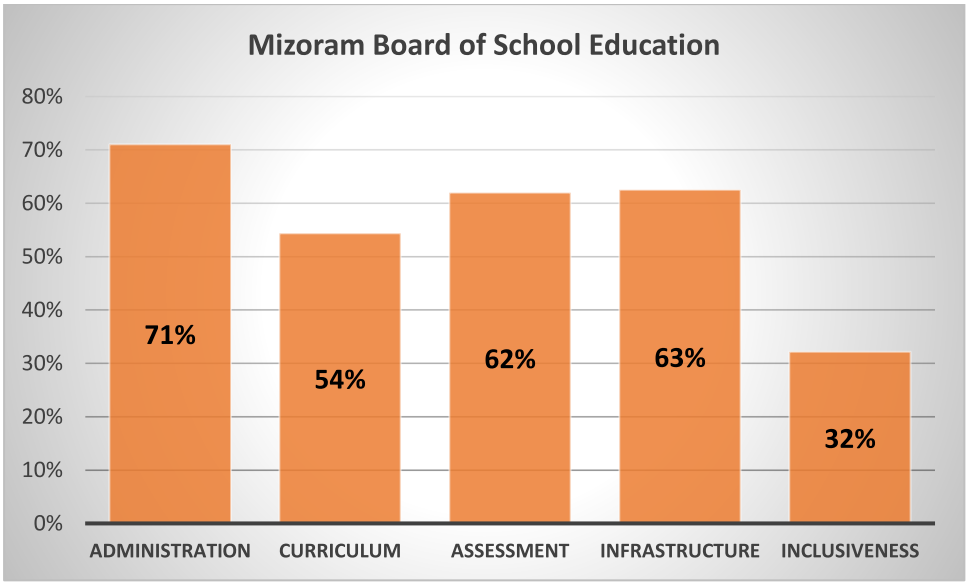



*Figure 29: Mizoram Board of School Education*

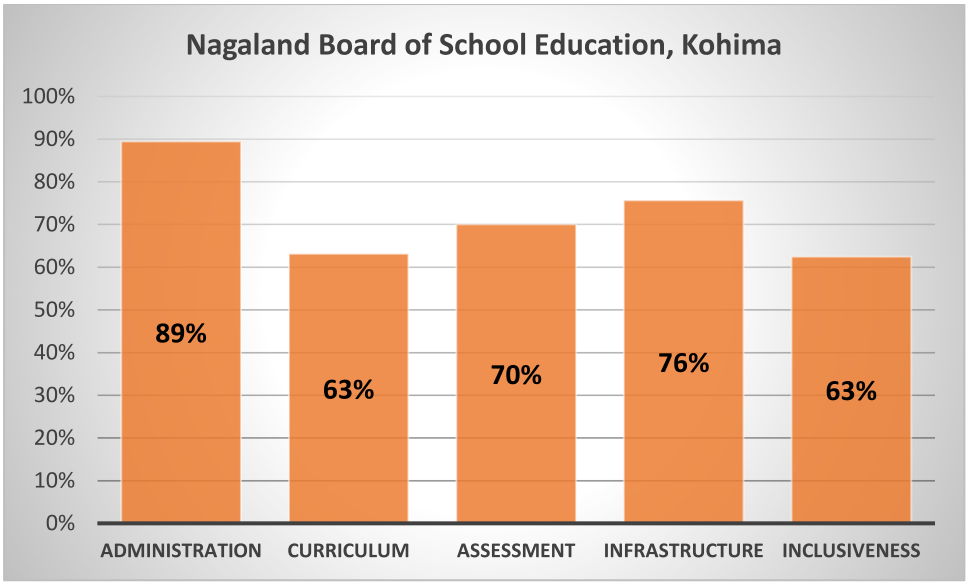



*Figure 30: Nagaland Board of School Education, Kohima*

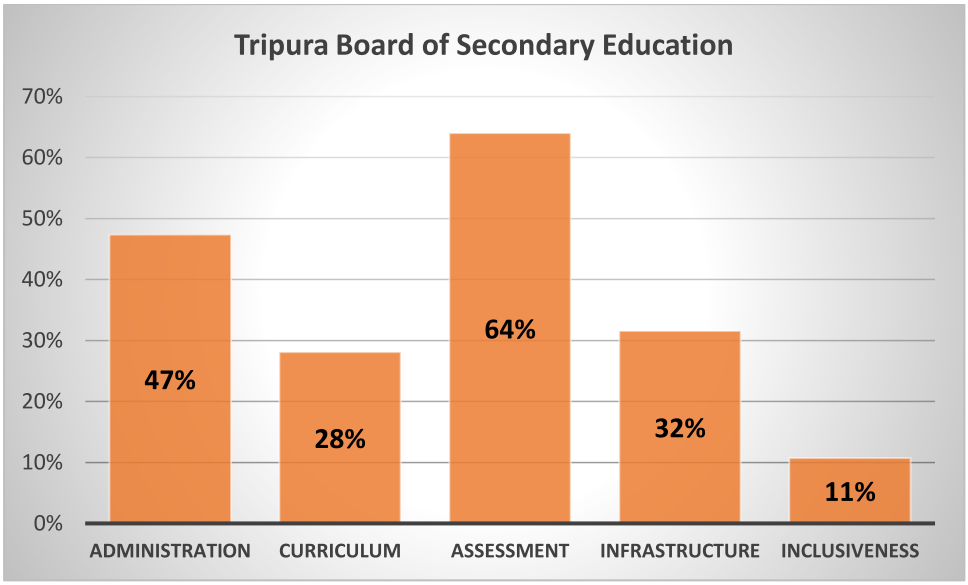



*Figure 31: Tripura Board of Secondary Education*

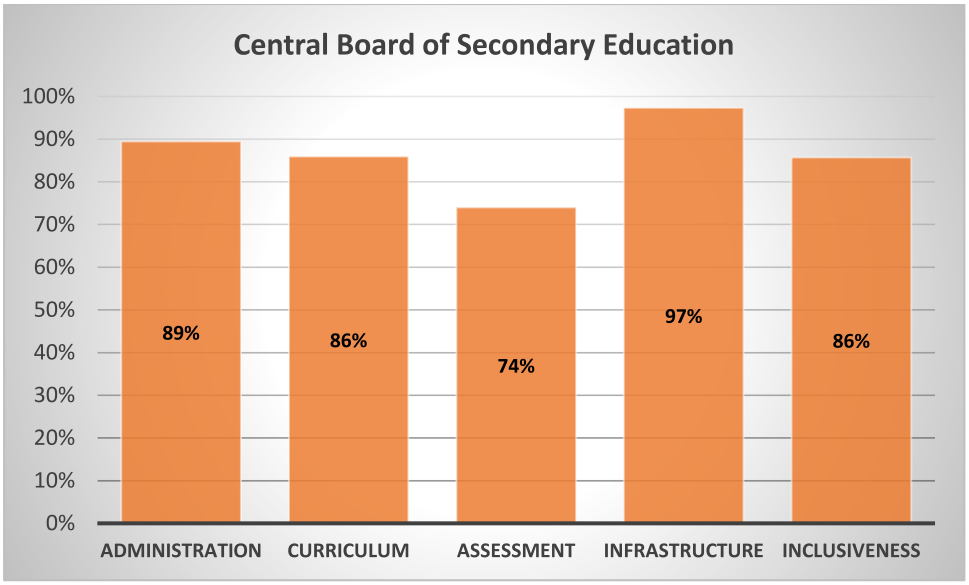



*Figure 32: Central Board of Secondary Education*

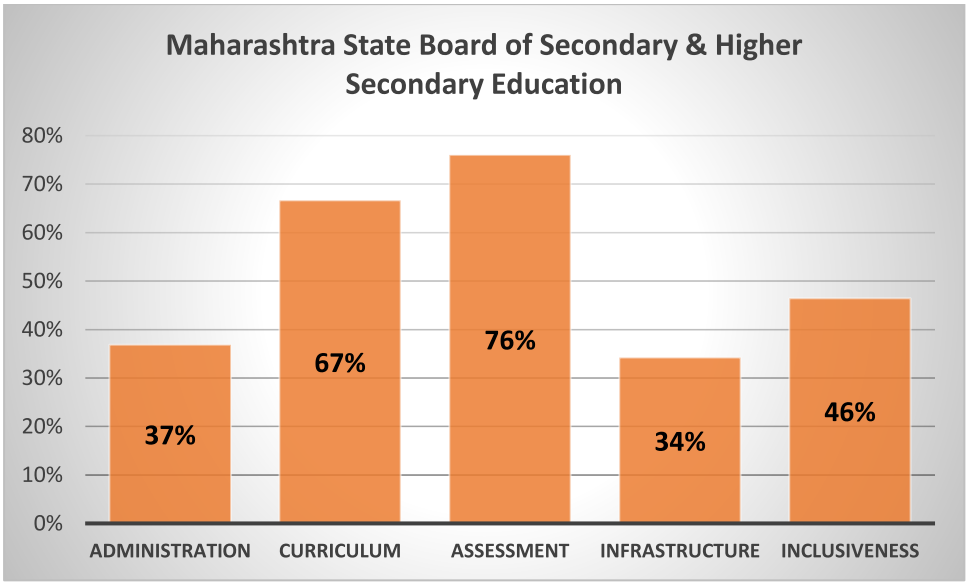



*Figure 33: Maharashtra State Board of Secondary & Higher Secondary Education*

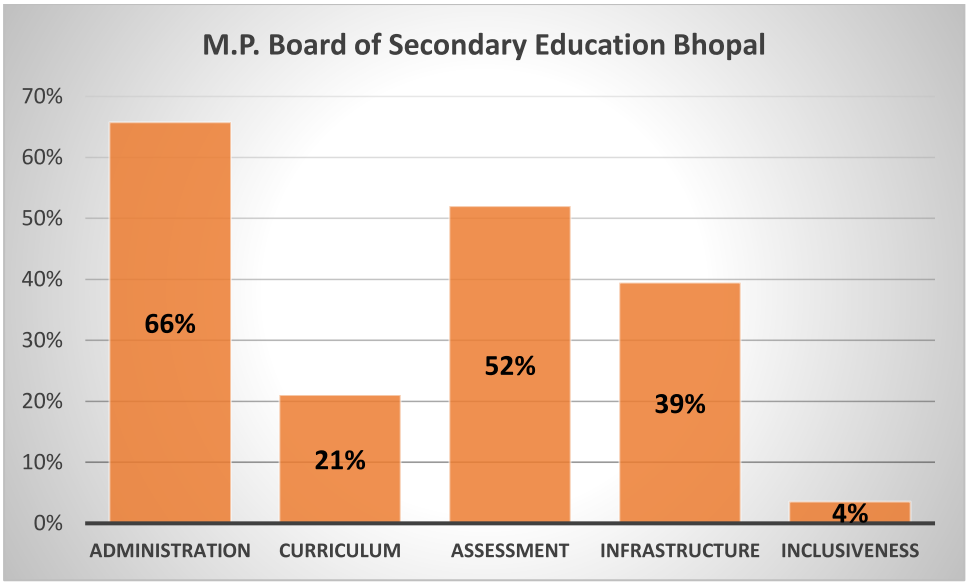



*Figure 34: Madhya Pradesh Board of Secondary Education Bhopal*

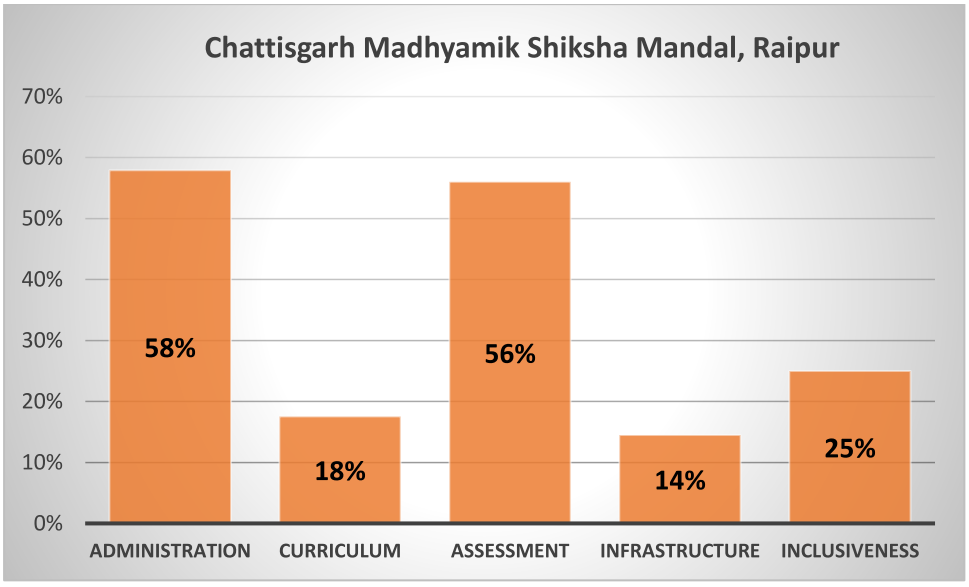



*Figure 35: Chhattisgarh Madhyamik Shiksha Mandal Raipur*

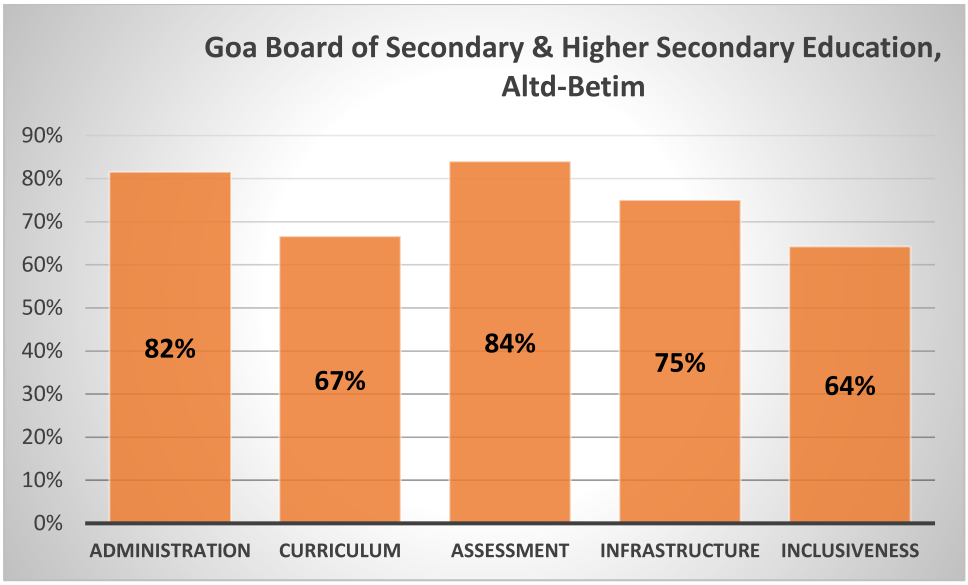



*Figure 36: Goa Board of Secondary & Higher Secondary Education*

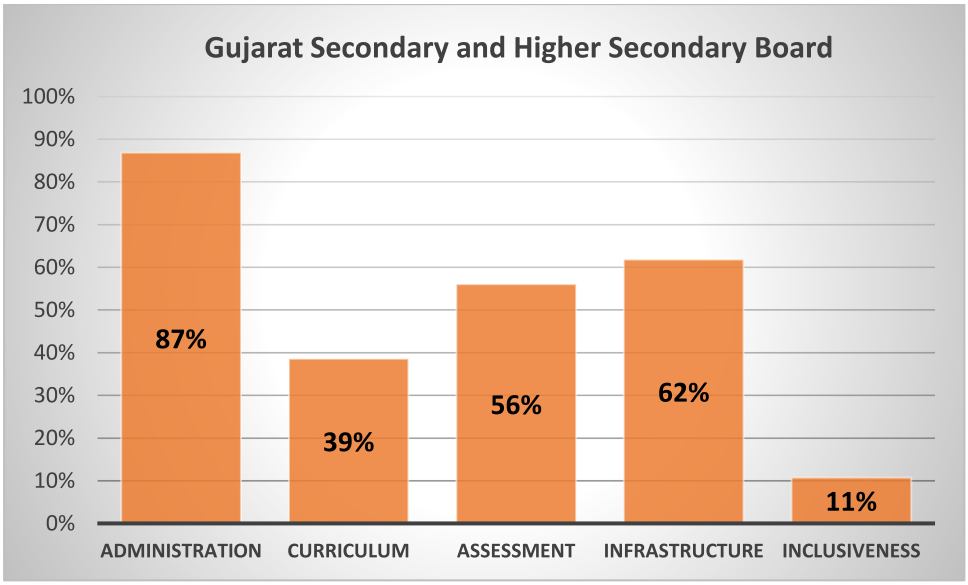



*Figure 37: Gujarat Secondary and Higher Secondary Board*

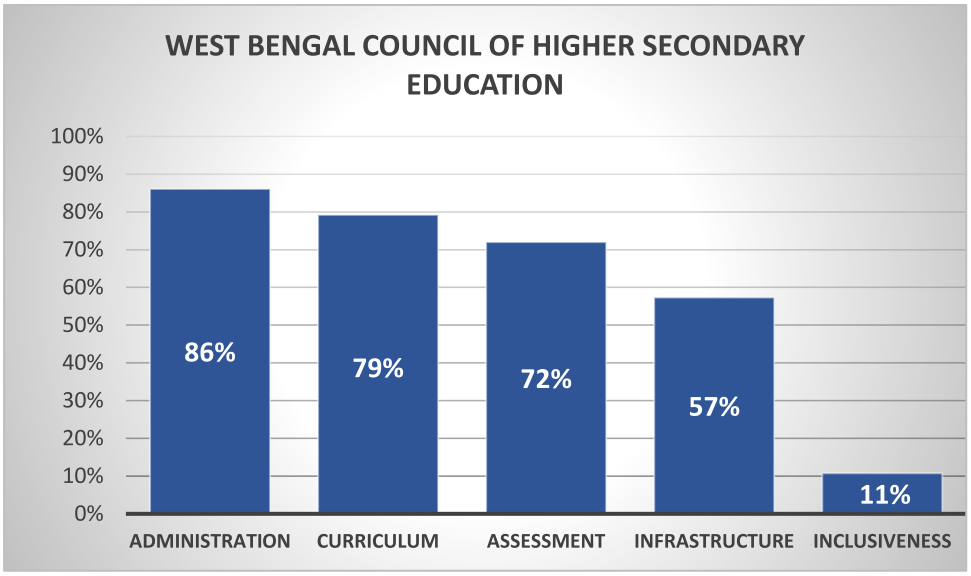



*Figure 38: West Bengal Council of Higher Secondary Education*

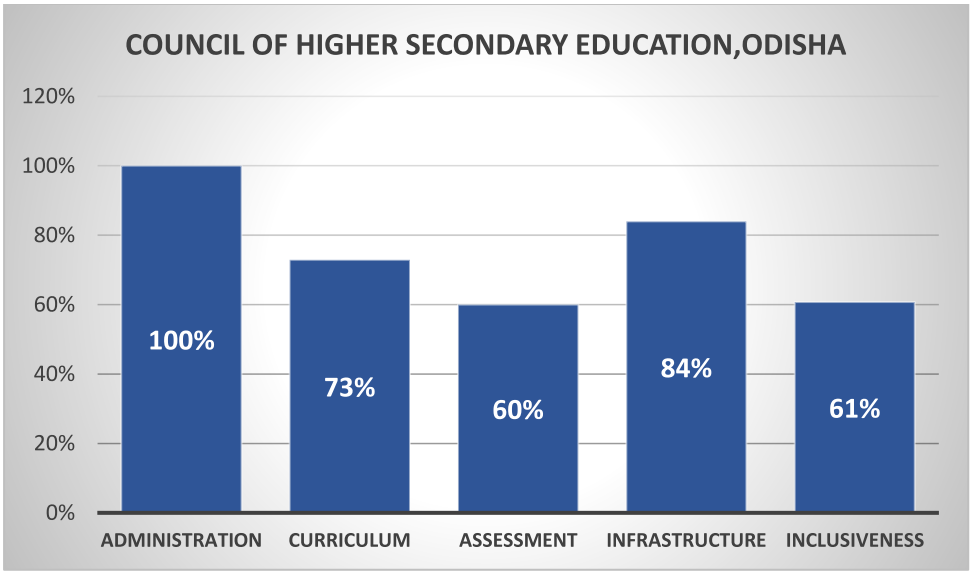



*Figure 39: Council of Higher Secondary Education, Odisha*

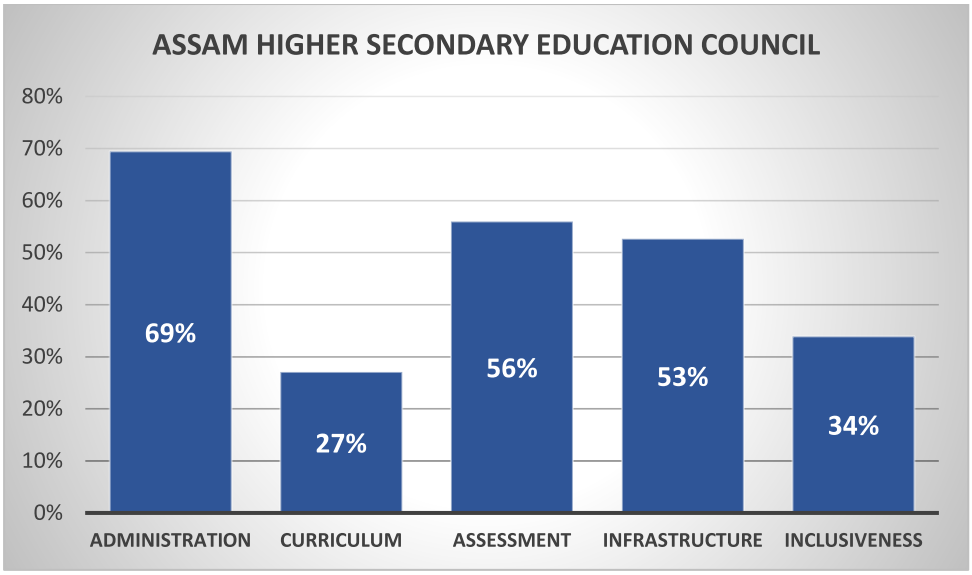



*Figure 40: Assam Higher Secondary Education Council*

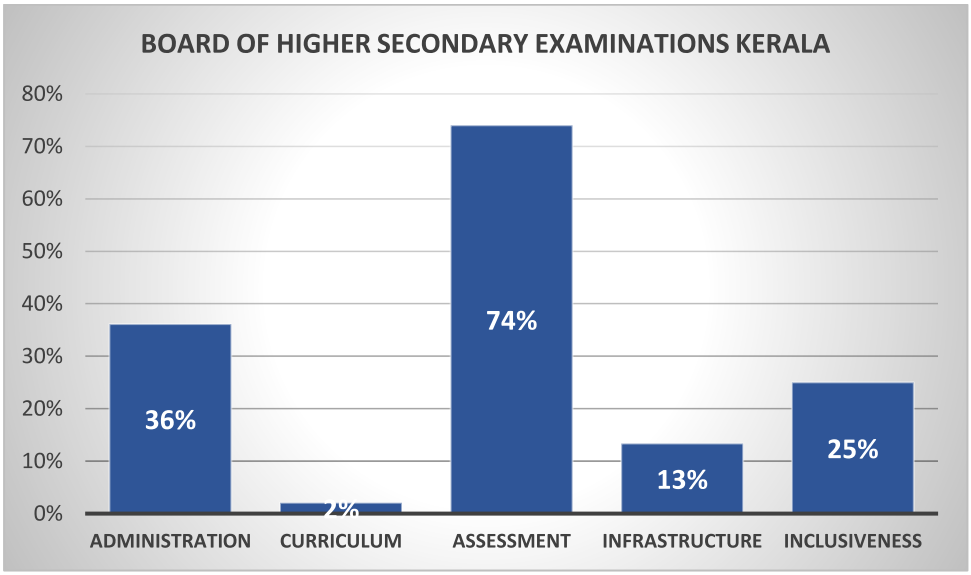



*Figure 41: Board of Higher Secondary Examinations Kerala*

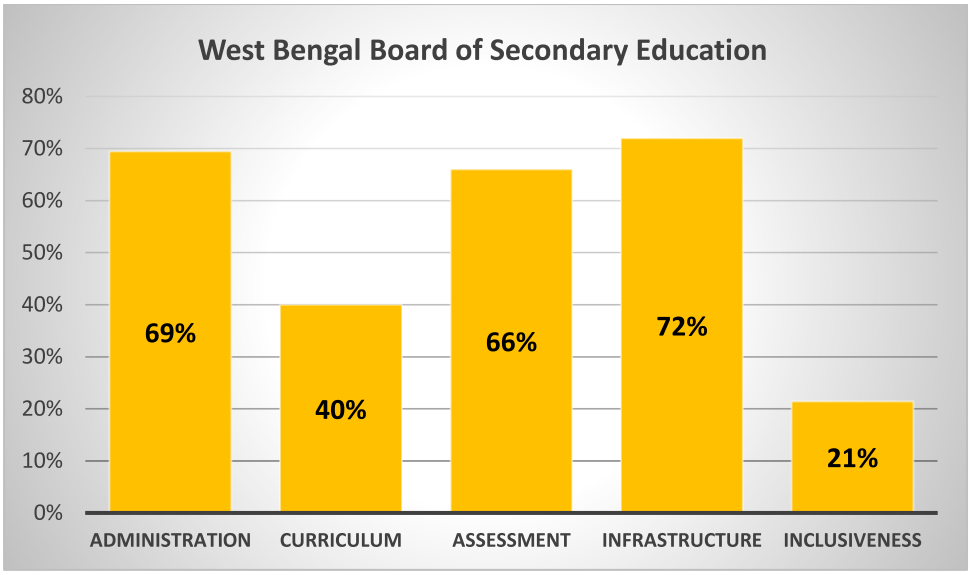



*Figure 42: West Bengal Board of Secondary Education*

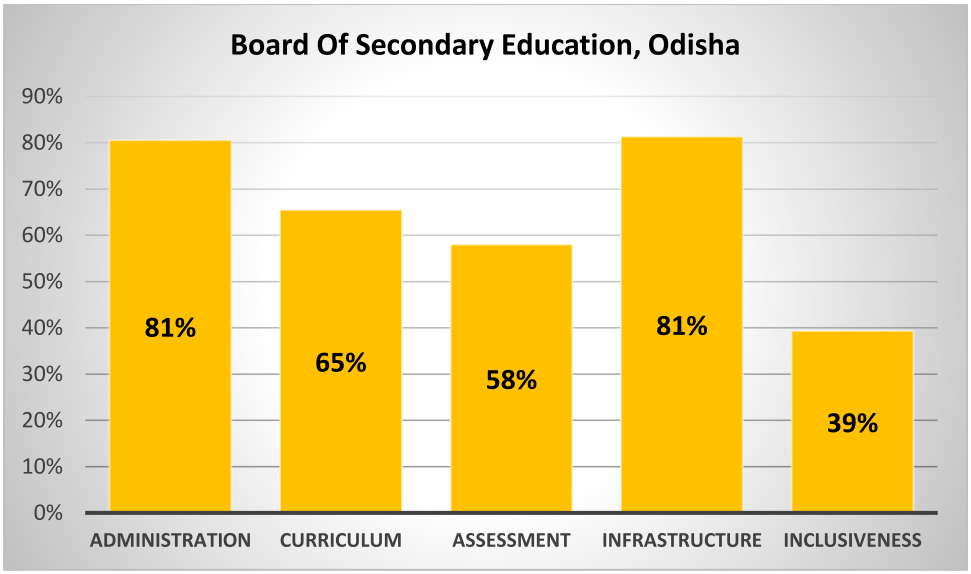



*Figure 43: Board of Secondary Education, Odisha*

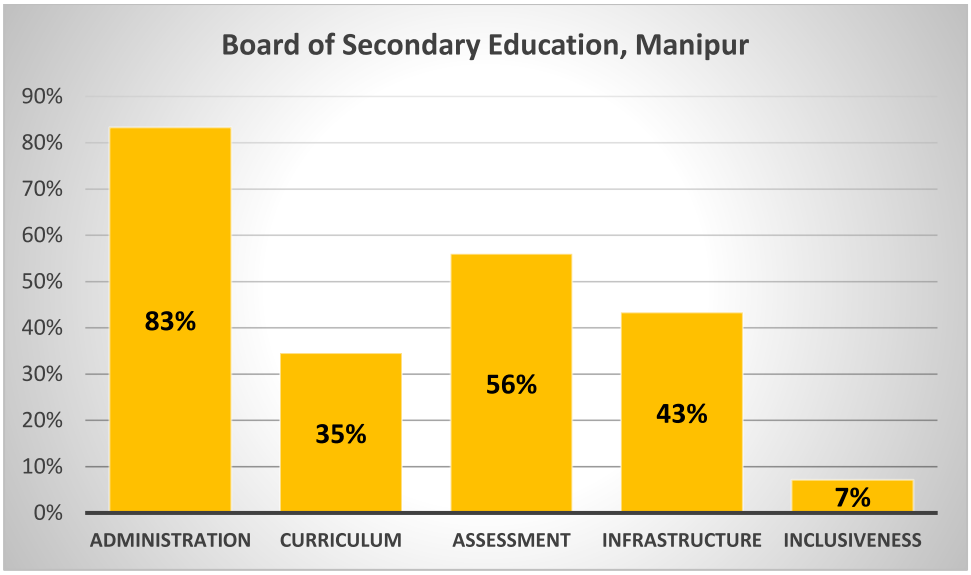



*Figure 44: Board of Secondary Education Manipur*

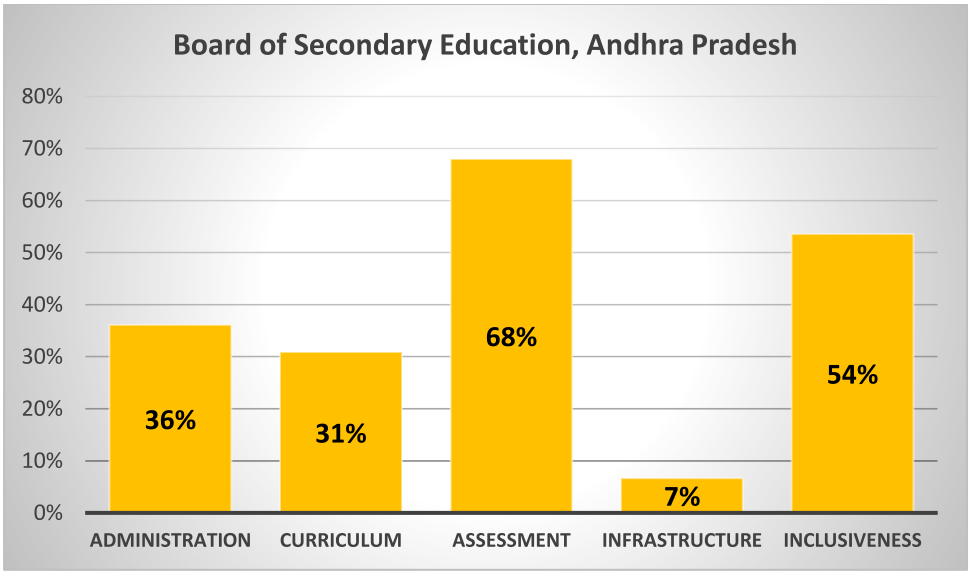



*Figure 45: Board of Secondary Education, Andhra Pradesh*

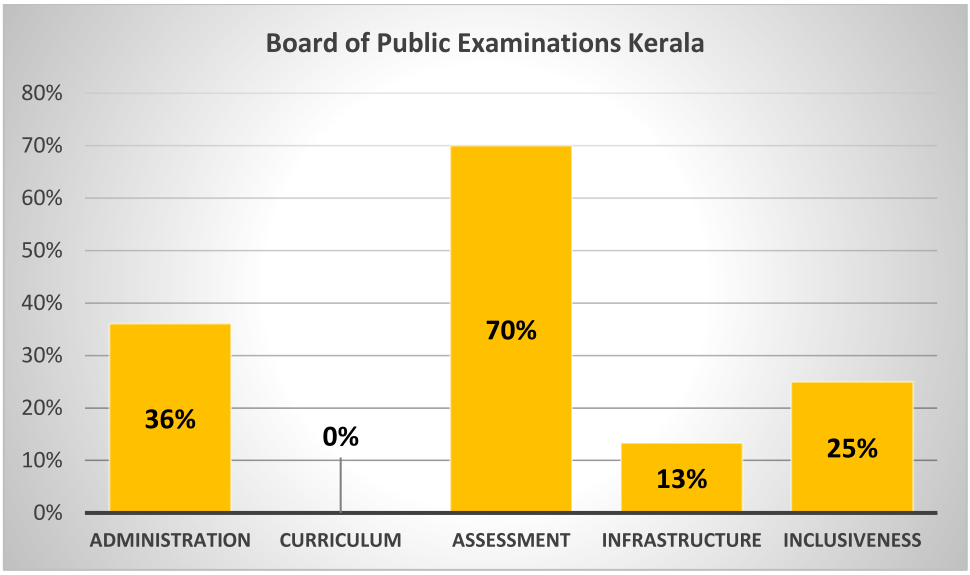



*Figure 46: Board of Public Examinations Kerala*

# POLICY RECOMMENDATIONS

The NEP 2020 proposes establishing equivalence across boards of school education as vital to elevate the nation's educational landscape. At its very core, it promotes the spirit of educational equity, which is the precondition for all development. However, ensuring equity in education alone cannot yield the desired results without a system based on high-quality learning, teaching, and assessments.

PARAKH, NCERT is transforming the educational landscape of the nation with a focus on competency-based assessment. Among its major responsibilities is to achieve equivalence of school education across the country.

PARAKH engaged in deliberations with participating boards during the documentation of 'Equivalence'. These sessions included gathering individual comments on the report and thoroughly discussing proposed recommendations. Through these deliberations, the recommendations were finalized. Given below is a table of the post-analysis deliberations undertaken by PARAKH:

**Post-Analysis Deliberations with the Boards**

| Date | Venue |
|---|---|
| 8th November & 9th November, 2023 | NCERT, Delhi |
| 9th November, 2023 | CBSE Office |
| 7th December, 2023 | NCERT, Delhi |
| 20th February, 2024 | NCERT, Delhi |

At the outset, the need to strengthen PARAKH, NCERT's mechanism of supporting and collaborating with school boards in different states has to be highlighted. Acting as a regulatory body, PARAKH will support and supervise the attainment of equivalence and its regulation across all Boards in the country.

PARAKH, NCERT is to host bi-annual meetings of all boards across the different regions ensuring that all the Boards get the requisite number of opportunities to share experiences and come up with context-specific interventions and solutions to their individual administrative or

pedagogical challenges. Chairpersons of the different Boards or an equivalent representative to ensure their participation in these meetings.

This study at its very onset identifies high-quality and equal education as paramount. It aims through its empirical, evidence-based approach to propose policy recommendations for Boards of Education based on a multi-dimensional standpoint. The recommendations have been distilled into five categories namely; **Administration, Curriculum, Assessments, Infrastructure and Inclusiveness** based on the multiple administrative and pedagogical dimensions associated with the functioning of the boards of education.

The adoption of the recommendations by the School Education Boards will be overseen by PARAKH, NCERT acting as the regulatory body for this implementation exercise. Furthermore, PARAKH in its advisory capacity proposes multiple implementation models for each sub-category of the recommendations to offer the Boards an entry point into this path-breaking exercise.

## ADMINISTRATION

1. **School Education Boards to have statutory status**. Statutory status will ensure that clear parameters are laid down for the functioning of a board as defined by the statute. This will help establish clear definitions regarding the powers, tenure of appointment, emoluments of the chairperson, and other authorities of the board, as well as other aspects of the board's functioning. All provisions/sections in the act should be updated according to current needs

2. **Boards to conduct regular periodic reviews of affiliated schools on a yearly basis**. Affiliations should be granted for a maximum period of three years only. Surprise inspections of the schools should be conducted to ensure continued implementation of the provisions required for the affiliation. Affiliations should only be granted to schools that have complied with the implementation of the provisions set by the Schools Standard Setting Authority (SSSA). Guidelines for the SSSA are to be developed in collaboration with PARAKH, NCERT. The school boards in the States to act as the SSSA.

3. **Boards to be empowered to recognise and affiliate the schools and give NOCs in the states, where recognition or affiliation is accorded by the Directorate.** The boards must have the authority to identify unrecognised institutions (schools/coaching centres etc.) and take action against them as per the prevailing laws of the land. Further, the conditions for affiliation laid down by the boards of education must be the same for all schools irrespective of the type of management (privately-run schools as well as government-run schools). The guidelines for affiliation are to be finalized in consonance with the recommendations of PARAKH.

4. **All boards to make provisions in their bylaws for capacity building and professional development of the Teachers/Principals at all levels.** As per the NEP 2020, 50 hours of

training for Continuous Professional Development (CPD) annually is mandated for all teachers by the board out of which 10 hours are compulsory for Paper Setting in competence-based assessments. A separate division of in-service training has been suggested to facilitate the upgradation of teaching skills. This division should interact closely with the Academic and Research divisions and collaborate with PARAKH to develop the CPD programs or 'competency-based assessment'. **The boards are to establish CPD programs focusing on the latest educational trends and technologies, tailored to the specific needs of educators in India.** These programs should include workshops, online courses, and collaborative learning opportunities to ensure that teachers are well-equipped to deliver high-quality education and adapt to changing educational environments.

5. **Depending on the size of the state, the board's functioning to be decentralized through the establishment of regional offices and their roles need to be strengthened.** The formulation of the decentralization process in the boards is to be prepared along with PARAKH.

6. **Boards are to have an autonomous organisational structure having a strong academic wing (curricular development, pedagogy and assessment)**. The boards should work towards defining their organisational structure precisely and comprehensively. This will give them the autonomy to function freely within the parameters laid down for them. Their functions should be diversified and expanded as well as redefined.

7. **Boards to have a Research Wing focusing on Skill and Sports Education, and developing interdisciplinary curriculum.** This division will strengthen the training mechanism and keep the boards updated on developments in educational research and policy, providing policy and pedagogical inputs as needed. Additionally, the division should have adequate staffing. Boards should ensure that professionals knowledgeable in research and familiar with field realities are identified and appointed to this division.

8. **Boards to set up of Library and Documentation Cell.** A Library and Documentation Cell should also be set up for the strengthening of the Academic and Research divisions. This will also add to the tempo of in-service training. The library should be a rich repository of textual and audio-visual materials. This activity will help the boards acquire an academic flavour with respect to their functioning.

9. **Boards to develop IT infrastructure and use generative AI.** With the changing times and keeping in focus the emerging needs it is recommended to develop IT infrastructure and use generative AI optimally.

10. **Boards to work further on digitizing the administrative infrastructure, examination, evaluation and monitoring systems including records.** Although many boards have computerized their work, there is a need to train the staff further in the use of computers not

merely for the processing of examination-related work but also for improving the management of the boards. It is therefore suggested that there should be a full-fledged IT Infrastructure Unit in each board. This will enable the staff in position to perform better than they are doing at present.

11. **Grievance Redressal -** The boards are to work on developing a competent mechanism for grievance redressal for secrecy in confidential work, administration as well as the conduct of examination and have a vigilance wing.

12. **Boards to emphasise the transparency of all operations and processes.** It should be affirmed that all administrative procedures cannot be treated as confidential. All confidentiality should relate to the identity of the individuals and not the procedures. It should be ensured that procedures are followed implicitly and honestly. Both efficiency and transparency are the cornerstones of the boards' functioning. The Chairperson of the board in her/his capacity as the chief administrative executive must ensure that whatever is laid down is fully implemented. This responsibility of the chairperson should not be transferable. The mechanism should be such that every grievance is attended to promptly as well as adequately.

13. **Boards to set up special committees depending on the administrative and academic needs.** Depending upon the nature of the problem and its complexity, a board may decide to set up any other committee/committees. In certain cases, these can also be advisory in nature.

14. **Boards to conduct refresher courses at the National and State level for officials of the boards.** Most senior officials would require an infusion of new ideas and training every two to three years. At the National and State level, these training programs need to be organised for upskilling of the personnel. International exposure to the officials of the board to understand the best practices and system prevalence of different boards be studied.

15. **Boards to collaborate with PARAKH and adopt international benchmarking to enhance the quality of education and ensure global competitiveness.** Boards in collaboration with international bodies should adopt best practices and methodologies from globally recognised education systems. According to NEP 2020, integrating global perspectives is crucial to preparing learners for a globalized economy, fostering innovation, and enhancing critical thinking skills. This alignment will not only improve the quality of education but also facilitate learner mobility and acceptance in higher education institutions worldwide. Comparative studies between the boards and the international boards can also be taken up to understand the best practices.

16. **Boards to implement a rigorous evaluation system for teachers and administrative staff incorporating peer reviews and learner feedback.** Boards should ensure that evaluations should include professional development components to ensure continuous

improvement. The NEP 2020 emphasises the need for a comprehensive teacher evaluation framework that includes regular assessments, professional development opportunities, and accountability measures. This framework will enhance the quality of teaching by identifying areas for improvement and providing targeted training and resources fostering a culture of continuous professional growth and excellence in teaching.

17. **Boards to develop a centralized database for managing learner records, staff details, and other administrative information to improve efficiency and transparency.** The database should be integrated with advanced data analytics tools to provide insights for decision-making and policy formulation. The database may be linked to the PARAKH website for all stakeholders to have equal access to information. The NEP 2020 also stresses the importance of leveraging technology to enhance administrative efficiency and data-driven decision-making in education. A centralized database will streamline administrative processes, improve data accuracy, and facilitate better resource management. Additionally, it will enable real-time monitoring of learner progress and institutional performance.

## ADMINISTRATION-MECHANISM FOR IMPLEMENTATION OF POLICY CHANGES

1. **School Self-Assessment:** It serves as the first step to improve the cadence of reviews of the affiliated schools by the boards. This approach will incentivise schools to regularly share information and data, enabling boards to respond promptly. One effective could involve gathering this data in smaller, continuous chunks as opposed to the current mode where hundreds of survey questions are made. This could be done on a regular basis, with 5-6 pertinent relevantly grouped questions every fortnight, which will simplify data collection, and facilitate real-time sharing. Additionally, setting up a cadence for these and mandating a state-level report would be beneficial. Boards should collect and analyse data for better decision-making and improvement in qualitative aspects.

2. **Improving Teacher-Learner Ratio**: Maintaining an optimal teacher-learner ratio is a widely acknowledged challenge for effective teaching-learning. Boards and education departments can formulate policies to recruit/create para-teachers akin to paramedics in the healthcare medical domain, who help expert doctors by doing a set of activities that make utilisation of a doctor's time more productive. Para-teachers could be young, aspiring educators who can work along with the expert teachers handling certain classroom and learner-related activities. This approach not only alleviates the workload of core expert teachers but also builds a robust pool of future educators who can shadow and learn from experienced mentors, eventually assuming their roles. Moreover, it contributes to job creation.

3. **School Attendance:** It directly correlates to the status of school infrastructure in terms of water, toilets, sanitation, hygiene, and other factors. Boards and school departments could

adopt regular audits using AI-driven photo analysis. Schools could use a smartphone app to periodically report on the status of facilities such as toilets, enabling AI to pinpoint schools requiring assistance and fostering improvements.

4. **Improve participation and sharing of best practices:** At the national level, PARAKH should provide a platform to improve participation and sharing of best practices, during the workshops and data-sharing phases offering ample opportunities for the board members to learn and share experiences. One approach could involve early dissemination of plans to facilitate participation; for instance, scheduling such meetings or workshops biannually across 6-7 regions.

## CURRICULUM

1. **Boards are to adhere to the grade-appropriate syllabus for each pedagogic stage (i.e., foundational, preparatory, middle, and secondary) aligning with the NCF-FS and NCF-SE 2023.** They must also ensure provision for skill training and subjects during the middle (Grades 6-8) and secondary (Grades 9-12) stages respectively. Secondary education should be treated as terminal in character and should operate with autonomy. In practical terms, skill training completed at the end of secondary school should adequately equip learners for employment opportunities. Each board is mandated to establish a Skill Education division, adequately staffed, adequately staffed to spearhead and oversee this relatively new area of educational activity

2. **Boards are to make counselling, especially career counselling mandatory for the schools affiliated with them** or promote a teacher-as-a-counsellor model. They should ensure that the schools have a career counsellor to provide support in respect of future career guidance, job placement assistance, academic and personal counselling and the mental and social well-being of the learners. They should work towards a community-based voluntary counselling model like the *Vidyanjali* initiative of the Government of India.

3. **The membership of the Boards of Studies and the Academic and Research Division must be both strengthened and professionalized if these are to improve the resource input for improving the quality of school education.** Proper diligence must go into nominating the members for the Board of Studies.

4. **Boards are to collaborate with PARAKH to see how interdisciplinary and multidisciplinary learning can be implemented in its affiliated schools by integrating subjects and encouraging collaborative projects across different fields of study.** The NEP 2020 supports an interdisciplinary approach to education, recognising that real-world problems are often complex and multifaceted. Encouraging learners to work on interdisciplinary projects will help them develop critical thinking, problem-solving, and

collaboration skills. It will also foster creativity and innovation by allowing learners to explore connections between different fields.

5. **Boards are to emphasise digital literacy and incorporate comprehensive ICT training within the curriculum in its affiliated schools.** The boards must work in collaboration with PARAKH and integrate digital literacy as a core component of the curriculum from the foundational stage in its affiliated schools. NEP 2020 highlights the importance of digital literacy in preparing learners for the digital age, where technology plays a central role in all aspects of life. Comprehensive ICT training should include coding, cybersecurity, and the ethical use of technology. By equipping learners with these skills, the education system will ensure that they are ready to thrive in a technology-driven world and contribute to the digital economy.

6. **Boards, based on the curriculum, need to prepare a blueprint for the grade-specific and the state-specific subjects that are being assessed.** These blueprints should primarily reflect the competencies that are being assessed. The blueprints should also consider subject-specific competencies outlined in the NCF-SE 2023, ensuring that assessments align with the learning outcomes defined for each subject and grade level.

## CURRICULUM-MECHANISM FOR IMPLEMENTATION OF POLICY CHANGES

1. **Curriculum Reforms**: Revise the curriculum to be more holistic and skill promoting schools to adapt their teaching materials and methods accordingly.

2. **Teacher Self-Assessment Rubric (TSAR):** The implementation of the Teacher Self-Assessment Rubric (TSAR) should be scaled up and integrated into a teacher's annual activities at the beginning of the academic year. In a rapidly changing world where children pick up skills and knowledge faster than their teachers, it is extremely important for the teachers to keep pace with them. TSAR could serve as a starting point for this endeavour. Boards should consider making this a periodic assessment with plans to formalise it once the practice is established. It should be digitised to allow access via teachers' smartphones, using highly engaging formats.

3. **Teacher training** should focus on a broad range of contemporary areas – e.g., new-age pedagogic models, technology integration, competencies and their measurement, need for and importance of formative tests, usage of data and data-led insights, talent identification in a classroom, and regular engagement with parents & community, etc. **Training of teachers in assessment development** is necessary to create capacity in competency-based assessments. Scalable, online capacity-building models and technology may be adopted by the States/Boards for implementation. All those trainings which lead to development of

qualitative aspects in education needs to be developed and implemented after assessing the training needs. This is to be done with endorsement from PARAKH, NCERT.

4. **Learning & Sharing** is a critical part of a teacher's professional development. Boards could look at setting up a State-level Teachers community or online forums where all the teachers can learn and share their ideas, suggestions, learning and pedagogic innovations. A minimum number of designated hours of skills learning, professional development and certification could be made mandatory for all teachers.

5. **Earmark specified learning hours for SDGs and 21st Century Skills -** Boards could introduce a specific number of hours within a year, or periods in a week inside the school year, for enabling awareness and understanding of the contemporary subjects and skills such as sustainable development goals (SDGs), 21st Century Skills and education. Integrating this part of the school system is the key and ideas such as CBSE coming up with a 21st century skills handbook in 2020-21 are to be encouraged.

6. **Skill Education -** Introducing Skill courses in secondary education is an important area, but one of the basic challenges schools will face is in getting expert trainers and infrastructure set-up for these specialized subjects. Boards to come up with models to enable their affiliated Schools to collaborate with local industries for practical training.

## ASSESSMENT

1. **Boards are to develop a comprehensive assessment framework in alignment with the NEP 2020 and the NCF-SE 2023**. They should ensure that the Question Papers should be developed on scientific design and blueprint mapped to clearly defined competencies. They should further ensure that the assessment design is prepared in such a manner that each unit of content is assigned a weightage in terms of credits. The scope for selective study by the learners should be eliminated to the maximum extent possible. Boards are to work towards developing alternative assessment strategies to reduce the 'high stakes' nature of assessment.

2. **Boards to develop an elaborate system of credit transfer as per NCrF.** To ensure inter-board mobility, and multiple entry and exit points, boards must develop a system of credit accumulation and transfer. This should include an academic mechanism for credit allocation mapped to the National Curriculum Framework along with the development of an Academic Bank of Credit (ABC) to ensure that credits are transferred across school boards in case of inter-board migration and/or across various entry/exit points. **(Details enclosed as Addendum-1).**

3. **Boards to prepare assessment schemes for Skill, Art and Physical Education, and Well-being.** The assessment and evaluation should be done locally at the school level with external

examiners. The designed assessment schemes should efficiently assess the learning outcomes of the course.

4. **School Boards to have a MoU with the National Council for Vocational Education and Training (NCVET) for assessment and certification in vocational subjects**. They must ensure that the norms are worked out in conjunction with industries and these should conform to the norms already laid down by the NCVET to ensure achievement of equivalence in this area. Also, **Education Boards should award learners with a certificate at multiple exit points after completion of their skill course, certifying their ability to join the workforce while putting to use their particular skill expertise.** This will also certify the level of expertise acquired by the learner in the particular vocation.

5. **Boards are to devise a foolproof mechanism to maintain confidentiality, and prevent leakages, and cheating in examinations.** By implementing strict protocols for handling examination papers, conducting secure digital assessments where applicable, and monitoring examination centres effectively, boards can mitigate risks of malpractice. This approach will uphold the trust of students, parents, and educational stakeholders.

6. **Boards are to develop a cadre of professional paper setters.** Boards are to ensure the quality and relevance of examination papers across their affiliated schools. This will enhance the rigour and standardisation of assessments by recruiting experienced subject matter experts who can construct fair, balanced, and thought-provoking exam questions. By establishing clear criteria and guidelines for paper setters, boards can uphold the academic integrity of examinations and align them with the learning objectives outlined in the curriculum.

7. **Boards are to choose examination centres that are secure, accessible, and equipped to handle the logistical requirements of conducting exams.** The location of examination centres has a direct bearing on ensuring integrity in the conduct of examinations. **The obvious thing to do is to lay down rules in advance for locating examination centres.** Not even the Chairman should have the authority to make any exceptions. This ensures that examination processes are conducted in a controlled environment, minimizing external influences and ensuring fairness in assessments.

8. **Boards are to ensure that clear guidelines for evaluation are prepared and provided to all the evaluators to minimize inter-examiner variability.** They should work on preparing a marking scheme including an item-wise analysis of the question paper.

9. **Boards are to move towards On-demand Examinations and develop Question Banks accordingly.** In accordance with the essential need to provide the learners with more opportunities to appear for the board examinations, as NCF-SE 2023 states its two major challenges as, “High Stakes” and giving “No Second Chances” (NCF-SE 3.4.12.1a), the provision

for a greater number of supplementary/compartment board examinations will be in alignment with the aspirations of the NCF-SE 2023 and the NEP 2020. **Boards must also have provisions for supplementary/compartment board examinations.** The learners are to be allowed to appear in at least two supplementary/compartment board examinations.

10. **Boards are to develop a mechanism for moderation of question papers in a scientific manner based on specific and clear-cut guidelines.** By implementing clear-cut moderation guidelines, boards are to standardise the process of reviewing and refining question papers to align them with the prescribed curriculum and learning objectives. The scientific approach to moderation involves evaluating the clarity of questions, assessing the balance of difficulty levels, and ensuring alignment with educational standards and can also be drawn from best practices and recommendations outlined in educational policies such as the NEP 2020,

11. **Boards are to ensure that the reliability and validity of the infrastructure is maintained.** They should do a performance analysis of the assessment as well as the population using an integrative mixed methods approach and disseminate the same to all stakeholders.

12. **Boards are to ensure that 360-degree Holistic Progress Cards for every learner in the affiliated schools are incorporated in board's certificate**. In line with the vision of NEP 2020, the elements of personality development such as a high emotional quotient, creativity etc. are equally important and need to be assessed to get a total picture of the learner's ability and personality. The boards will therefore incorporate a component of learners' Holistic progress in the form of the Holistic Progress Card within the boards' certification of exams.

13. **Boards are to work towards the development of assessment benchmarks for examinations to ensure inter and intra-year comparability of results**. Benchmarking as an exercise ensures checks and balances in question paper development and makes the practice of moderation scientific and evidence-based.

14. **Boards are to move towards a more holistic assessment framework that includes formative assessments, project-based evaluations, and peer assessments in addition to traditional exams.** The NEP 2020 proposes a shift from high-stakes examinations to comprehensive evaluation. Boards must collaborate with PARAKH and use multiple assessment methods to capture a comprehensive picture of the learner's learning journey. This approach aligns with NEP 2020's vision of reducing the excessive pressure associated with high-stakes exams by incorporating diverse evaluation methods. Holistic assessment methods will help identify learners' strengths and areas for improvement, providing them with timely feedback and support. By integrating such assessment methods, educators can better understand the learner's learning processes and adjust their teaching strategies accordingly. This would encourage a more balanced and inclusive assessment system that values different aspects of learner development beyond rote memorization. This

comprehensive approach ensures that assessments are more reflective of a learner's overall capabilities and learning journey.

15. **Boards are to implement real-time feedback systems for learners to help them understand their strengths and areas for improvement continuously.** Boards must use technology-based platforms in their affiliated schools to provide immediate and personalized feedback to the learners. This recommendation aligns with NEP 2020, which emphasises the importance of continuous feedback in enhancing learner's learning and engagement. Real-time feedback systems will enable teachers to monitor learner's progress closely and make informed decisions about instructional strategies. This timely feedback will also empower learners to take ownership of their learning and make necessary adjustments to achieve their academic goals. Moreover, such systems encourage a proactive learning environment where learners are continuously engaged and motivated to improve.

16. **Boards are to adopt international assessment practices and tools to ensure the evaluation standards are on par with global benchmarks.** Boards must benchmark Indian assessments against internationally recognised standards. NEP 2020 advocates for the adoption of best practices from around the world to improve the quality and credibility of learner assessments. Aligning with international assessment practices will ensure that Indian learners are evaluated fairly and accurately, enhancing their readiness for higher education and global employment opportunities. This alignment helps in standardising educational outcomes, making it easier for learners to transition between different educational systems and pursue higher education abroad.

17. **Boards are to establish mechanisms for continuous improvement in assessment processes, leveraging technology for better analysis and reporting.** Boards must work in collaboration with PARAKH and use advanced data analytics to analyse assessment results and identify trends and ascertain areas for improvement. NEP 2020 highlights the need for ongoing evaluation and refinement of assessment methods to ensure they remain effective and relevant. Continuous improvement mechanisms will help education authorities and institutions to make data-driven decisions, enhance the quality of assessments, and ensure that they meet the evolving needs of learners and society.

18. **Boards to set paper for conducting the census-based assessment in Grade 8.** Census-based assessments can play a crucial role in transforming the education system by providing a detailed and equitable evaluation of learner performance across the country. When aligned with the objectives of the NEP 2020, such assessments can help in achieving a more inclusive, effective, and transparent educational framework, ultimately leading to better learning outcomes for all learners.

## ASSESSMENTS-MECHANISM FOR IMPLEMENTATION OF POLICY CHANGES

1. **Focus on formative-level assessments:** Formative assessments inside classrooms conducted after completing 1-2 chapters in each subject, are crucial to enhance engagement and reduce reliance on high-stakes exams. This practice holds particular significance for learners in the Middle and Secondary Stages. Regular formative assessments following each unit of study enable teachers to assess learner progress, identify learning gaps, and implement targeted strategies for improvement. Item banks and repositories of instructions can be utilised to develop such formative assessments efficiently at school, block, and district levels.

2. **Assessing 21st-century skills:** It is equally crucial to traditional assessments. Modern learners will enter a job market that increasingly values skills beyond basic subject-level mastery. Therefore, it is essential to assess and foster skills such as communication, critical thinking, creativity, general aptitude, and global citizenship. Incorporating assessments that evaluate these skills encourages holistic development and prepares learners to thrive in diverse professional environments. By emphasizing these competencies, educators can better equip students for the challenges and opportunities of the future.

3. **Technology-Aids in Assessments**: Boards are to help schools access high-quality question papers for the various types of assessments. Boards can enable the affiliated schools with tools and techniques, including technology-led aids, question banks, blueprints, sample question papers etc. These tools may help standardise question papers in accordance with the competency-based needs, and selection of items based on specified cognitive objectives and create 'balanced' Question Papers as suggested by NEP 2020.

4. **Streamlining the Question Paper creation process for Board Examinations:** Boards are to set up formal state-level academic structures that work to streamline the end-to-end Question Paper creation process. This includes workflow mode linking of objectives, blueprints, question banks, competency mapping, question creation-review and approval process, and also dissemination of the same to schools.

5. **Analytics and Dashboards**: Regular analysis and dissemination of actionable information from the assessments is key to improving learning outcomes. Boards and Schools can adopt technology solutions that aid in bringing real-time visibility to analyse learner performances. The same can be very useful to analyse questions and question papers in a board exam, as they bring in a feedback loop into understanding QP accuracy as per its stated objectives, and map evolving learner performances across years.

6. **Reduce Variations in Evaluation**: Today there are solutions to bring digital techniques in the evaluation of summative written papers. Boards could adapt them, as such digital evaluation technology solutions allow for the capture of response patterns of the candidates.

With the performance of learners across different units, topics, and concepts can be analysed, and such information could inform teacher training, classroom teaching-learning, and assessment development.

## INFRASTRUCTURE

1. **Boards are to ensure the availability of basic infrastructure in schools affiliated with them.** Boards must develop a management system of information which must keep records of the infrastructure of the schools including the availability of toilet facilities for both boys and girls separately, running water facilities, electricity, internet facility, well-equipped library (adequate number of books), facilities for indoor and outdoor games (playground), strong room for storing the question papers, photocopying facilities, laboratories, facilities for skill education, adequate number of computer labs, etc.

2. **Boards are to conduct cyclic audits.** Boards must make provisions for regular audits of the safety and security of children and employees of the school.

3. **Boards are to put infrastructure maintenance in place.** Regular maintenance of school buildings in terms of whitewash, painting and repairs. A boundary wall is a must. Boards must also have a well-equipped library, auditorium, conference hall, and online monitoring system.

4. **Boards are to upgrade classrooms to smart classrooms equipped with the latest educational technologies such as interactive whiteboards, projectors, and internet access.** NEP 2020 emphasises the role of technology in modernizing education and making it more accessible and inclusive. Boards must invest in technology infrastructure to create an engaging and interactive learning environment. Smart classrooms will facilitate blended learning, where learners can benefit from both in-person and online instruction. This upgrade will also enable teachers to use a variety of digital resources to enhance their teaching and make learning more engaging and effective.

5. **Boards are to promote the construction of green buildings that are environmentally sustainable and energy efficient.** Boards must incorporate green building standards into school infrastructure projects to reduce environmental impact and operational costs. NEP 2020 advocates for sustainable development and the integration of environmental education into the school curriculum. Green buildings will provide a healthier learning environment for learners and staff while also promoting environmental stewardship. These buildings can serve as living laboratories for learners to learn about sustainability practices and the importance of environmental conservation.

6. **Boards are to implement comprehensive safety measures, including surveillance systems, emergency response protocols, and regular safety drills.** Boards must develop a standardised safety protocol for all schools to ensure a safe and secure learning

environment. NEP 2020 highlights the importance of safety in schools and calls for robust measures to protect learners and staff. Comprehensive safety measures will include physical security enhancements, regular training for staff and learners, and clear guidelines for responding to emergencies. Ensuring a safe school environment is crucial for the well-being and academic success of the learners.

7. **Boards are to ensure that all infrastructure is inclusive and accessible to learners with disabilities, including ramps, elevators, and special classrooms.** Boards must adhere to universal design principles to accommodate all learners' needs. NEP 2020 emphasises the need for inclusive education that caters to the diverse needs of all learners. Inclusive infrastructure will provide equal opportunities for learners with disabilities to participate fully in educational activities. It will also promote a culture of inclusivity and respect for diversity within the school community.

## INFRASTRUCTURE-MECHANISM FOR IMPLEMENTATION OF POLICY CHANGES

1. **MIS Systems**: A few of the boards have stated they already have a state-wide MIS system implemented in schools for gathering school-level information across the various parameters – attendance, enrolment, teacher-pupil ratio, access and communications, grades & performance records as well as learner demographics. Every board to implement such systems to streamline data.

2. **Lab Infrastructure**: Most boards have not recorded the availability or utilisation of computer labs. Boards to prioritize the setting up of computer labs which can be leveraged for multiple purposes. viz technology-led learning, practice for learners, digital learner assessments, and also teacher training. Many states are setting up Vidya Samiksha Kendras at the State headquarters. These should be augmented by setting at district levels too for better governance on-ground.

## INCLUSIVENESS

1. **Private schools affiliated with the boards are to provide 25% reservation for the Economically Weaker Section.** This will bridge the socio-economic gap by offering disadvantaged students the opportunity to benefit from the same high standard of education as their more affluent peers. By fostering a diverse learning environment, schools can contribute to the overall development of all students, encouraging mutual respect and understanding across different economic backgrounds.

2. **Boards are to ensure that the affiliated schools evolve opportunities for learning for gifted and differently-abled children.** By integrating these provisions, schools can foster an

inclusive educational culture where every student, regardless of their abilities, has access to tailored learning experiences and opportunities for holistic development. This approach not only aligns with NEP 2020 recommendations but also promotes a supportive and nurturing environment that empowers all students to reach their full potential.

3. **Boards are to address the disabilities mentioned in the RPWD Act 2016 and other related documents.** This requirement emphasizes the need for educational institutions affiliated with boards to implement inclusive practices and provide necessary accommodations for students with disabilities. Provisions like Braille question papers, scribes, audio examinations etc. must be made in all schools affiliated to the boards. By adhering to the guidelines of the RPWD Act 2016, boards support the integration of students with disabilities into mainstream education, aligning with the inclusive education goals.

4. **Boards are to ensure that disability-friendly infrastructure is developed in their affiliated schools**. They should ensure the provision of accessible bathrooms, ramps, use of assistive devices, etc. This will strengthen their commitment to promoting equitable educational opportunities and creating a supportive atmosphere that accommodates the diverse needs of all learners.

5. **Boards are to encourage its schools to provide an enabling environment for the socio-economically disadvantaged groups.** By encouraging schools to implement inclusive practices and support mechanisms, boards can help mitigate barriers to education faced by disadvantaged groups. This includes initiatives such as scholarship programs, fee waivers, and supplementary educational support, which are aligned with the recommendations of the NEP 2020 and other relevant policy frameworks.

6. **Boards are to establish cultural exchange programs to promote diversity and intercultural understanding among learners.** NEP 2020 highlights the importance of fostering global awareness and cultural sensitivity among learners. In line with this, boards are to partner with international institutions to facilitate learner and teacher exchanges. Cultural exchange programs will provide opportunities for learners to experience different cultures, perspectives, and educational practices. These programs will also enhance learners' social and communication skills, making them more adaptable and empathetic global citizens.

7. **Boards are to ensure equitable distribution of educational resources across all schools, particularly focusing on rural areas.** NEP 2020 also emphasises the need for equity in education, ensuring that all learners, regardless of their background, have equal opportunities to succeed. Boards must collaborate with PARAKH to develop a resource allocation framework to address disparities and ensure that all learners have access to quality education. Equitable resource distribution will involve targeted investments in infrastructure, teaching materials, and professional development for educators in

underserved areas. This approach will help bridge the gap between urban and rural schools and promote social justice in education.

8. **Boards are to provide additional support for non-native learners, including language learning programs and cultural assimilation workshops.** NEP 2020 also advocates for an inclusive education system that accommodates the needs of all learners, including those from diverse linguistic and cultural backgrounds. Adhering to them, boards must develop specialized curricula and training programs for teachers to support non-native learners effectively. Support for non-native learners will include language instruction, peer mentoring programs, and activities.

## INCLUSIVENESS-MECHANISM FOR IMPLEMENTATION OF POLICY CHANGES

1. **Identifying talent early in a classroom is important to offer specialised learning paths for gifted individuals**. Boards can facilitate state-wide cognitive talent assessments, starting with middle and secondary schools. The toppers can be provided with scholarship programs as well as specialized learning paths.

## ISSUES RELATED TO THE IMPLEMENTATION OF RECOMMENDATIONS

1. Implementation may require legislative consent. Therefore, the governments at various levels will play a crucial role in actively pursuing the re-organisation of School Education Boards.
2. The government may accelerate the process of re-organisation. It may also make policy interventions.
3. Given the varying sizes of boards, funding levels, and availability of trained manpower, policymakers should avoid adopting a one-size-fits-all approach when implementing policy or administrative changes.
4. Achieving the ideal of professional board functioning requires several intermediate steps. Productive interaction with others is just one necessary step toward this goal.

## SUGGESTED FRAMEWORK FOR EQUIVALENCE FOR THE SECONDARY STAGE OF SCHOOL EDUCATION

The Secondary Stage of School Education is divided into two phases as per the National Curriculum Framework for School Education (NCF-SE) 2023:

- Phase I (Grade 9-10) and
- Phase II (Grade 11-12).

For the first phase of Secondary Education, learners must earn 40 credits in Grade 9 and 40 credits in Grade 10.

## PHASE I

### Grade 9

- Earn 32 subject-specific credits
- Pass the Census-Based Assessment* (in Grade 8) (2 credits)
- Earn at least 2 credits by pursuing online course/s (60 hours) from Online Learning platforms (ex. MOOCs).
- Complete a minimum of 120 hours of 'involved activities' as per Holistic Progress Card involving Research and/or Community-Based Projects (4 credits)
- **Total credits – 40**

*The census-based assessment in Grade 8 will have 2 credits which will be added in Grade 9.

### Grade 10

- Earn 32 subject-specific credits
- Earn at least 4 credits by pursuing online course/s (120 hours) from Online Learning platforms (ex. MOOCs).
- Complete a minimum of 120 hours of 'involved activities' as per Holistic Progress Card involving Research and/or Community-Based Projects (4 credits)
- **Total credits – 40**

For the second phase of Secondary Education, learners must earn 44 credits in Grade 11 and 44 credits in Grade 12.

## PHASE II

### Grade 11

- Earn 36 subject-specific credits
- Earn at least 4 credits by pursuing online course/s (120 hours) from Online Learning platforms (ex. MOOCs).
- Complete a minimum of 120 hours of 'involved activities' as per Holistic Progress Card involving Research and/or Community-Based Projects (4 credits)
- **Total credits – 44**

### Grade 12

- Earn 36 subject-specific credits
- Earn at least 4 credits by pursuing online course/s (120 hours) from Online Learning platforms (ex. MOOCs).
- Complete a minimum of 120 hours of 'involved activities' as per Holistic Progress Card involving Research and/or Community-Based Projects (4 credits)
- **Total credits – 44**

| SECONDARY EDUCATION | | | |
|---|---|---|---|
| **Phase I** | | **Phase II** | |
| **Grade 9** | **Grade 10** | **Grade 11** | **Grade 12** |
| • Earn 32 subject-specific credits<br>• Pass the Census-Based Assessment* (in Grade 8) (2 credits)<br>• Earn at least 2 credits by pursuing online course/s (60 hours) from Online Learning platforms (ex. MOOCs).<br>• Complete a minimum of 120 hours of 'involved activities' as per Holistic Progress Card involving Research and/or Community-Based Projects (4 credits)<br>*The census-based assessment in Grade 8 will have 2 credits which will be added in Grade 9. | • Earn 32 subject-specific credits<br>• Earn at least 4 credits by pursuing online course/s (120 hours) from Online Learning platforms (ex. MOOCs).<br>• Complete a minimum of 120 hours of 'involved activities' as per Holistic Progress Card involving Research and/or Community-Based Projects (4 credits) | • Earn 36 subject-specific credits<br>• Earn at least 4 credits by pursuing online course/s (120 hours) from Online Learning platforms (ex. MOOCs).<br>• Complete a minimum of 120 hours of 'involved activities' as per Holistic Progress Card involving Research and/or Community-Based Projects (4 credits) | • Earn 36 subject-specific credits<br>• Earn at least 4 credits by pursuing online course/s (120 hours) from Online Learning platforms (ex. MOOCs).<br>• Complete a minimum of 120 hours of 'involved activities' as per Holistic Progress Card involving Research and/or Community-Based Projects (4 credits) |
| **Total credits – 40** | **Total credits – 40** | **Total credits – 44** | **Total credits – 44** |

## SCHEME OF ASSESSMENT

The suggested assessment framework for learners in classes 9 through 12 will employ a comprehensive approach that balances both, formative and summative assessment methods to provide a holistic view of learners' progress. This framework ensures that various aspects of learner performance are adequately measured through diverse assessment modes.

In classes 9 and 11, the assessment will be done in two terms. During Term I, Classroom Assessments using Holistic Progress Cards (HPCs) will include methods such as Portfolio Assessment, Self-Assessment, Peer Assessment, Teacher Observation, Group Work, Laboratory activities, and Group Discussions. The End Term Assessment will employ a competency-based approach using the Integrated Test Management System (ITMS), which will allow teachers to select content and questions from a predefined question bank. Term II will mirror Term I's classroom assessment methods but additionally include Project Work and Paper Presentations. The End Term Assessment will remain competency-based, utilising ITMS with teacher-selected content and questions.

For classes 10 and 12, the assessment framework will be divided similarly into two terms. Term I will feature Classroom Assessments through HPCs, involving Portfolio Assessment, Self-Assessment, Peer Assessment, Teacher Observation, Group Work, and Laboratory activities. The End Term Assessment will continue with competency-based assessments using ITMS, with teachers selecting from the question bank. Term II will introduce formative assessment with additional components such as Project Work, Paper Presentations with viva voice, and Group Discussions. The summative assessment will consist of a common paper consisting of Long Answers, Short Answers, Very Short Answers, and Multiple Choice Questions linking with the Learning Outcomes, based on the question paper design and blueprint.

The weightage of formative and summative marks will be adjusted progressively from class 9 to class 12, increasing the emphasis on summative assessment as learners advance in grades. Specifically, class 9 features a 70% formative and 30% summative split, class 10 an equal 50% formative and summative division, class 11 a 40% formative and 60% summative distribution, and class 12 a 30% formative and 70% summative ratio. Consequently, the cumulative marks at the end of the secondary stage are 15% for class 9, 20% for class 10, 25% for class 11, and 40% for class 12.

This assessment framework will ensure a balanced mix of formative (ongoing) and summative (end-term) assessments, providing a holistic assessment of learners' capabilities and readiness for higher education or professional paths. The diverse assessment methods, including portfolios, self-assessment, and competency-based assessments, will comprehensively measure various facets of learning and skills of learners. The suggested assessment framework is given below in tabular form as well.

## SCHEME OF ASSESSMENT

| | Class 9 & Class 11 | | | |
|---|---|---|---|---|
| | Term I | | Term II | |
| **Assessment** | Formative Assessment | Summative Assessment | Formative Assessment | Summative Assessment |
| **Mode/Pattern of Assessment** | • Portfolio Assessment<br>• Self-Assessment<br>• Peer Assessment<br>• Teacher Observation<br>• Group Work<br>• Laboratory<br>• Group Discussions | Competency-based Assessment making use of ITMS (Integrated Test Management System<br><br>Teacher will have the option of selecting the contents and the Questions from the BANK) | • Portfolio Assessment<br>• Self-Assessment<br>• Peer Assessment<br>• Teacher Observation<br>• Group Work<br>• Laboratory<br>• Project Work (using materials available in the surroundings<br>• Paper presentation<br>• OTBA | Competency-based Assessment making use of ITMS (Integrated Test Management System<br><br>Teacher will have the option of selecting the contents and the Questions from the BANK) |

| | Class 10 & Class 12 | | | |
|---|---|---|---|---|
| | Term I | | Term II | |
| **Assessment** | Formative Assessment | Summative Assessment | Formative Assessment | Summative Assessment |
| **Mode/Pattern of Assessment** | • Portfolio Assessment<br>• Self-Assessment<br>• Peer Assessment<br>• Teacher Observation<br>• Group Work<br>• Laboratory | Competency-based Assessment making use of ITMS (Integrated Test Management System) | • Portfolio Assessment<br>• Self-Assessment<br>• Peer Assessment<br>• Teacher Observation<br>• Group Work<br>• Laboratory<br>• Project Work (using materials available in the surroundings<br>• Paper presentation with viva voice<br>• Group Discussions | Question paper LA, SA, VSA, MCQ linking with LOs<br><br>Based on Question paper Design and Blue Print |

## SUGGESTED FRAMEWORK FOR EQUIVALENCE FOR THE SECONDARY STAGE OF SCHOOL EDUCATION

| | Class 9 | Class 10 | Class 11 | Class 12 |
|---|---|---|---|---|
| Weightage of Formative Assessment and Summative Assessment | 70% of Formative Assessment Marks & 30% of Summative Assessment Marks | 50% of Formative Assessment Marks & 50% of Summative Assessment Marks | 40% of Formative Assessment Marks & 60% of Summative Assessment Marks | 30% of Formative Assessment Marks & 70% of Summative Assessment Marks |
| Weighted Marks at the end of Higher Secondary Stage | 15% | 20% | 25% | 40% |

## SUBJECT-SPECIFIC CREDITS

Learners must earn the following **32 subject-specific credits** per year to be awarded in the first phase (Grade 9-10) of Secondary Education.

These credits are divided in the following manner:

- Phase I (Grade 9 and Grade 10)
  - 12 credits in 3 Languages (R1, R2, and R3; 4 credits each)
  - 4 credits in Mathematics
  - 4 credits in Sciences
  - 4 credits in Social Sciences
  - 2 credits in Art Education
  - 2 credits in Interdisciplinary Areas
  - 2 credits in Physical Education & Well-being
  - 2 credits in Skill Education

Learners must earn the following **36 subject-specific credits** per year to be awarded in the second phase (Grade 11-12) of Secondary Education.

These credits are divided in the following manner:

- Phase II (Grade 11 and Grade 12)
  - 12 credits in 2 compulsory Languages (Choose two Languages from Group 1; at least one of which is native to India)
  - 24 credits for Groups 2, 3 and 4 (four subjects from at least two of the following groups)

## SUBJECTS OFFERED IN THE TWO PHASES:

## PHASE I

The list of subjects for Secondary Education Phase I as provided by NCF-SE 2023.

| Curricular Areas | Subjects | Examinations |
|---|---|---|
| **Languages** | Language 1 | External Examination |
| | Language 2 | External Examination |
| | Language 3 | External Examination |
| **Mathematical & Computational Thinking** | Mathematics | External Examination |
| **Science** | Science | External Examination |
| **Social Science** | Social Science | External Examination |
| **Art Education** | Art Education | Local Assessment with External Examiner |
| **Interdisciplinary Areas** | Environmental Education | External Examination |
| **Physical Education & Well Being** | Physical Education | Local Assessment with External Examiner |
| **Vocational Education** | Vocational Education | Local Assessment with External Examiner |

## PHASE II

## GROUP 1 OF SUBJECT-SPECIFIC CREDITS (AS PER NCF-SE 2023)

Choose two Languages from the following; at least one of which must be native to India.

- Languages
  - Languages native to India (Compulsory)
  - Other Languages (Compulsory)
  - Modern Indian Languages
  - Classical Languages
  - Foreign Languages

## GROUP 2, 3, AND 4 OF SUBJECT-SPECIFIC CREDITS (AS PER NCF-SE 2023)

Of the 24 credits in Phase II of compulsory credits, learners must complete four from at least two of the following Groups.

## GROUP 2:

- Art Education
  - Indian Classical Music
  - Folk Music
  - Contemporary Music
  - Theatre
  - Puppetry
  - Sculpture
  - Fine Arts
  - Folk Painting
  - Graphic Design
  - Motion Pictures
  - Photography
  - Textile Designing

- Physical Education and Well-being
  - Yoga & Lifestyle
  - Sports & Nutrition
  - Physical Education for Learners with Disabilities
  - Biomechanics and Sports

- Vocational Education
  - Agriculture-Cereal Production
  - Agriculture – Seed Production
  - Agriculture – Gardening
  - Automobile Servicing
  - Machining
  - Electronics
  - Community Health
  - Accounting Services
  - Data Entry & Management
  - Banking Services
  - Textile & Garments

## GROUP 3:

- Social Science
  - History
  - Geography
  - Political Science
  - Psychology
  - Psychology & Mental Health
  - Economics
  - Development
  - Economics
  - Sociology
  - Philosophy
  - Anthropology
  - Archaeology

- Interdisciplinary Areas
  - Business Studies
  - Accounting
  - Sustainability and Climate Change
  - Journalism
  - Indian Knowledge Systems
  - Legal Studies

## GROUP 4:

- Mathematics & Computational Thinking
  - Mathematics
  - Computer Science
  - Business Mathematics
  - Advanced Mathematics
  - Probability & Statistics

- Science
  - Physics
  - Chemistry
  - Biology
  - Earth Sciences
  - Astronomy
  - Modern Physics
  - Biology

## NOTE:

Vocational Education, Art Education, and Physical Education and Well-being are integral parts of the curriculum in NCF-SE. However, much of the assessment, in this case, will have to be demonstration-based and not written-exam-based. It is recommended that 75% of the overall certification weightage be given to such demonstration-based assessment, and only 25% to any written examination. Boards will also need to design and implement high-quality systems which can locally (at the school) assess these demonstrations on the basis of demonstration. This will need to be independent from the school, yet operationally feasible.

Science and other subjects also need to have demonstration-based assessments, e.g., conducting experiments. This should have 20-25% weightage in the overall subject certification. While such assessments currently exist, they require significant enhancement for improved validity and objectivity, similar to the aforementioned criteria (similar to item e. above).

## CENSUS BASED ASSESSMENT (GRADE 8)

Learners must achieve the required competencies equivalent to the end of the Middle School Stage i.e. at the end of Grade 8 to earn their Secondary Education certificate. To ensure consistency and proficiency in the performance of the learners at the secondary stage, they must attain competencies equivalent to the end of the middle stage, as assessed by the census-based assessment at the end of Grade 8.

Credits will be awarded based on the percentages obtained in the Census-based Assessment (CBA) as follows:

- 0.5 credit (Below 60%)
- 1 credit (60%-75%)
- 2 credits (75% and above)

This will ensure that learners possess fundamental language, mathematical, and comprehension skills which are essential for academic success at a later stage and to being a lifelong learner.

## ONLINE LEARNING FROM MOOC PLATFORMS

Learners must engage in at least one online course offered by a Massive Open Online Course (MOOC) platform, culminating in a certificate of completion. Embracing the opportunities presented by digital learning platforms is not only advantageous but also essential in today's fast-evolving educational landscape.

The certificates will serve as tangible evidence of the individual's dedication to self-improvement and skill acquisition, enhancing their academic and professional profile in an increasingly competitive world.

Prominent MOOC platforms such as SWAYAM, Coursera, MOOC KIT, and edX, among others, offer a variety of courses that can be surveyed to find suitable options.

## 'INVOLVED HOURS' FROM HOLISTIC PROGRESS CARD (HPC)

Learners are required to complete a minimum of 120 hours of "involved activities" as outlined in the Holistic Progress Card (HPC) at the Secondary Stage. These activities may involve Skill Internships, Individual Research Projects (Community-based), Sports internships, etc. This will help in providing learners with a well-rounded educational experience going beyond traditional academic pursuits.

Participating in Skill Internships will allow learners to apply theoretical knowledge in real-world settings, gaining valuable hands-on experience and insights into their chosen fields. This practical exposure will not only enhance their skill set but also foster a deeper understanding of the professional landscape they aim to enter.

Individual Research endeavours will empower learners to explore their intellectual curiosity and delve into topics of personal interest. This will not only contribute to the development of critical thinking and analytical skills but also encourage a sense of academic ownership and passion for lifelong learning.

Community-based Projects will provide learners with opportunities to make a positive impact beyond the classroom. By actively engaging in projects that address local or global challenges, learners will be able to cultivate a sense of social responsibility and develop teamwork, communication, and leadership skills that are essential for success in various facets of life.

Incorporating sports into the holistic progress framework will aid in recognising the importance of physical well-being in overall development. Participation in sports activities will not only promote a healthy lifestyle but also instil qualities such as discipline, teamwork, and resilience.

Learners need to view these "involved activities" as integral components of their educational journey, contributing significantly to their personal and professional growth. The 120-hour requirement is not merely a benchmark but an opportunity for learners to shape a comprehensive skill set and a well-balanced perspective that will serve them well in the future.

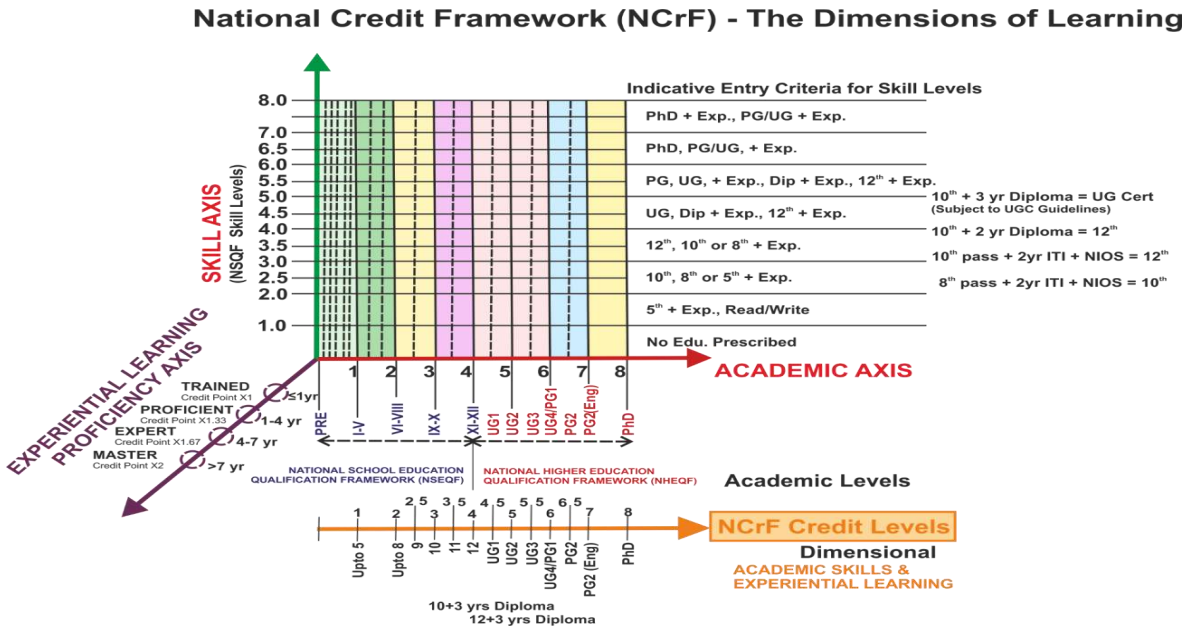
Division of credits:

- 30 hours = 1 credit
- 60 hours = 2 credits
- 90 hours = 3 credits
- 120 hours = 4 credits

## PROVISIONS FOR MULTIPLE EXIT AND ENTRY POINTS

The NCrF relies on an integrated approach across education and skilling frameworks, enabling the education and skilling ecosystem to implement a unified credit-based framework in line with the vision of National Education Policy 2020. While catering to multi-disciplinarity and holistic education across Sciences, Social Sciences, Arts, Humanities and Sports, NCrF enables multiple entry - multiple exit (ME-ME) pathways in general & Skill education; ensures flexibility for learners to choose their learning trajectories and career choices, including option for mid-way course correction or modification, as per their talents and interests.

The CBCS provides a system wherein the learners can take courses of their choice, learn at their own pace, undergo additional courses acquire more than the required credits, and adopt an interdisciplinary approach to learning.




## DIGITIZATION OF ASSESSMENTS

The need for digitization, particularly in the assessment process, has become increasingly important. Digitization offers several benefits, including enhanced security, easier access to records, and improved efficiency in processing and analysing student data. Also, digital records are less susceptible to damage and loss compared to physical documents, ensuring the longevity and reliability of educational credentials.

Less than half of the recognised boards were found to have partnered with DigiLocker, a digital platform by the Government of India, to issue Class 10th and 12th marksheets. Out of 69 recognised boards, 32 of them provide Class X mark sheets through DigiLocker, while 31 boards offer Class XII mark sheets via DigiLocker.

## List of Boards using DigiLocker for Class X Marksheet

| S.No. | Board |
|---|---|
| 1 | Bihar State Board of School Examination (Bihar) |
| 2 | Board of Open Schooling and Skill Education (Sikkim) |
| 3 | Board of School Education Haryana (Haryana) |
| 4 | Board of Secondary Education, Andhra Pradesh (Andhra Pradesh) |
| 5 | Board of Secondary Education, Assam (Assam) |
| 6 | Board of Secondary Education, Manipur (Manipur) |
| 7 | Board of Secondary Education, Odisha (Odisha) |
| 8 | Central Board of Secondary Education (Delhi) |
| 9 | Chhattisgarh State Board of Secondary Education (Chhattisgarh) |
| 10 | Council for the Indian School Certificate Examination (CISCE) (Delhi) |
| 11 | Goa State Board of Secondary and Higher Secondary Education (Goa) |
| 12 | Gujarat State Board of Secondary and Higher Secondary Education (Gujarat) |
| 13 | H.P. Board of School Education (Himachal Pradesh) |
| 14 | Jharkhand State Board (Jharkhand Academic Council) (Jharkhand) |
| 15 | Karnataka Secondary Education Examination Board (Karnataka) |
| 16 | Maharashtra State Board of Secondary and Higher Secondary Education (Maharashtra) |
| 17 | Maharashtra State Open School (Maharashtra) |
| 18 | Meghalaya Board of School Education, Tura (Meghalaya) |
| 19 | Mizoram State Board of School Education (Mizoram) |
| 20 | MP State Board of Secondary Education (Madhya Pradesh) |
| 21 | Nagaland Board of School Education (Nagaland) |
| 22 | National Institute of Open Schooling (Uttar Pradesh) |
| 23 | Punjab School Education Board (Punjab) |
| 24 | Rajasthan Board of Secondary Education (Rajasthan) |
| 25 | Rajasthan State Open School, Jaipur (Rajasthan) |
| 26 | Tamil Nadu State Board (Tamil Nadu Directorate of Government Examinations) (Tamil Nadu) |
| 27 | The Jammu and Kashmir Board of School Education (Jammu & Kashmir) |
| 28 | Tripura State Board of Secondary Education (Tripura) |
| 29 | UP State Board of High School and Intermediate Education (Uttar Pradesh) |
| 30 | Uttarakhand State Board of School Education (Uttarakhand) |
| 31 | West Bengal Board of Madrasah Education (West Bengal) |
| 32 | West Bengal Board of Secondary Education, Govt. of West Bengal (West Bengal) |

## List of Boards not using DigiLocker for Class X Marksheet

| S.No. | Board |
|---|---|
| 1 | Assam Higher Secondary Education Council (AHSEC) {Assam State Open School (ASOS) (under banner of AHSEC)} |
| 2 | Board of Intermediate Education, Andhra Pradesh |
| 3 | Board of Higher Secondary Education, Kerala |
| 4 | Council of Higher Secondary Education, Manipur |
| 5 | Council of Higher Secondary Education, Odisha Bhubaneswar |
| 6 | West Bengal Council of Higher Secondary Education (WBCHSE) |
| 7 | Board of Public Examination, Kerala |
| 8 | Board of Secondary Education, Telangana, Hyderabad, |
| 9 | West Bengal Board of Primary Education (WBBPE) |
| 10 | International Baccalaureate (IB) |
| 11 | Delhi Board of School Education (DBSE) |
| 12 | UP Basic Shiksha Parishad, Prayagraj (1-8 class) |
| 13 | Bihar Board of Open Schooling & Examination (BBOSE), Patna |
| 14 | Andhra Pradesh Open School Society |
| 15 | Chhattisgarh State of Open School, Raipur |
| 16 | Madhya Pradesh State Open School Education Board |
| 17 | The West Bengal Council of Rabindra Open Schooling |
| 18 | Haryana State Open Board of Schooling |
| 19 | Himachal Pradesh state open school |
| 20 | Punjab board of open school |
| 21 | Telangana Open School Society, Hyderabad |
| 22 | Bihar Sanskrit Education Board, Patna |
| 23 | Chhattisgarh Sanskrit Vidyamandalam, Raipur |
| 24 | Sanskrit Board Maharishi Patanjali Sanskrit Sansthan |
| 25 | Shri Jagannath Sanskrit University, Shri Vihar Puri, Odisha |
| 26 | Board of Secondary Sanskrit Education, Uttar Pradesh |
| 27 | Uttarakhand Sanskrit Education Board Dehradun |
| 28 | Assam Sanskrit board |
| 29 | Bihar State Madrasa Education Board, Patna, (बिहार राज्य मदरसा शिक्षा बोर्ड, पटना) |
| 30 | Chhattisgarh Madrasa Board |
| 31 | Odisha State Board of Madrasa Education |
| 32 | U.P. Board of Madrasa Education (mats) |
| 33 | Uttarakhand Madrasa Shiksha Parishad Dehradun |
| 34 | State Madrassa Education Board, Assam |
| 35 | Directorate of Technical Education, Goa |
| 36 | Board of Higher Secondary Education (Vocational) |
| 37 | West Bengal State Council of Technical Education & Vocational Education and Skill Development |

## List of Boards using DigiLocker for Class XII Marksheet

| S.No. | Board |
|---|---|
| 1 | Assam Higher Secondary Education Council (Assam) |
| 2 | Board of Intermediate Education (Andhra Pradesh) |
| 3 | Board of Open Schooling and Skill Education (Sikkim) |
| 4 | Board of School Education Haryana (Haryana) |
| 5 | Central Board of Secondary Education (Delhi) |
| 6 | Chhattisgarh State Board of Secondary Education (Chhattisgarh) |
| 7 | Council for the Indian School Certificate Examination (CISCE) (Delhi) |
| 8 | Council of Higher Secondary Education (Odisha) |
| 9 | Council of Higher Secondary Education (Manipur) |
| 10 | Goa State Board of Secondary and Higher Secondary Education (Goa) |
| 11 | Gujarat State Board of Secondary and Higher Secondary Education (Gujarat) |
| 12 | H.P. Board of School Education (Himachal Pradesh) |
| 13 | Jharkhand State Board (Jharkhand Academic Council) (Jharkhand) |
| 14 | Karnataka State Board (Department of Pre University Education) (Karnataka) |
| 15 | Maharashtra State Board of Secondary and Higher Secondary Education (Maharashtra) |
| 16 | Maharashtra State Open School (Maharashtra) |
| 17 | Meghalaya Board of School Education, Tura (Meghalaya) |
| 18 | Mizoram State Board of School Education (Mizoram) |
| 19 | MP State Board of Secondary Education (Madhya Pradesh) |
| 20 | Nagaland Board of School Education (Nagaland) |
| 21 | National Institute of Open Schooling (Uttar Pradesh) |
| 22 | Punjab School Education Board (Punjab) |
| 23 | Rajasthan Board of Secondary Education (Rajasthan) |
| 24 | Rajasthan State Open School, Jaipur (Rajasthan) |
| 25 | Tamil Nadu State Board (Tamil Nadu Directorate of Government Examinations) (Tamil Nadu) |
| 26 | The Jammu and Kashmir Board of School Education (Jammu & Kashmir) |
| 27 | Tripura State Board of Secondary Education (Tripura) |
| 28 | UP State Board of High School and Intermediate Education (Uttar Pradesh) |
| 29 | Uttarakhand State Board of School Education (Uttarakhand) |
| 30 | West Bengal Board of Madrasah Education (West Bengal) |
| 31 | West Bengal Council of Higher Secondary Education, Govt. of West Bengal (West Bengal) |

## List of Boards not using DigiLocker for Class XII Marksheet

| S.No. | Board |
|---|---|
| 1 | Board of Higher Secondary Education, Kerala |
| 2 | Board of Secondary Education, Assam (SEBA) |
| 3 | Board of Secondary Education, Andhra Pradesh |
| 4 | Board of Public Examination, Kerala |
| 5 | Board of Secondary Education, Manipur |
| 6 | Board of Secondary Education, Odisha |
| 7 | West Bengal Board of Secondary Education (WBBSE) |
| 8 | Bihar School Examination Board, Patna |
| 9 | Board of Secondary Education, Telangana |
| 10 | West Bengal Board of Primary Education (WBBPE) |
| 11 | International Baccalaureate (IB) |
| 12 | Delhi Board of School Education (DBSE) |
| 13 | UP Basic Shiksha Parishad, Prayagraj (1-8 class) |
| 14 | Bihar Board of Open Schooling & Examination (BBOSE), Patna |
| 15 | Andhra Pradesh Open School Society |
| 16 | Chhattisgarh State of Open School, Raipur |
| 17 | Madhya Pradesh State Open School Education Board |
| 18 | The West Bengal Council of Rabindra Open Schooling |
| 19 | Haryana State Open Board of Schooling |
| 20 | Himachal Pradesh state open school |
| 21 | Punjab board of open school |
| 22 | Telangana Open School Society, Hyderabad |
| 23 | Bihar Sanskrit Education Board, Patna |
| 24 | Chhattisgarh Sanskrit Vidyamandalam, Raipur |
| 25 | Sanskrit Board Maharishi Patanjali Sanskrit Sansthan |
| 26 | Shri Jagannath Sanskrit University, Shri Vihar Puri, Odisha |
| 27 | Board of Secondary Sanskrit Education, Uttar Pradesh |
| 28 | Uttarakhand Sanskrit Education Board Dehradun |
| 29 | Assam Sanskrit board |
| 30 | Bihar State Madrasa Education Board, Patna, (बिहार राज्य मदरसा शिक्षा बोर्ड, पटना) |
| 31 | Chhattisgarh Madrasa Board |
| 32 | Odisha State Board of Madrasa Education |
| 33 | U.P. Board of Madrasa Education (mats) |
| 34 | Uttarakhand Madrasa Shiksha Parishad Dehradun |
| 35 | State Madrassa Education Board, Assam |

| | |
|---|---|
| **36** | Directorate of Technical Education, Goa |
| **37** | Board of Higher Secondary Education (Vocational) |
| **38** | West Bengal State Council of Technical Education & Vocational Education and Skill Development |

Most school boards have yet to fully digitize their assessment processes. However, it was found that the Central Board of Secondary Education (CBSE) stands out as an exception, having made substantial progress in this area. CBSE uses several digital tools and systems for the following stages: Exam Planning & Preparation Stage, Pre-Exam Stage, Exam Conduct Stage, Post Exam Stage, Result Compilation Stage, Result Declaration & Dissemination Stage, and Post Result Declaration Stage.

In conclusion, embracing digitization offers a transformative opportunity for examination boards across India to enhance efficiency, accuracy, and transparency in their operations. By fully integrating digital solutions, boards can streamline processes, reduce errors, and provide timely and reliable services to students and stakeholders. It is imperative that boards prioritize the development of robust IT infrastructure and invest in continuous staff training to harness the full potential of digital technologies.

# CONCLUSION

In a country of 1.42 billion people where about 30% of the population is below the age of 18, school education becomes an area of focus to inspire the ethos of nation-building and holistic development. The beauty of diversity doesn't fail to pose challenges in the form of equality in quality education for all learners, irrespective of religion, caste, creed, or geographical locality. For this purpose, it is imperative that quality education be standardised across all Education Boards.

The National Education Policy (NEP) 2020 and the National Curriculum Framework (NCF-SE) 2023 have both envisioned such quality and equality in education. Through the present report, the provisions pertaining to equivalency in different domains of assessment, curriculum, administration, infrastructure, and Inclusiveness, as mentioned in the NEP 2020 and the NCF-SE 2023, have first been observed and used as a touchstone to analyse the present condition of Education Boards in India.

With regards to Administration, it was observed that one board received an overall score of 100%, successfully implementing a majority of the recommended reforms for administrative equivalence. Among the 27 boards assessed, 9 boards scored above 75%, indicating a positive trend. However, 10 boards scored below 50%, highlighting that significant progress still needs to be made. When asked about initiating capacity building for teachers to create professional online training modules and manuals/handbooks for *Assessment as Learning and Assessment for Learning*, 57% of the boards responded affirmatively. This suggests that while there is some progress, there remains a notable gap in prioritizing these initiatives, despite their high demand as highlighted in NCF-SE 2023.

Assimilating the complete results for the points allocated to Administration for each category of boards, it was found that only one of the boards secured 100% points in this category. Among the 27 boards assessed, 9 boards scored above 75%, indicating a positive trend. However, 10 boards scored below 50%, highlighting that significant progress still needs to be made.

For Curriculum, it was found that there were only three boards that fared above 75%. There was a notable misalignment between the desired educational standards and the prevailing situation. Education Boards exhibited discrepancies in their subject offerings for Grades 10 and 12. The majority of boards provided Science, Social Science, and Language 1 as either optional or compulsory subjects in Grade 10, while Vocational Education or other Optional Subjects were offered by only a fraction of them, thus suggesting a lack of balance in the curriculum. This trend extended to Grade 12, with a similar imbalance in subject offerings. The data reveals that in Grade 10, 38.89% of the boards have Art/Craft as compulsory subjects in their curriculum, and 61.11%

of boards provide Physical Education/Sports/Yoga as a compulsory subject. Ninety per cent of boards indicated that they are providing Vocational Education in Grade 10 as an optional subject, whereas 9.52 per cent of boards have made the curricular area compulsory. This analysis underscores the need for a more uniform and comprehensive approach to curriculum development and subject offerings in both Grade 10 and Grade 12 to ensure educational standards align with expectations.

The Assessment mechanisms and examination approaches employed by various Educational Boards exhibit substantial variations, creating a complex landscape in the realm of education assessments. NCF-SE 2023 distinguishes between Formative and Summative Assessments, each serving distinct purposes. The focus is on Formative Assessments as tools for teachers to understand the effectiveness of their teaching methods and for learners to gain insights into their strengths and weaknesses. However, the data reveals a significant lack of emphasis on Formative Assessments among many boards, with some offering minimal or no weightage to them. This lack of alignment with the NEP 2020's desire for more "regular and formative" assessment practices highlights the need for a fundamental shift in assessment priorities. Furthermore, the provision of on-demand examinations is a recurring theme in NEP 2020 and NCF-SE 2023. However, data indicates that the vast majority of boards do not offer such flexibility, missing an opportunity to reduce the high-stakes nature of Board Examinations. Additionally, the number of Supplementary/Compartment Board Examinations allowed by various boards is inconsistent, further impacting learners' chances and adding to the high-stakes environment. The lack of a semester-wise system and limited adoption of holistic progress cards compounds the challenges in assessment reform. In the overall Assessment category, the majority of boards fall within the average performance range, with few excelling and only one performing below the average. These findings emphasise the need for comprehensive reforms and a concerted effort to align educational assessment practices with the referred policies and frameworks.

In the evaluation of Infrastructure within the Educational Boards, the findings indicate a diverse landscape. While a significant portion of boards have effectively maintained essential infrastructure for examinations, such as exam halls and photocopying facilities, there remains room for improvement in other key areas. Notably, basic amenities like running water and updated libraries present areas where enhancements are needed. The data underscores variations in adherence to equivalency norms. To promote equitable educational environments, it is crucial for the Education Boards to address deficiencies and work toward a more uniform and comprehensive infrastructure standard.

Both the National Education Policy (NEP) 2020 and the National Curriculum Framework – School Education (NCF-SE) 2023 emphasise Inclusiveness in education. However, the data analysis reveals gaps in Inclusiveness measures among Education Boards. It was found that only 34.3% of the boards have a definite policy for assessing gifted children indicating room for improvement.

Sixty-two point five per cent of the boards have responded affirmatively to the inclusion of gender sensitivity and other constitutional values such as tolerance and empathy in their learning outcomes.

About 43% of the boards reported that they encourage affiliated schools to provide an enabling environment for the enrolment of transgender children in terms of awareness and sensitization among learners and staff. Such initiative to facilitate learner Inclusiveness is imperative to create awareness among learners and inculcate a sense of understanding and tolerance towards diversity.

In conclusion, the report underscores that achieving equivalence in education across diverse Education Boards in India is a complex but imperative task. It necessitates a concerted effort, guided by the principles and recommendations articulated in the NEP 2020 and NCF-SE 2023. Addressing the identified gaps and implementing reforms in the domains of administration, curriculum, assessment, infrastructure, and inclusiveness is essential to ensure that the nation's educational landscape truly fosters quality and equality for all learners, in line with the ethos of nation-building and holistic development.

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# APPENDICES

## APPENDIX-I: QUESTION PAPER TEMPLATE

The following is the list of variables used for the Question Paper Analysis Template.

**Table 1. Questions asked in Question Paper Analysis Template**

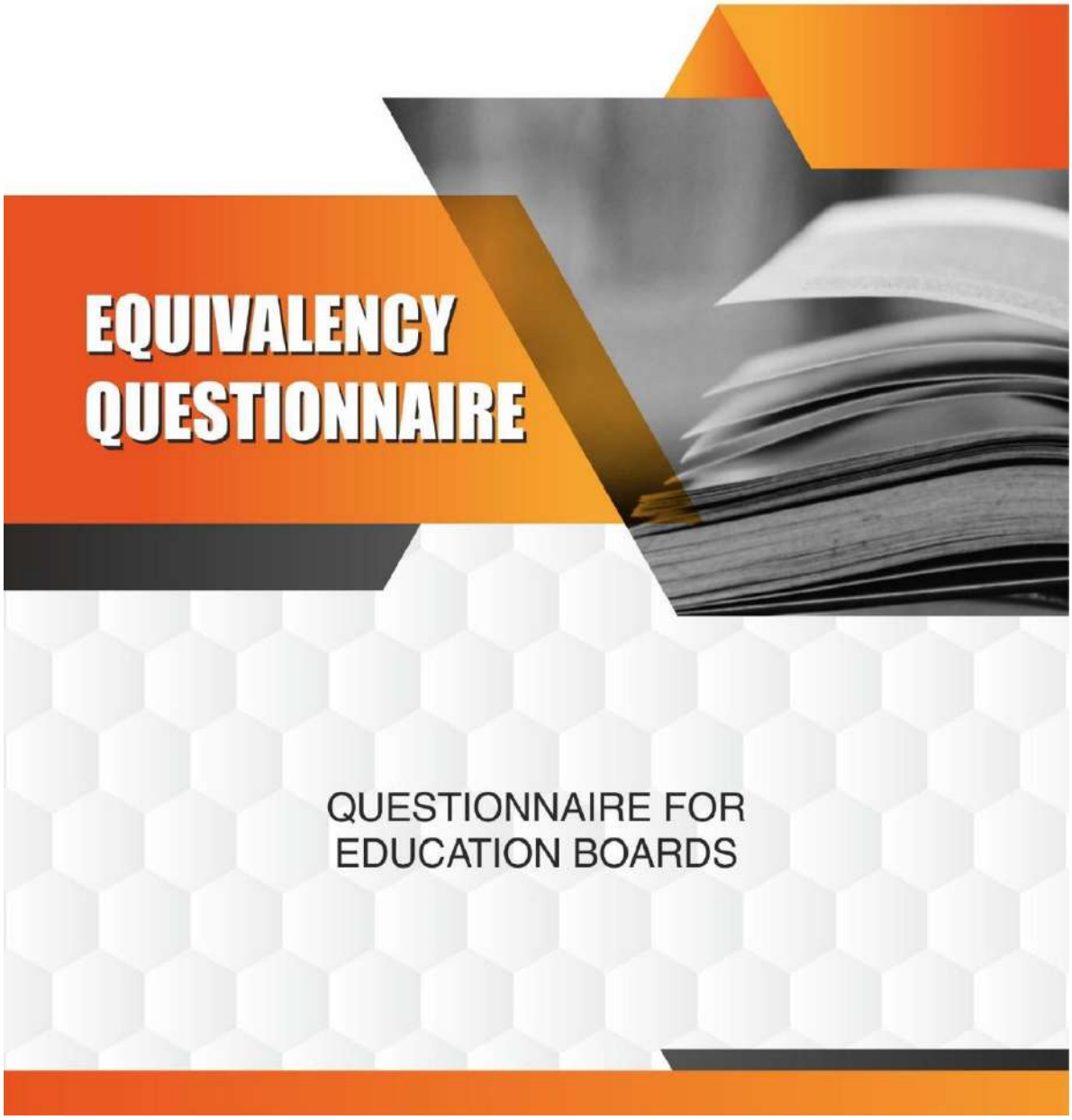
| | |
|---|---|
| **Question Paper Information** | Board |
| | Year |
| | Grade |
| | Stream |
| | Subject |
| | Language(s) |
| | Set number |
| | Duration of test in minutes |
| | Max Marks (total question paper) |
| | Is the question paper linked or aligned to an Assessment Framework? |
| | Is the assessment linked to learning standards? |
| | Is there a syllabus for reference for the year? |
| | Is there a marking scheme for reference for the year? |
| | Is there a model answer paper for reference for the year? |
| **Item information** | Item number (on QP) |
| | Does the learner have a CHOICE among items? |
| | Please describe item numbering and learner choice |
| | Max marks (item) |
| | Notes on max marks |
| | Question type |
| | Does the awarded mark seem appropriate for the question? |
| | Is the item linked to an Assessment framework? |
| | Grade X Content Category |

| | |
|---|---|
| | Grade X Content Sub-topic |
| | Grade XII Content Category |
| | Grade XII Content Sub-topic |
| | Cognitive demand |
| | Is there any error identified in the question? |
| | If yes, kindly describe the identified error |
| | Difficulty level (E/M/H) |
| **For items with a reading passage: Passage-Level Categories** | Passage Status |
| | Passage Type |
| | Informational Passage Interdisciplinary Focus |
| | Passage Word Count (For provided passages only) |
| | Passage Reading Level |
| **For items with a Map** | Map Type |
| | Map Scope |
| | Map Purpose |
| | Map Complexity |
| | Map Task |
| **For items that include drawing** | Diagram Directions |
| | Diagram Complexity |
| **For comparisons across sets and years** | Does question appear also in another set? |
| | if appears in another set, which set? |
| | Does question appear also in another year? |
| | If from other year, which year? |
| | If from other year, which set? |
| | Notes and Comments |

# APPENDIX-II: EQUIVALENCE QUESTIONNAIRE

PARAKH

A constituent unit of NCERT funded by World Bank under STARS



The items presented in this questionnaire were developed specifically for the PARAKH project, as well as adapted from existing frameworks in international student assessment. The resources utilized in drafting this equivalence questionnaire include:

- Programme for International Student Assessment (PISA) 2018
- Programme for International Student Assessment (PISA) 2022
- PISA for Development
- National Assessment of Educational Progress (NAEP)
- OECD – Programme for International Student Assessment Data Explorer
- United States Department of Education School Community Network Handbook on Family and Community Engagement
- University of Washington Accessibility Guidelines
- Government of India's *Remodeling of School Education Boards*
- Government of India's *Report on Unified District Information System for Education Plus*
- Association of Indian Universities' *Standard Operating Procedure for Equivalence of Qualifications of Indian School Boards*

The questionnaire is separated into multiple sections, each with a subset of questions relating to overarching topics. The framework of the questionnaire includes:

| | | | |
|---|---|---|---|
| I | Board Establishment, Functioning, and Membership | Board Management & Policies | 5 Items |
| | | Board Affiliation | 5 Items |
| | | Board Developed Materials | 2 Items |
| II | Teaching, Learning, Curriculum, and Assessment | Curriculum & Learning Time | 5 Items |
| | | Assessments | 11 Items |
| | | Teaching and Qualifications | 6 Items |
| III | Facilities, Opportunities, and Resources | Facilities & Infrastructure | 14 Items |
| | | Resources & Opportunities | 10 Items |
| | | Total Items: | 58 |

# PARAKH Equivalency Questionnaire

Board Name _____

State ☐01 Open ☐02 Central ☐03 International ☐04 Other ☐05:

Website _____

Head Office Address _____

Name of the Respondent_____

Designation _____

Official Email ID _____

Alternate email ID _____

Mobile Number _____ Official Number _____

## School and Enrollment Information:

| | *Number of Affiliated Schools* | *Number of Government Schools* | *Number of Government -Aided Schools* | *Number of Private Schools* | *Approx. Number of Students Enrolled in 2023* | *Number of Boys Only Schools* | *Number of Girls Only Schools* | *Number of Co-Ed Schools* |
|---|---|---|---|---|---|---|---|---|
| **Affiliated for Class X Exams** | | | | | | | | |
| **Affiliated for Class XII** | | | | | | | | |
| **Total** | | | | | | | | |

## Section 1 – Board Establishment, Functioning, and Membership

This section includes questions related to the functions of education boards, school membership within education boards, and funding sources of the boards.

**Q1. Does your board perform periodic reviews on the following aspects of its affiliated schools?**

*(Please select one response in each row.)*

| | *Yes* | *No* |
|---|---|---|
| Student Attendance | ☐ 01 | ☐ 02 |
| Infrastructure and Facilities | ☐ 01 | ☐ 02 |
| Teacher Performance | ☐ 01 | ☐ 02 |
| Teaching Days | ☐ 01 | ☐ 02 |
| School-based Assessment | ☐ 01 | ☐ 02 |
| Internal Assessment Practices | ☐ 01 | ☐ 02 |
| Pedagogical Practices for CWSN | ☐ 01 | ☐ 02 |

**Q2. Thinking of the previous question, In a few points, please specify the purpose and modality of your boards periodic reviews**

*(Please write a response. If not applicable, please write "Not applicable".)*

| |
|---|
| |

**Q3. Are your private schools fulfilling the 25% reservation for Economically Weaker Sections?**

*(Please select one response.)*

| | |
|---|---|
| Yes | ☐ 01 |
| No | ☐ 02 |
| Not Applicable | ☐ 03 |

**Q4. What is the language policy of the schools in your board?**

*(Please select one response.)*

| | X | XII |
|---|---|---|
| Two languages | ☐ 01 | ☐ 01 |
| Three languages | ☐ 02 | ☐ 02 |

*Other please specify* _____

**Q5. Approximately, what percentage of your board's funding comes from the following sources?**

*(Please write a number between 1 and 100 on each line. Write "0" (zero) if not applicable)*

| | % |
|---|---|
| Autonomous self-financing body (funded by examination fees and charges) | _____01 |
| Autonomous self-financing body (funded by benefactors, donations, bequests, sponsorships, fundraising) | _____02 |
| Funded by central government | _____03 |
| Funded by state government | _____04 |
| Funded by an organization/institution authorized by central/state government | _____05 |
| Funded by religious bodies/minority organizations | _____06 |

**Q6. In a few points, please specify the process for an existing school to become affiliated with your education board. Please share a website link/bylaw/ attachment for the same.**

*(Please write a response.)*

**Q7. In a few points, please specify the process and requirements for starting a <u>new</u> school under your education board. Please share a website link/bylaw/ attachment for the same.**

*(Please write a response.)*

**Q8. In a few points, please specify the process for a school under your education board to become unaffiliated. Please share a website link/ bylaw/ attachment for the same.**

*(Please write a response.)*

| |
|---|
| |

**Q9. How was your school board established?**

*(Please select one response.)*

| | |
|---|---|
| An executive order of the Central Government | ☐ 01 |
| An executive order of the State Government | ☐ 02 |
| An act of Parliament | ☐ 03 |
| An act of the State Legislature | ☐ 04 |
| Other | ☐ 05 |

**Q10. Does your board provide guidelines/bylaws for the following aspects of its affiliated schools?**

*(Please select one response in each row.)*

| | *Yes* | *No* |
|---|---|---|
| A prescribed curriculum for students across all affiliated schools | ☐ 01 | ☐ 02 |
| A specialized curriculum that accounts for local cultures and traditions | ☐ 01 | ☐ 02 |
| Specialised subject streams geared toward specific career paths | ☐ 01 | ☐ 02 |
| Textbooks approved for use in schools | ☐ 01 | ☐ 02 |
| Learning Software approved for use in schools | ☐ 01 | ☐ 02 |
| Timetable structure allotment | ☐ 01 | ☐ 02 |
| Student Attendance Criteria for appearing for Board Examination | ☐ 01 | ☐ 02 |
| The number of CWSN appearing for Board Examination | ☐ 01 | ☐ 02 |

**Q11. Is your board involved in the development of any of the following?**
*(Please select one response in each row.)*

| | *Yes* | *No* |
|---|---|---|
| Textbooks | ☐ 01 | ☐ 02 |
| Learning Materials | ☐ 01 | ☐ 02 |
| Teaching aids | ☐ 01 | ☐ 02 |
| Capacity building for Teachers | ☐ 01 | ☐ 02 |
| eResources | ☐ 01 | ☐ 02 |

**Q12. If your board does develop textbooks, learning materials, software applications or teaching aids, please briefly describe the development and review process.**
*(Please write a response in the space provided.)*

## Section 2 – Teaching, Learning, Curriculum, and Assessment

This section presents questions related to the curriculum in schools of your board, as well as how students are taught, how they learn, and how their learning is assessed.

**Q13. Are the following subjects compulsory or optional for <u>Grade X</u> students in your board?**

*(Please select one response in each row. Specify languages below)*

Language 01_____ Language 02_____Language 03_____

| | *Compulsory* | *Optional* | *N/A* |
|---|---|---|---|
| Mathematics (Common) | ☐01 | ☐02 | ☐03 |
| Mathematics (Standard) | ☐01 | ☐02 | ☐03 |
| Mathematics (General) | ☐01 | ☐02 | ☐03 |
| Language 1 | ☐01 | ☐02 | ☐03 |
| Language 2 | ☐01 | ☐02 | ☐03 |
| Language 3 | ☐01 | ☐02 | ☐03 |
| Science (Physics, Chemistry, Biology) | ☐01 | ☐02 | ☐03 |
| Social Science (Geography, History, Civics / Political Science, Economics) | ☐01 | ☐02 | ☐03 |
| Physical Education/Sports/ Yoga | ☐01 | ☐02 | ☐03 |
| Art / Craft | ☐01 | ☐02 | ☐03 |
| Music | ☐01 | ☐02 | ☐03 |
| Computer Application | ☐01 | ☐02 | ☐03 |
| Dance/Yoga | ☐01 | ☐02 | ☐03 |
| Home Science | ☐01 | ☐02 | ☐03 |
| Vocational Subjects | ☐01 | ☐02 | ☐03 |
| **Other Subjects (Please specify)** | | | |
| _____ | ☐01 | ☐02 | ☐03 |
| _____ | ☐01 | ☐02 | ☐03 |
| _____ | ☐01 | ☐02 | ☐03 |
| _____ | ☐01 | ☐02 | ☐03 |
| _____ | ☐01 | ☐02 | ☐03 |
| _____ | ☐01 | ☐02 | ☐03 |
| _____ | ☐01 | ☐02 | ☐03 |

**Q14. Are the following subjects compulsory or optional for <u>Grade XII</u> students in your board?**

*(Please select one response in each row.) Please specify names of the languages here*

Language 01_____ Language 02_____Language 03_____

(If more please write)

| | *Compulsory* | *Optional* | *N/A* |
|---|---|---|---|
| Mathematics | ☐01 | ☐02 | ☐03 |
| Language 1 (specify) | ☐01 | ☐02 | ☐03 |
| Language 2 (specify) | ☐01 | ☐02 | ☐03 |
| Language 3 (specify) | ☐01 | ☐02 | ☐03 |
| Physics | ☐01 | ☐02 | ☐03 |
| Chemistry | ☐01 | ☐02 | ☐03 |
| Biology | ☐01 | ☐02 | ☐03 |
| Geography | ☐01 | ☐02 | ☐03 |
| History | ☐01 | ☐02 | ☐03 |
| Political Science | ☐01 | ☐02 | ☐03 |
| Economics | ☐01 | ☐02 | ☐03 |
| Physical Education/Sports | ☐01 | ☐02 | ☐03 |
| Yoga | ☐01 | ☐02 | ☐03 |
| Philosophy | ☐01 | ☐02 | ☐03 |
| Psychology | ☐01 | ☐02 | ☐03 |
| Art / Craft | ☐01 | ☐02 | ☐03 |
| Music | ☐01 | ☐02 | ☐03 |
| Computer Application | ☐01 | ☐02 | ☐03 |
| Dance | ☐01 | ☐02 | ☐03 |
| Home Science | ☐01 | ☐02 | ☐03 |
| Vocational Subjects | ☐01 | ☐02 | ☐03 |
| **Other Subjects (Please specify)** | | | |
| _____ | ☐01 | ☐02 | ☐03 |
| _____ | ☐01 | ☐02 | ☐03 |
| _____ | ☐01 | ☐02 | ☐03 |
| _____ | ☐01 | ☐02 | ☐03 |

**Q15. Thinking of board examinations, please answer the following as they apply to your board.**

*(Please write a response on each line.)*

| | Grade X | Grade XII |
|---|---|---|
| Total Marks for Board Examinations | _____ 01 | _____ 01 |
| Are Internal Practical Examiners appointed? | _____ 02 | _____ 02 |
| Are External Practical Examiners appointed? | _____ 03 | _____ 03 |
| Are Answer Books for Practical Exams provided? | _____ 04 | _____ 04 |
| Are Credits Offered Post-Examinations? | _____ 05 | _____ 05 |
| Number of Days Reserved for Board Examinations? | _____ 06 | _____ 06 |
| Number of Working Days in Academic Year | _____ 07 | _____ 07 |
| Number of Teaching Days in Academic Year | _____ 08 | _____ 08 |
| Number of School Days in Academic Year | _____ 09 | _____ 09 |
| Weightage for Formative Assessments? | _____ 10 | _____ 10 |
| Weightage for Summative Assessments? | _____ 11 | _____ 11 |

**Q16. Do the schools in your board offer health and wellness instruction to students? *(Health and wellness includes courses involving nutrition, sex education, or physical activities)***

*(Please select one response.)*

| | |
|---|---|
| Yes, most | ☐ 01 |
| Yes, some | ☐ 02 |
| No | ☐ 03 |

**Q17. In a typical school week, approximately how much time is dedicated to each of the following subjects by the schools in your board? *(Each period is assumed to be 35-40 minutes in length.)***

*(Please select one response in each row.)*

| | *Up to 1 period of instruction* | *2 periods* | *3 periods* | *4 periods* | *5 periods* | *Specify the maximum periods* | *Not Applicable* |
|---|---|---|---|---|---|---|---|
| Mathematics | ☐01 | ☐02 | ☐03 | ☐04 | ☐05 | ☐06 | ☐07 |
| Language 1 | ☐01 | ☐02 | ☐03 | ☐04 | ☐05 | ☐06 | ☐07 |
| Language 2 | ☐01 | ☐02 | ☐03 | ☐04 | ☐05 | ☐06 | ☐07 |
| Language 3 | ☐01 | ☐02 | ☐03 | ☐04 | ☐05 | ☐06 | ☐07 |
| Science | ☐01 | ☐02 | ☐03 | ☐04 | ☐05 | ☐06 | ☐07 |
| Social Science | ☐01 | ☐02 | ☐03 | ☐04 | ☐05 | ☐06 | ☐07 |
| Physical Education/Sports | ☐01 | ☐02 | ☐03 | ☐04 | ☐05 | ☐06 | ☐07 |
| Art/ Craft | ☐01 | ☐02 | ☐03 | ☐04 | ☐05 | ☐06 | ☐07 |
| Music | ☐01 | ☐02 | ☐03 | ☐04 | ☐05 | ☐06 | ☐07 |
| Computer Application | ☐01 | ☐02 | ☐03 | ☐04 | ☐05 | ☐06 | ☐07 |
| Dance/Yoga | ☐01 | ☐02 | ☐03 | ☐04 | ☐05 | ☐06 | ☐07 |
| Moral Studies | ☐01 | ☐02 | ☐03 | ☐04 | ☐05 | ☐06 | ☐07 |
| Religious Studies | ☐01 | ☐02 | ☐03 | ☐04 | ☐05 | ☐06 | ☐07 |
| Socio-emotional Learning Programs | ☐01 | ☐02 | ☐03 | ☐04 | ☐05 | ☐06 | ☐07 |

**Q18. Does your board provide any of the following with respect to Board Examinations?**

*(Please select one response in each row.)*

| | *Yes, for board use only* | *Yes, publicly available* | *No* |
|---|---|---|---|
| Examination bylaws | ☐01 | ☐02 | ☐03 |
| Syllabus | ☐01 | ☐02 | ☐03 |
| Assessment framework | ☐01 | ☐02 | ☐03 |
| Question Paper blueprints | ☐01 | ☐02 | ☐03 |
| Marking/grading schemes | ☐01 | ☐02 | ☐03 |
| Model Answer Paper | ☐01 | ☐02 | ☐03 |

**Q19. Does your board provide any of the following with respect to Board Examinations?**

*(Please select one response in each row.)*

| | Yes | No |
|---|---|---|
| Provisions for online examinations | ☐ 01 | ☐ 02 |
| Provisions for on-demand examinations | ☐ 01 | ☐ 02 |

**Q20. How many supplementary/compartment board examinations are students permitted to take in your board?**

*(Please select one response.)*

| | |
|---|---|
| None | ☐ 01 |
| One | ☐ 02 |
| Two | ☐ 03 |
| More than two | ☐ 04 |

**Q21. On average, approximately how many days after Board Examinations are supplementary/compartment Board Examinations made available to students in your board?**

*(Please write a number. Write "0" (zero) if there are none)*

| | X | XII |
|---|---|---|
| Number of days: | _____ 01 | _____ 01 |

**Q22. On average, approximately how many days does it take for supplementary board results to be announced?**

*(Please write a number. Write "0" (zero) if there are none)*

| | X | XII |
|---|---|---|
| Number of days: | _____ 01 | _____ 01 |

**Q23. Does your board conduct semester examinations?**

*(Please select one response.)*

| | X | XII |
|---|---|---|
| Yes | ☐ 01 | ☐ 01 |
| No | ☐ 02 | ☐ 02 |

**Q24. Did your board charge a fee to conduct board examinations in 2023 for the following groups?**
*(Please write a number. Write "0" (zero) if there are none)*

| | Number |
|---|---|
| Class 10: | _____01 |
| Class 12: | _____02 |
| Other: | _____03 |

**Q25. Does your board have a policy for assessing gifted children? If so, please elaborate in a few points.**
*(Please write a response.)*

| |
|---|
| |

**Q26. What are the different examination-related activities taken up by the board?**
*(Please select one response in each row.)*

| | Yes | No |
|---|---|---|
| Paper Setting | ☐01 | ☐02 |
| Exam Moderation | ☐01 | ☐02 |
| Conduct of Examination | ☐01 | ☐02 |
| Results Declaration | ☐01 | ☐02 |

**Q27. Thinking of <u>Board Examinations,</u> are any of the following roles applicable to the specified personnel?**
*(Please select all that apply.)*

| | Question Development | Marking Scheme Development | Approval/ Moderation of Question Paper | Model Answer Script Development |
|---|---|---|---|---|
| Teachers | ☐01 | ☐02 | ☐03 | ☐04 |
| Principals of Schools | ☐01 | ☐02 | ☐03 | ☐04 |
| Board Representative | ☐01 | ☐02 | ☐03 | ☐04 |
| Moderator | ☐01 | ☐02 | ☐03 | ☐04 |

**Q28. Thinking of board examinations, what kind of training does your board provide to administration staff (e.g. board question paper setters, moderators, examination conduct personnel, result processing personnel)?**
*(Please write a response below.)*

| |
|---|
| |

**Q29. Does your education board have any role in providing formal observations of teaching staff within its schools?**
*(Please write a response below. If yes, please state who provides/conducts these formal observations.)*

| |
|---|
| |

**Q30. In your board, are teachers required to take part in the following activities?**
*(Please select one response in each row.)*

| | *Yes* | *No* |
|---|---|---|
| Professional Development | ☐ 01 | ☐ 01 |
| Subject-specific Training | ☐ 02 | ☐ 02 |
| Assessment Development Training | ☐ 03 | ☐ 03 |

**Q31. Do the bylaws/policies of your board require subject-specific expertise when hiring teachers for Grades 10 or 12?**
*(Please select one response.)*

| | |
|---|---|
| Yes | ☐ 01 |
| No | ☐ 02 |

**Q32. Which agency (or agencies) develops the textbooks for your board?**
*(Please write a response in the space provided.)*

| | |
|---|---|
| Agency name: | _____ 01 |

**Q33. Does your board collaborate with any of the following institutions regarding teacher training?**

*(Please select one response in each row.)*

| | *Yes* | *No* |
|---|---|---|
| NCERT | ☐01 | ☐02 |
| SCERT / SIEMAT/ SIE's | ☐01 | ☐02 |
| DIETs / NGOs/ Publishers / Ed Tech Companies / Directorate of Education | ☐01 | ☐02 |
| None of these | ☐01 | ☐02 |

**Q34. Which of the following statements have been initiated in your education board?**

*(Please select one response in each row.)*

| | *Yes* | *No* |
|---|---|---|
| 1. Emphasis on holistic development of students are taken care of through innovative pedagogies, experiential learning, creativity and critical thinking. | ☐01 | ☐02 |
| 2. Assessment patterns for both formative and summative assessments and formulated evaluation procedures are in accordance with extant NCF. | ☐01 | ☐02 |
| 3. - Capacity building of teachers including preparation of professional online training modules and manuals/handbooks for undertaking "assessment as learning" and "assessment for learning". | ☐01 | ☐02 |
| 4. Capacity building of paper setters, moderators, and evaluators of Boards examinations. | ☐01 | ☐02 |
| 5. Guidelines on assessment standards are to be achieved by the Board covering multidisciplinary, multiformat assessments, CWSN accessible assessment leading to attainment of 21st century skills | ☐01 | ☐02 |
| 6. Learning outcomes are fine-tuned to introduce learning outcome-based assessment in all grades and a mechanism is in place for tracking progress of learning. | ☐01 | ☐02 |
| 7. Introduced holistic progress cards for 360-degree assessment of students. | ☐01 | ☐02 |
| 8. Learning outcomes include gender sensitivity and other constitutional values such as tolerance and empathy. | ☐01 | ☐02 |
| 9. The board encourages schools to provide an enabling environment for enrolment of transgender children in terms of awareness and sensitisation among students and staff. | ☐01 | ☐02 |

## Section 3 – Facilities, Opportunities & Resources

This section of the questionnaire will ask questions about schools in your board and their surrounding communities to assess their available resources and collect background information about the populations of students that they serve.

**Q35. Approximately, what percentage of the schools in your board have access to electricity?**

*(Please write a number between 1 and 100 on each line. Write "0" (zero) if there are none)*

| | % |
|---|---|
| Yes, uninterrupted access | _____01 |
| Yes, interrupted access | _____02 |
| No electricity | _____03 |

**Q36. Approximately, what percentage of the schools in your board have access to the Internet?**

*(Please write a number between 1 and 100 on each line. Write "0" (zero) if there are none)*

| | % |
|---|---|
| Yes, uninterrupted internet access | _____01 |
| Yes, interrupted internet access | _____02 |
| No internet access | _____03 |

**Q37. Approximately, what percentage of the schools in your board are equipped with the following digital resources?**

*(Please write a number between 1 and 100 for each option on each line. Write "0" (zero) if there are none)*

| | *Not available* | *Available, with interruption* | *Available, without interruption* |
|---|---|---|---|
| Internet connection for students | _____01 | _____02 | _____03 |
| Internet connection for teachers | _____01 | _____02 | _____03 |
| Internet connection for school administration staff | _____01 | _____02 | _____03 |

**Q38. Approximately, what percentage of the schools in your board have the following features, and if so, in what condition are they?**

*(Please write a number between 1 and 100 for each option on each line. Write "0" (zero) if there are none)*

| | *No, not available* | *Yes, but in poor condition* | *Yes, but in need of minor repairs* | *Yes, in good condition* |
|---|---|---|---|---|
| Running water | _____01 | _____02 | _____03 | _____04 |
| Indoor plumbing | _____01 | _____02 | _____03 | _____04 |
| Drinking fountains | _____01 | _____02 | _____03 | _____04 |
| Flush toilets | _____01 | _____02 | _____03 | _____04 |
| Accessible toilets | _____01 | _____02 | _____03 | _____04 |
| Separate toilets for boys and girls | _____01 | _____02 | _____03 | _____04 |
| Separate toilets for school staff and students | _____01 | _____02 | _____03 | _____04 |
| Sinks or Handwashing Stations | _____01 | _____02 | _____03 | _____04 |
| Other types of toilets (e.g. latrines, squat holes, pit toilets) | _____01 | _____02 | _____03 | _____04 |

**Q39.(a) Thinking of the infrastructure required for examinations, do the schools of your board have the following?**

*(Please select one response in each row.)*

| | *Yes, all* | *Yes, some* | *No* |
|---|---|---|---|
| Exam halls | ☐01 | ☐02 | ☐03 |
| Lighting (e.g. overhead lighting or windows) | ☐01 | ☐02 | ☐03 |
| Ventilation | ☐01 | ☐02 | ☐03 |
| Strong rooms | ☐01 | ☐02 | ☐03 |
| Photocopying facilities | ☐01 | ☐02 | ☐03 |

**Q39.(b) Does the board collect the above information from the schools (Q38-Q39(a))**

*(Please select one response in each row.)*

| | |
|---|---|
| Yes | ☐01 |
| No | ☐02 |

**Q40. Do the schools in your board have a defined space for each of the following?**
*(Please select one response in each row.)*

| | *Yes, most* | *Yes, some* | *No* |
|---|---|---|---|
| Sport ground/playground | ☐01 | ☐02 | ☐03 |
| Art room | ☐01 | ☐02 | ☐03 |
| Music room | ☐01 | ☐02 | ☐03 |
| Yoga and Dance | ☐01 | ☐02 | ☐03 |
| Library | ☐01 | ☐02 | ☐03 |
| Computer Lab | ☐01 | ☐02 | ☐03 |
| Laboratory | ☐01 | ☐02 | ☐03 |
| Resource room for CWSN | ☐01 | ☐02 | ☐03 |

**Q41. Thinking of Sport Grounds/Playgrounds/Indoor play spaces at the schools of your board, which of the following statements apply?**
*(Please select one response in each row.)*

| | *Yes, most* | *Yes, some* | *No* |
|---|---|---|---|
| The schools provide play equipment for the students | ☐01 | ☐02 | ☐03 |
| The schools schedule time specifically for inter/intrapersonal student play | ☐01 | ☐02 | ☐03 |
| The schools schedule time specifically for sports and games | ☐01 | ☐02 | ☐03 |
| The schools schedule time for ecological and environmental-related activities focused on Sustainable Development Goals | ☐01 | ☐02 | ☐03 |
| The schools provide qualified teachers to instruct physical activity classes | ☐01 | ☐02 | ☐03 |
| The schools provide qualified teachers to instruct physical activity classes adapted to suit needs of CWSN | ☐01 | ☐02 | ☐03 |
| The schools organize sport teams for students (including CWSN) | ☐01 | ☐02 | ☐03 |
| The schools hold sports competitions | ☐01 | ☐02 | ☐03 |

**Q42. Thinking of art and music spaces in the schools of your board, do any of the following apply?**

*(Please select one response in each row.)*

| | *Yes, most* | *Yes, some* | *No* |
|---|---|---|---|
| The schools offer Drawing courses | ☐01 | ☐02 | ☐03 |
| The schools offer Painting courses | ☐01 | ☐02 | ☐03 |
| The schools offer Photography courses | ☐01 | ☐02 | ☐03 |
| The schools offer Printmaking courses | ☐01 | ☐02 | ☐03 |
| The schools offer Sculpture courses | ☐01 | ☐02 | ☐03 |
| The schools offer Ceramics courses | ☐01 | ☐02 | ☐03 |
| The schools offer Digital media/Graphic Design courses | ☐01 | ☐02 | ☐03 |
| The schools offer film courses | ☐01 | ☐02 | ☐03 |
| The schools provide art supplies for students | ☐01 | ☐02 | ☐03 |
| The schools provide qualified teachers to instruct art courses | ☐01 | ☐02 | ☐03 |
| The school organises music groups | ☐01 | ☐02 | ☐03 |
| The schools provide musical instruments for students | ☐01 | ☐02 | ☐03 |
| The schools provide qualified teachers to instruct music | ☐01 | ☐02 | ☐03 |
| The schools provide clothing for dance and yoga activities | ☐01 | ☐02 | ☐03 |
| The schools provide equipment for dance and yoga activities | ☐01 | ☐02 | ☐03 |
| The schools schedule time specifically for dance activities | ☐01 | ☐02 | ☐03 |
| The schools schedule time specifically for yoga activities | ☐01 | ☐02 | ☐03 |
| The schools provide qualified teachers to instruct dance classes | ☐01 | ☐02 | ☐03 |
| The schools provide qualified teachers to instruct yoga classes | ☐01 | ☐02 | ☐03 |

**Q43.(a) On average, approximately how many books are available in the libraries of the schools in your board?**

*(Please select one response.)*

| | |
|---|---|
| There are no books. | ☐01 |
| 1-10 books | ☐02 |
| 11-25 books | ☐03 |
| 26-100 books | ☐04 |
| 101-200 books | ☐05 |
| 201-500 books | ☐06 |
| More than 500 books | ☐07 |
| More than 1500 books | ☐08 |

**Q43.(b) Is the above data collected while giving affiliation to the schools**

| | |
|---|---|
| Yes | ☐ 01 |
| No | ☐ 02 |

**Q44. Does your board provide any of the following in school libraries?**
*(Please select one response in each row.)*

| | *Yes* | *No* |
|---|---|---|
| Books in braille | ☐ 01 | ☐ 02 |
| Audio books | ☐ 01 | ☐ 02 |
| Indian Sign Language books | ☐ 01 | ☐ 02 |

**Q45. Approximately how many new books does the board prescribe adding to the libraries of its schools each year?**
*(Please write a number. Write "0" (zero) if there are none)*

| | *Number* |
|---|---|
| Number of new books: | _____ 01 |

**Q46. Are libraries in the schools in your board used for any of the following?**
*(Please select one response in each row.)*

| | *Yes, most* | *Yes, some* | *No* |
|---|---|---|---|
| Instruction on use of Library resources | ☐ 01 | ☐ 02 | ☐ 03 |
| Studying/Research | ☐ 01 | ☐ 02 | ☐ 03 |
| Accessing the internet | ☐ 01 | ☐ 02 | ☐ 03 |
| Special Events | ☐ 01 | ☐ 02 | ☐ 03 |
| Leisure time | ☐ 01 | ☐ 02 | ☐ 03 |
| Individualised tutoring | ☐ 01 | ☐ 02 | ☐ 03 |

**Q47. Thinking of computer labs in the schools of your board, which of the following statements apply?**
*(Please select one response in each row.)*

| | *Yes, most* | *Yes, some* | *No* |
|---|---|---|---|
| The schools provide desktop or computers to students | ☐ 01 | ☐ 02 | ☐ 03 |
| The schools schedule time specifically for computer use and technology education | ☐ 01 | ☐ 02 | ☐ 03 |
| The schools provide qualified teachers to instruct computer classes | ☐ 01 | ☐ 02 | ☐ 03 |
| There is at least one computer with accessibility features for students with visual impairments (e.g. braille keyboard). | ☐ 01 | ☐ 02 | ☐ 03 |

**Q48. Thinking of dedicated laboratory spaces in the schools of your board, which of the following statements apply?**

*(Please select one response in each row.)*

| | *Yes, most* | *Yes, some* | *No* |
|---|---|---|---|
| The schools provide laboratory equipment to students | ☐ 01 | ☐ 02 | ☐ 03 |
| The schools schedule time specifically for laboratory use for science education | ☐ 01 | ☐ 02 | ☐ 03 |
| The schools provide qualified teachers to instruct laboratory use | ☐ 01 | ☐ 02 | ☐ 03 |
| The schools provide ATAL Tinkering Labs for student use | ☐ 01 | ☐ 02 | ☐ 03 |
| The laboratories are accessible by wheelchairs | ☐ 01 | ☐ 02 | ☐ 03 |
| The laboratories are accessible for children with visual or hearing impairment | ☐ 01 | ☐ 02 | ☐ 03 |

**Q49. Does your board mandate compulsory vocational education in its schools for students in class 9 or above?**

*(Please select one response.)*

| | |
|---|---|
| Yes | ☐ 01 |
| No | ☐ 02 |

**Q50. Do the schools in your board offer courses in any of the following vocational programs to students in class 9 or above?**

*(Please select one response in each row.)*

| | *Yes, most* | *Yes, some* | *No* |
|---|---|---|---|
| Automotive Repair | ☐01 | ☐02 | ☐03 |
| Bookkeeping | ☐01 | ☐02 | ☐03 |
| Carpentry | ☐01 | ☐02 | ☐03 |
| Dressmaking | ☐01 | ☐02 | ☐03 |
| Heating, Ventilation, and Air Conditioning | ☐01 | ☐02 | ☐03 |
| Electrician | ☐01 | ☐02 | ☐03 |
| Culinary | ☐01 | ☐02 | ☐03 |
| Plumbing | ☐01 | ☐02 | ☐03 |
| Welding | ☐01 | ☐02 | ☐03 |
| Health and Beauty | ☐01 | ☐02 | ☐03 |
| Hospitality | ☐01 | ☐02 | ☐03 |
| Agriculture | ☐01 | ☐02 | ☐03 |
| Coding | ☐01 | ☐02 | ☐03 |
| Data Management | ☐01 | ☐02 | ☐03 |
| Application Development | ☐01 | ☐02 | ☐03 |
| Audio-Video Production | ☐01 | ☐02 | ☐03 |
| Other (Please specify) | ☐01 | ☐02 | ☐03 |

**Q51. Does your board provide any of the following information to students?**

*(Please select one response in each row.)*

| | *Yes, most* | *Yes, some* | *No* |
|---|---|---|---|
| Information about internships | ☐01 | ☐02 | ☐03 |
| Information about future careers | ☐01 | ☐02 | ☐03 |
| Information about university admissions exam preparation | ☐01 | ☐02 | ☐03 |
| Information about future educational opportunities | ☐01 | ☐02 | ☐03 |
| Information about student financing (e.g. student loans and grants) | ☐01 | ☐02 | ☐03 |
| Information about job placement assistance | ☐01 | ☐02 | ☐03 |
| Other (school – industry linkage) | ☐01 | ☐02 | ☐03 |

**Q52. Does your board provide the following opportunities to students?**
*(Please select all that apply.)*

| | |
|---|---|
| Affordable tuition fees | ☐ 01 |
| Home-schooling options | ☐ 02 |
| Career counseling | ☐ 03 |

**Q53. In most schools in your board, are there certified teachers on staff for students with special needs?**

| | |
|---|---|
| Yes | ☐ 01 |
| No | ☐ 02 |

**Q54. Do most schools in your board provide any of the following accommodations for students with special needs? *('Support staff' are full- or part-time employees of the school/board who act as teacher's aides or assistants to provide more individualized instruction and assistance to students with special needs)***
*(Please select one response in each row.)*

| | *Yes* | *No* |
|---|---|---|
| Lecture notes or outlines | ☐ 01 | ☐ 02 |
| Recorded lectures | ☐ 01 | ☐ 02 |
| Extended time for completing assignments | ☐ 01 | ☐ 02 |
| Individual planning of assignment workflows | ☐ 01 | ☐ 02 |
| Proofreading of assignments | ☐ 01 | ☐ 02 |
| Extended exam times | ☐ 01 | ☐ 02 |
| Availability of a room with reduced distractions | ☐ 01 | ☐ 02 |
| Assistive Technology (e.g. screen readers, refreshable braille translators) | ☐ 01 | ☐ 02 |
| Option of oral exams | ☐ 01 | ☐ 02 |
| Large font question papers | ☐ 01 | ☐ 02 |
| Braille question papers | ☐ 01 | ☐ 02 |
| Modified assessment standards or policies | ☐ 01 | ☐ 02 |
| Availability of support staff | ☐ 01 | ☐ 02 |
| Use of assistive devices | ☐ 01 | ☐ 02 |
| Adapted grade-level curriculum | ☐ 01 | ☐ 02 |
| Accessible bathrooms | ☐ 01 | ☐ 02 |
| Accessible sport facilities | ☐ 01 | ☐ 02 |
| Other (Please specify) | ☐ 01 | ☐ 02 |

**Q55. Approximately, what proportion of schools in your board offer the above accommodations to students with special needs?**

*(Please write a number on each line. Write "0" (zero) if there are none)*

| | % |
|---|---|
| Percent of schools: | _____01 |

**Q56. Does your board plan for and regularly conduct audits of safety and security in your schools?**

*(Please select one response.)*

| | |
|---|---|
| Yes | ☐01 |
| No | ☐02 |

**Q57. Do most of the schools in your board have the following features, and if so, in what condition are they?**

*(Please select one response in each row.)*

| | *No, not available* | *Yes, but in poor condition* | *Yes, but in need of minor repairs* | *Yes, in good condition* |
|---|---|---|---|---|
| Roof | ☐01 | ☐02 | ☐03 | ☐04 |
| Walls | ☐01 | ☐02 | ☐03 | ☐04 |
| Floors | ☐01 | ☐02 | ☐03 | ☐04 |
| Building entrance | ☐01 | ☐02 | ☐03 | ☐04 |
| Doors | ☐01 | ☐02 | ☐03 | ☐04 |
| Windows | ☐01 | ☐02 | ☐03 | ☐04 |
| Hallways | ☐01 | ☐02 | ☐03 | ☐04 |
| Classrooms | ☐01 | ☐02 | ☐03 | ☐04 |
| Desks | ☐01 | ☐02 | ☐03 | ☐04 |
| Lifts | ☐01 | ☐02 | ☐03 | ☐04 |
| Lights | ☐01 | ☐02 | ☐03 | ☐04 |
| Fans | ☐01 | ☐02 | ☐03 | ☐04 |
| Ventilation | ☐01 | ☐02 | ☐03 | ☐04 |
| Wheelchair ramps | ☐01 | ☐02 | ☐03 | ☐04 |
| Stair guides | ☐01 | ☐02 | ☐03 | ☐04 |
| Braille signages | ☐01 | ☐02 | ☐03 | ☐04 |
| Other (Please specify) | ☐01 | ☐02 | ☐03 | ☐04 |

**Q58. Do community members or organisations (I.e. parents/student guardians, Parent-Teacher Organisations, local volunteer groups) contribute to the schools in your board by doing any of the following?**

*(Please select one response in each row.)*

| | *Yes* | *No* |
|---|---|---|
| Build school facilities such as classrooms or teacher houses. | ☐ 01 | ☐ 02 |
| Maintain school facilities such as classrooms or teachers' houses. | ☐ 01 | ☐ 02 |
| Maintain school grounds and fences or hedges around them. | ☐ 01 | ☐ 02 |
| Construct, maintain or repair furniture or equipment. | ☐ 01 | ☐ 02 |
| Teach when teachers are absent. | ☐ 01 | ☐ 02 |
| Assist teachers in addressing the needs of students with disabilities. | ☐ 01 | ☐ 02 |
| Organise sport activities or school trips. | ☐ 01 | ☐ 02 |
| Assist with preparation and distribution of school meals. | ☐ 01 | ☐ 02 |
| Organize cultural activities or events at school. | ☐ 01 | ☐ 02 |
| Provide information to students about culture and traditions | ☐ 01 | ☐ 02 |
| Other (Please specify) | ☐ 01 | ☐ 02 |

# APPENDIX-III: LIST OF PARTICIPATING BOARDS

The following is a list of the Boards present at the Regional Workshop on the Equivalence of Boards conducted by PARAKH, NCERT.

| Sr. No. | BOARD NAME |
|---|---|
| 1. | Central Board of Secondary Education |
| 2. | Council of Higher Education, Odisha |
| 3. | Delhi Board of School Education |
| 4. | Goa Board of Secondary & Higher Secondary Education, Altd-Betim |
| 5. | Nagaland Board of School Education, Kohima |
| 6. | Gujarat Secondary and Higher Secondary Board |
| 7. | Jammu and Kashmir Board of School Education |
| 8. | West Bengal Council of Higher Secondary Education |
| 9. | Meghalaya Board of School Education |
| 10. | Punjab School Education Board |
| 11. | Board of School Education Haryana, Bhiwani |
| 12. | Board of Secondary Education, Andhra Pradesh |
| 13. | Board of Secondary Education Manipur |
| 14. | Board of Secondary Education, Odisha |
| 15. | Mizoram Board of School Education |
| 16. | West Bengal Board of Secondary Education |
| 17. | Madhyamika Shiksha Parishad Uttar Pradesh Prayagraj |
| 18. | Assam Higher Secondary Education Council |
| 19. | Board of Secondary Education Rajasthan Ajmer |
| 20. | Board of School Education Uttarakhand, Ramnagar, Nainital |
| 21. | Himachal Pradesh Board of School Education |
| 22. | Maharashtra State Board of Secondary & Higher Secondary Education |
| 23. | Board of Public Examinations Kerala |
| 24. | Tripura Board of Secondary Education |
| 25. | Chhattisgarh Madhyamik Shiksha Mandal Raipur |
| 26. | M.P. Board of Secondary Education Bhopal |
| 27. | Board of Higher Secondary Examinations Kerala |
| 28. | Council for the Indian School Certificate Examinations |
| 29. | National Institute of Open Schooling |
| 30. | HP Board of School Education Dharamshala |
| 31. | Board of Open Schooling and Skill Education, Sikkim |
| 32. | MP State Open School Education Board |

*Note: The Council for the Indian School Certificate Examinations (CISCE) has been excluded from the analysis since they couldn't provide the required data due to administrative reasons.*

# ADDENDUM

## ADDENDUM-I: CHECKLIST OF PARTICULARS FOR EQUIVALENCE

Checklists pertaining to the five categories of focus, i.e., Administration, Curriculum, Assessments, Infrastructure, and Inclusiveness have been attached herewith. This is for the Boards to re-check and re-evaluate their areas of strength and deficiencies in order to bring necessary changes with regard to particular domains.

| **Administration** | | ✓ |
|---|---|---|
| 1. | If the Boards perform periodic reviews of particular aspects of its affiliated schools. | |
| | ■ Learner Attendance | |
| | ■ Infrastructure and Facilities | |
| | ■ Teacher Performance | |
| | ■ Teaching Days | |
| | ■ School-based Assessment | |
| | ■ Internal Assessment Practices | |
| | ■ Pedagogical Practices for CWSN | |
| 2. | Language Policy of the schools affiliated to the Board. | |
| 3. | Sources of Funding for the Boards | |
| | ■ Autonomous self-financing body (funded by examination fees and charges) | |
| | ■ Autonomous self-financing body (funded by benefactors, donations, sponsorships, fundraising) | |
| | ■ Funded by Central Government/State Government. | |
| 4. | If the Board has a specific process for an existing school to become affiliated with the Board. | |
| 5. | If there is a particular process for starting a new school under the Education Board. | |
| 6. | If there are specified Guidelines or Bylaws for the given aspects of its affiliated schools. | |
| | ■ A prescribed curriculum for learners across all affiliated schools | |
| | ■ A specialized curriculum that accounts for local cultures and traditions | |

| | | |
|---|---|---|
| | ■ Specialized subject streams geared toward specific career paths | |
| | ■ Textbooks approved for use in schools | |
| | ■ Learning software approved for use in schools | |
| | ■ Timetable structure allotment | |
| | ■ Learner Attendance Criteria for appearing for Board Examination | |
| | ■ The number of CWSN appearing for Board Examination. | |
| 7. | If the Board is involved in administrative tasks, like the development of any of the following | |
| | ■ Textbooks | |
| | ■ Learning Materials | |
| | ■ Teaching aids | |
| | ■ Capacity Building for Teachers | |
| | ■ eResources | |
| 8. | If the Board plays a role in providing formal observations of teaching staff within its schools. | |
| 9. | If the teachers in the Board are required to take part in activities: | |
| | ■ Professional Development | |
| | ■ Subject-specific Training | |
| | ■ Assessment Developing Training | |
| 10. | If the Board requires Subject-specific expertise when hiring teachers for Grades 10 or 12? | |
| 11. | If the Board collaborates with State or National institutions for Teacher Training. | |
| 12. | If the Board has initiated capacity building of teachers including preparation of professional online training modules and manual/handbooks. | |
| 13. | If the Board has initiated capacity building of paper setters, moderators, and evaluators of Boards examination. | |

| Curriculum | | ✓ |
|---|---|---|
| 1. | If Skill Subjects and Optional Subjects including Entrepreneurial, Sports, etc. are offered by the Board for Grade X and XII learners. | |
| 2. | If Schools in the Board offer Health and Wellness instruction (including courses involving Nutrition, Adult Education, etc.) to the learners. | |
| 3. | If the amount of time dedicated to particular subjects (weekly) is in alignment with the minimum requirements specified by the NCF-SE 2023. | |
| | ■ Mathematics – 4 hours | |
| | ■ Language 1 – 3 hours | |
| | ■ Language 2 – 2 hours | |
| | ■ Science – 5 hours | |
| | ■ Social Science – 5 hours | |
| 4. | If the Holistic development of learners is taken care of through innovative pedagogies, experiential learning, creativity, and critical thinking. | |
| 5. | If the Learning Outcomes are fine-tuned to introduce Learning Outcome-based assessment in all grades. | |
| 6. | If courses like Drawing, Printmaking, Photography, Ceramics, or Film are provided by the Board. | |
| 7. | If Skill Courses like Automotive Repair, Bookkeeping, Carpentry, etc. are offered by the Schools in the Board. | |
| 8. | If the Board provides any of the following information to learners: | |
| | ■ Information about internships | |
| | ■ Information about future careers | |
| | ■ Information about university admissions exam preparation | |
| | ■ Information about future educational opportunities | |
| | ■ Information about learner financing (e.g., learner loans and grants) | |
| | ■ Information about job placement assistance | |
| | ■ Other (school–industry linkage) | |

| **Assessment** | | ✓ |
|---|---|---|
| 1. | If the Board provides any of the following with regards to Board Examination. | |
| | ■ Examination Bylaws | |
| | ■ Syllabus | |
| | ■ Assessment framework | |
| | ■ Question Paper blueprints | |
| | ■ Marking/grading schemes | |
| | ■ Model Answer Paper | |
| 2. | If the Board has the provision for: | |
| | ■ Online Examinations | |
| | ■ On-demand Examinations | |
| 3. | Number of Supplementary/Compartment board examinations that the learners are permitted to take. | |
| 4. | If the Board conducts Semester Examinations | |
| 5. | If different kinds of examination-related activities are taken up by the Board: | |
| | ■ Paper Setting | |
| | ■ Exam Moderation | |
| | ■ Conduct of Examination | |
| | ■ Results Declaration | |
| 6. | In the Board Examinations, if various roles are appointed to School personnel, Board Representatives, or Moderators. Roles like: | |
| | ■ Question Development | |
| | ■ Marking Scheme Development | |
| | ■ Approval/Moderation of Question Paper | |
| | ■ Model Answer Script Development | |
| 7. | In the Board Examinations, the different kind of training that the Board provides to the Administration Staff. | |
| 8. | If the Assessment patterns for both Formative and Summative assessments are in accordance with the NCF-SE 2023. | |
| 9. | If Holistic Progress Cards for 360-degree assessment has been piloted in the Board. | |

| Infrastructure | | ✓ |
|---|---|---|
| 1. | Percentage of Schools in your Board having access to electricity. | |
| 2. | Percentage of Schools in your Board having access to internet. | |
| 3. | Percentage of Schools in your Board equipped with other digital resources like: | |
| | ■ Internet connection for learners and teachers | |
| | ■ Internet connection for school administration staff | |
| 4. | Percentage of Schools in your Board that have basic facilities: | |
| | ■ Running water | |
| | ■ Indoor plumbing | |
| | ■ Drinking foundations | |
| | ■ Flush toilets | |
| | ■ Accessible toilets | |
| | ■ Separate toilets for boys and girls | |
| | ■ Separate toilets for school staff and learners | |
| | ■ Sinks or Handwashing Stations | |
| | ■ Other types of toilets (e.g., latrines, squat holes, pit toilets) | |
| 5. | If the Schools in your Board have: | |
| | ■ Exam halls | |
| | ■ Lighting (e.g., Overhead lighting or windows) | |
| | ■ Ventilation | |
| | ■ Strong rooms | |
| | ■ Photocopying facilities | |
| 6. | If the Schools in your Board have a defined space for: | |
| | ■ Sports ground/playground | |
| | ■ Art room | |
| | ■ Music room | |
| | ■ Yoga and Dance | |
| | ■ Library | |
| | ■ Computer Lab | |
| | ■ Laboratory | |

| | | |
|---|---|---|
| | ■ Resource room for CWSN | |
| 7. | If the Schools in your Board provide the following: | |
| | ■ Play equipment for the learners | |
| | ■ Schedule time specifically for inter/intrapersonal learner play | |
| | ■ Schedule time specifically for sports and games | |
| | ■ Schedule time for ecological and environmental-related activities focused on Sustainable Development Goals | |
| | ■ Qualified teachers to instruct physical activity class | |
| | ■ Qualified teachers to instruct physical activity classes adapted to suit needs of CWSN. | |
| | ■ Organise sport teams for learners (including CWSN) | |
| | ■ Sports competitions are held. | |
| 8. | Number of books available in the libraries of your Schools. | |
| 9. | Number of new books prescribed by the Board to add to the libraries of its schools each year. | |
| 10. | If the Libraries in the School are used for the following activities: | |
| | ■ Instruction on use of Library resources | |
| | ■ Studying/Research | |
| | ■ Accessing the internet | |
| | ■ Special events | |
| | ■ Leisure time | |
| | ■ Individualised tutoring | |
| 11. | If the Computer Labs in the Schools affiliated with the Board align with the following statements: | |
| | ■ The schools provide desktops or computers to learners | |
| | ■ The schools schedule time specifically for computer use and technology education | |
| | ■ The schools provide qualified teachers to instruct computer classes | |
| | ■ A least one computer is present with accessibility features for learners with visual impairments (e.g., braille keyboard) | |
| 12. | If Laboratories in the Schools affiliated to the Board align with the following statements: | |
| | ■ The schools provide laboratory equipment to learners | |
| | ■ The schools schedule time specifically for laboratory use for science education | |
| | ■ The schools provide qualified teachers to instruct laboratory use | |

| | | |
|---|---|---|
| | ■ The schools provide ATAL Tinkering Labs for learner use | |
| | ■ The Laboratories are accessible by wheelchairs | |
| | ■ The Laboratories are accessible for children with visual or hearing impairment. | |
| 13. | If the schools of the Board are capable to provide compulsory Skill Education in its schools for learners in Grade 9 or above. | |
| 14. | If the Board provides the following opportunities to its learners: | |
| | ■ Affordable tuition fees | |
| | ■ Home-schooling options | |
| | ■ Career counselling | |
| 15. | If most of the Schools affiliated to the Board have certified teachers on staff for learners with special needs. | |
| 16. | If the Board plans for and regularly conducts audits for safety and security in the schools. | |
| 17. | If most schools on the Board have basic infrastructure: | |
| | ■ Roof | |
| | ■ Walls | |
| | ■ Floors | |
| | ■ Building entrance | |
| | ■ Doors | |
| | ■ Windows | |
| | ■ Hallways | |
| | ■ Classrooms | |
| | ■ Desks | |
| | ■ Lifts | |
| | ■ Lights | |
| | ■ Fans | |
| | ■ Ventilation | |
| | ■ Wheelchair ramps | |
| | ■ Stair guides | |
| | ■ Braille Signages | |

| **Inclusiveness** | | ✓ |
|---|---|---|
| 1. | If the Private schools affiliated to the Board is fulfilling the 25% reservation for Economically Weaker Sections. | |
| 2. | If the Board has a policy for assessing gifted children. | |
| 3. | If the Assessment Standards of the Boards covers CWSN accessible assessment. | |
| 4. | If the Learning Outcomes include gender sensitivity and other constitutional values such as tolerance and empathy. | |
| 5. | If the Board encourages its schools to provide an enabling environment for the enrolment of transgender children. | |
| 6. | If the Board provides the following in their libraries: | |
| | ■ Books in braille | |
| | ■ Audiobooks | |
| | ■ Indian sign language books | |
| 7. | If the following accommodations for learners with special needs are provided by the schools affiliated with your Board: | |
| | ■ Lecture notes or outlines | |
| | ■ Recorded lectures | |
| | ■ Extended time for completing assignments | |
| | ■ Individual planning of assignment workflows | |
| | ■ Proofreading of assignments | |
| | ■ Extended time for completing assignments | |
| | ■ Individual planning of assignment workflows | |
| | ■ Proofreading of assignments | |
| | ■ Extended exam times | |
| | ■ Availability of a room with reduced distractions | |
| | ■ Assistive Technology (e.g., screen readers, refreshable braille translators) | |
| | ■ Option of Oral Exams | |
| | ■ Large font question papers | |
| | ■ Braille question papers | |
| | ■ Modified assessment standards or policies | |
| | ■ Availability of support staff | |
| | ■ Use of assistive devices | |
| | ■ Adapted grade-level curriculum | |
| | ■ Accessible bathrooms | |
| | ■ Accessible sport facilities | |
| 8. | High proportion of schools in the Board provide the accommodations for learners with special needs as mentioned above. | |

# ADDENDUM-II: CREDITS FRAMEWORK FOR EQUIVALENCE IN SCHOOL EDUCATION IN INDIA

## BACKGROUND

School education in India, constituting of a diverse range of Educational Boards, exerts an intrinsic desire for equivalence in order to accommodate the variety of its recipients and provide them with quality education that can, in its truest sense, aid to inculcate knowledge and an ethos of human solidarity. Once such an equivalence is attained across all educational boards in the country, an idea which is its offshoot, i.e., the framework of credits, can be implemented.

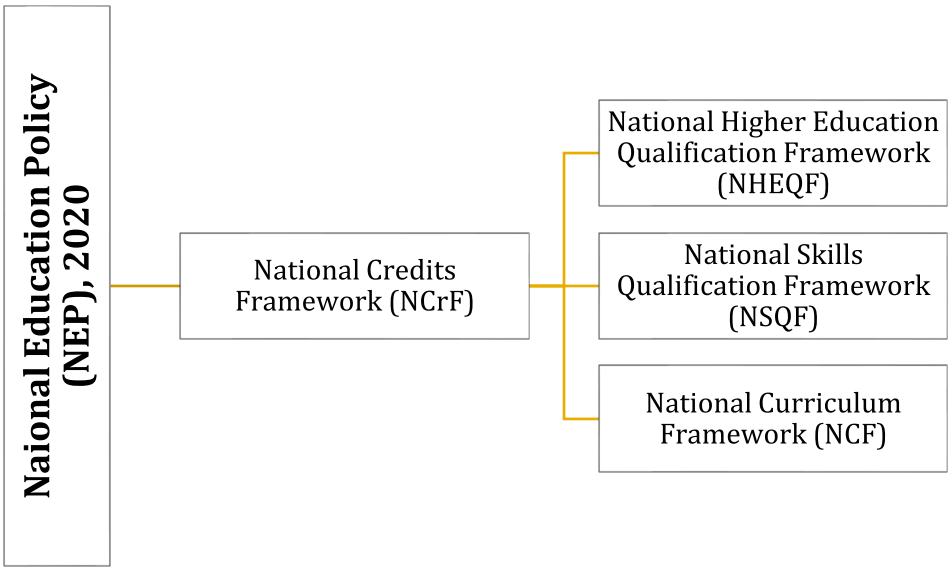
A rigorous credit framework in the school system is a prerequisite for transcending the binary of formal and informal education. The National Education Policy (NEP) 2020 underscores the imperative of amalgamating general academic education with skill education and training, facilitating seamless horizontal and vertical mobility between these domains for lifelong learning. This integrated approach is envisaged to instigate necessary reforms in the education and skilling systems. The incorporation of skill education and training programs into mainstream education across all levels, as emphasised in the NEP 2020, is anticipated to eliminate the dichotomy between general and Skill education and training. Simultaneously, this integration aims to establish academic equivalence between these two realms, representing a pivotal means of fostering aspiration for skill education and training among the youth. Moreover, this amalgamation is poised to accentuate the dignity of labour and underscore the significance of diverse vocations.

In order to realise the vision outlined in the NEP 2020, which seeks to enhance the holistic and effective nature of education while prioritizing the integration of general academic education, skill education, and experiential learning, including pertinent experiences and proficiency/professional levels attained, it becomes imperative to institute and formalize a national credit accumulation and transfer system. Such a system would facilitate the seamless integration of these diverse educational components, ensuring equivalence and mobility of learners and learners within and between general and skill education systems.

Although a framework of credits hasn't yet been implemented in regular school education, there have been multiple endeavours to bring a credit system in other domains of education in India. A framework of credits has hitherto been functional under the open schooling system. The National Institute of Open Schooling (NIOS), at the secondary and the senior secondary level, has appointed 240 hours for self-study to each subject and a total of 1200 hours and 40 credits, annually. In Higher Education, the University Grants Commission (UGC) has introduced the Choice Based Credit System (CBCS) which prescribes the requirement for awarding a degree or diploma or certificate in terms of number of credits to be earned by the learners. All India Council

for Technical Education (AICTE) runs a scheme on Skill Assessment Matrix for Vocational Advancement of Youth (SAMVAY) which is a credit framework for skill vocational courses.

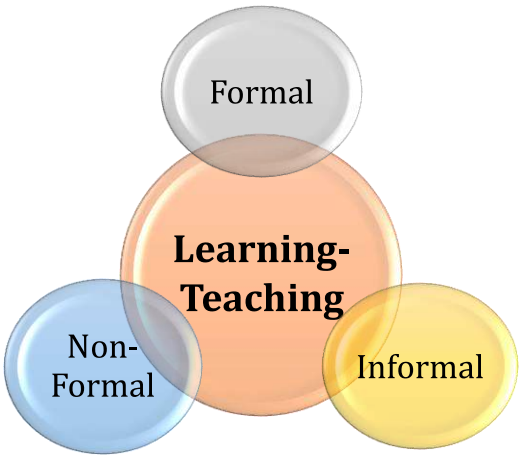
The National Credit Framework (NCrF) is a comprehensive framework of credits encompassing elementary, school, higher, and vocational education & training. It has been developed jointly by UGC, AICTE, NCVET, NIOS, CBSE, NCERT, DGT, Ministry of Education, and Ministry of Skill Development in order to integrate learning on all dimensions i.e., academics, vocational skills and experiential learning including relevant experience and proficiency/professional levels acquired.




*Education Policy and Credit Transfer*

## FORMAL, INFORMAL AND NON-FORMAL LEARNING

All learning-teaching has been traditionally divided into formal, informal and non-formal.




*Types of Learning-Teaching*

## FORMAL LEARNING:

Formal learning is defined as the type of learning that takes place in a structured manner and is often followed by summative assessments. It takes place within an organised system, such as schools, colleges, and universities. The curriculum is predetermined, and there is a clear hierarchy of educators, from teachers to professors, responsible for imparting knowledge. Formal learning is characterized by a systematic approach, fixed timetables, and standardised assessments.

## PROS OF FORMAL LEARNING:

- Recognised qualifications: Formal learning often leads to degrees, diplomas, or certificates, providing tangible proof of acquired knowledge.
- Rigorous structure: The structured nature of formal education ensures a comprehensive coverage of subjects within a specified timeframe.
- Accreditation: Institutions offering formal education are usually accredited, ensuring a certain quality standard.

## CONS OF FORMAL LEARNING:

- Lack of flexibility: Formal learning is often rigid, with limited room for individual pace and style of learning.
- High costs: Attending formal institutions can be expensive, involving tuition fees, books, and other associated costs.
- Stressful assessments: Standardised tests and exams can create stress and may not accurately reflect an individual's true understanding of a subject.

## INFORMAL LEARNING:

Informal learning occurs in everyday life, outside the structured environment of formal education. It is spontaneous, unstructured, and often unintentional. Informal learning takes place through experiences, interactions, and observations, such as conversations with peers, exploring hobbies, or learning from mistakes.

## PROS OF INFORMAL LEARNING:

- Flexibility: Informal learning adapts to the learner's pace, preferences, and interests.
- Real-world application: Knowledge gained informally is often immediately applicable to real-life situations.
- Cost-effectiveness: Informal learning is often free or comes at a minimal cost.

## CONS OF INFORMAL LEARNING:

- Lack of validation: Informal learning experiences may not come with recognised certifications or degrees.
- Limited depth: While informal learning covers a wide range of topics, it may lack the depth and specialization provided by formal education.
- Inconsistency: The quality of information in informal learning settings can vary, and there may be a lack of accuracy and reliability.

## NON-FORMAL LEARNING:

Non-formal learning lies somewhere between formal and informal learning. It is organised and intentional but occurs outside traditional educational institutions. Non-formal learning can be seen in workshops, training programs, and other structured activities designed to impart specific skills and knowledge.

## PROS OF NON-FORMAL LEARNING:

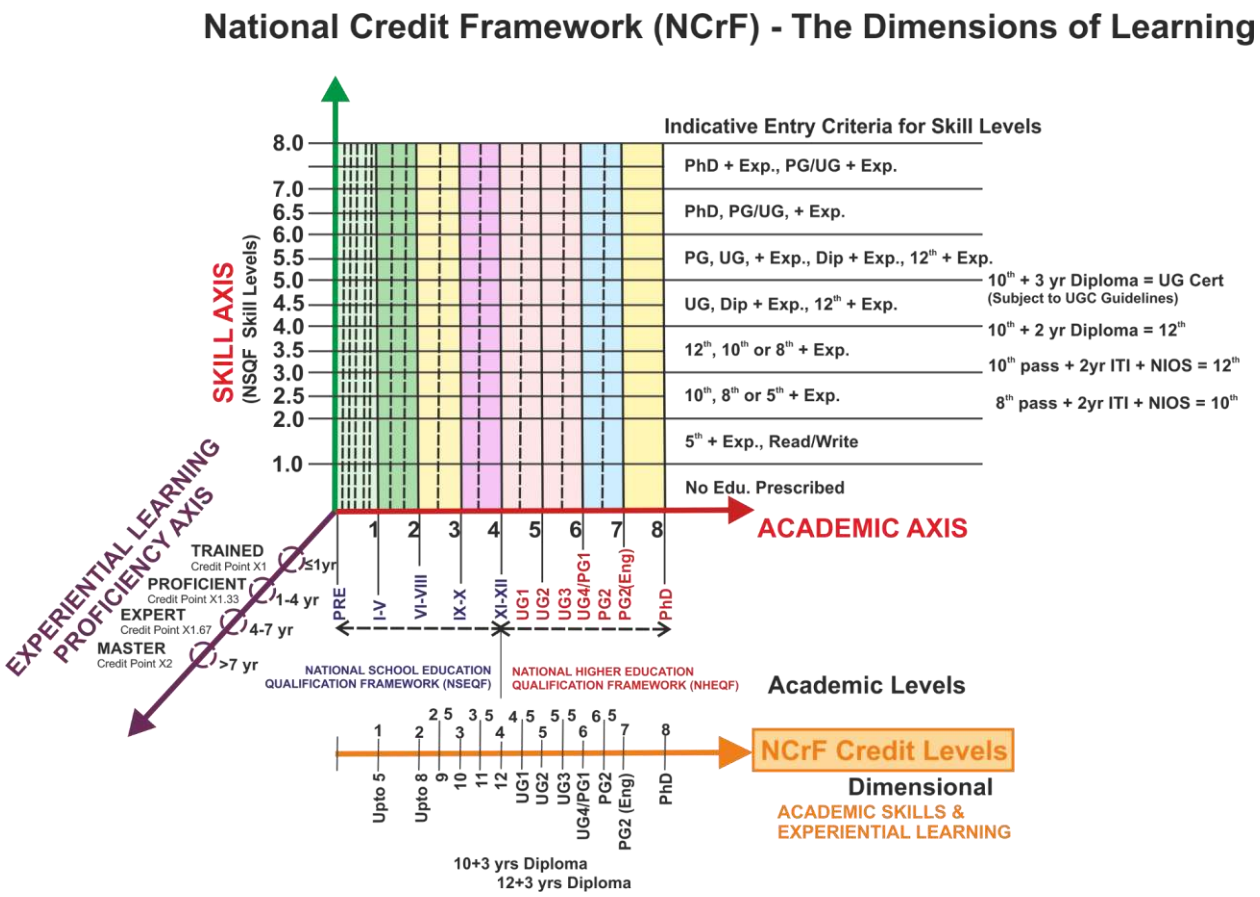
- Practical skills: Non-formal learning often focuses on hands-on, practical skills relevant to specific contexts or industries.
- Flexibility: Like informal learning, non-formal learning offers flexibility in terms of schedule and learning approaches.
- Targeted outcomes: Non-formal learning programs are designed with specific goals and outcomes in mind.

## CONS OF NON-FORMAL LEARNING:

- Limited recognition: Similar to informal learning, non-formal learning may lack widely recognised certifications.
- Variable quality: The effectiveness of non-formal learning programs can vary depending on the provider and design.
- Lack of comprehensive education: Non-formal learning may not cover a broad spectrum of subjects, focusing instead on specific skills or knowledge areas.

## NATIONAL CREDIT FRAMEWORK

The National Credits Framework (NCrF) is a comprehensive system designed to standardise and facilitate the recognition and accumulation of academic and vocational credits in a country's education and training systems. This framework plays a crucial role in promoting transparency, flexibility, and mobility within the education sector, allowing learners to move seamlessly between different levels and types of education while ensuring that their achievements are recognised and valued.




## KEY COMPONENTS OF THE NATIONAL CREDITS FRAMEWORK:

- Credit Accumulation and Transfer: One of the fundamental aspects of the NCrF is the concept of credit accumulation and transfer (CAT). Under this system, learners earn credits for the successful completion of modules, courses, or qualifications. These credits are portable and can be transferred across institutions or programs, enabling individuals to build their qualifications incrementally or pursue interdisciplinary pathways.

- Levels of Qualifications: The NCrF typically organises qualifications into different levels, each representing a specific standard of complexity and specialization. For example, in many

countries, levels range from basic certificates (Level 1 or equivalent) to doctoral degrees (Level 8 or equivalent). This hierarchical structure allows learners to understand the depth and complexity of a qualification and aids employers and institutions in assessing the relevance of an individual's education and skills.

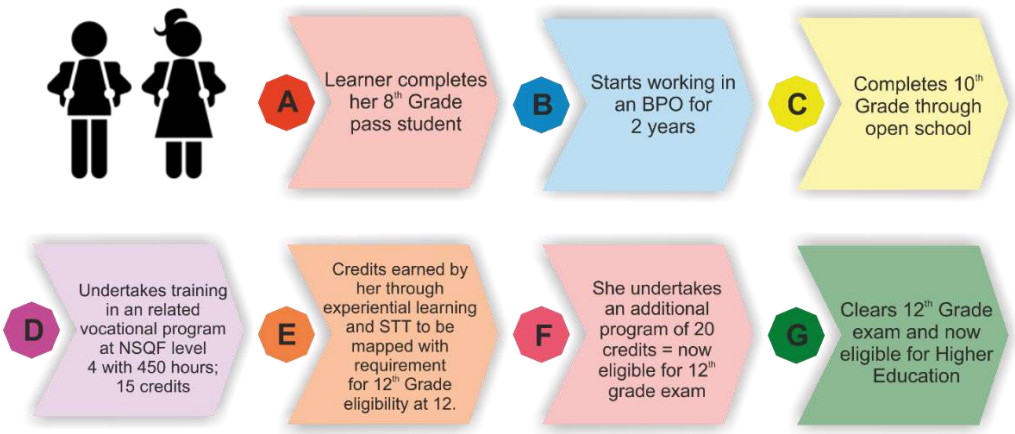
- Quality Assurance: The NCrF includes mechanisms for quality assurance to maintain the integrity and consistency of credits awarded across different institutions. This involves setting standards for the assessment process, ensuring that credits are awarded based on rigorous evaluation, and periodically reviewing and updating the framework to align with evolving educational needs and industry requirements.

- Recognition of Prior Learning (RPL): An essential feature of the NCrF is the recognition of prior learning, acknowledging that learning occurs through various experiences, not just within formal education settings. RPL allows individuals to receive credits for skills and knowledge acquired through work experience, volunteering, or other non-formal learning activities, promoting inclusivity and valuing diverse learning pathways.

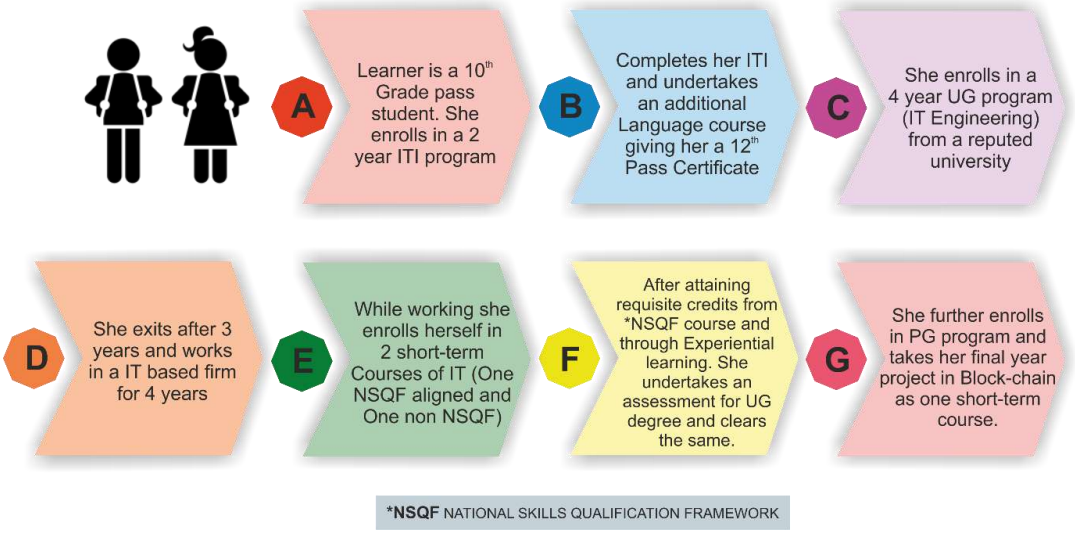
- Enhanced Mobility: The NCrF facilitates seamless mobility for learners, allowing them to transfer credits between educational institutions and move across different levels of qualifications. This is particularly beneficial for individuals who wish to pursue further studies, change careers, or engage in lifelong learning.

- Transparency and Consistency: By standardising credit systems and qualification levels, the NCrF brings transparency to the education sector. This consistency helps learners, employers, and institutions understand the value and equivalency of different qualifications, fostering trust in the education and training system.

- Flexibility in Learning Pathways: The NCrF encourages flexibility in learning pathways, enabling learners to design their educational journey based on their interests, goals, and circumstances. This adaptability is essential in a rapidly changing world, where individuals may need to acquire new skills or change career paths multiple times throughout their lives.



- Alignment with Industry Needs: The NCrF can be adapted to align with industry needs, ensuring that educational programs provide relevant skills and knowledge that are in demand in the workforce. This alignment enhances the employability of graduates and strengthens the link between education and industry.




## KEY SUGGESTIONS OF NCRF

- Enables creditization of all learning.
- No hard separation between areas of learning: arts and sciences, curricular, and extra-curricular activities, vocational and academic streams.
- A total Notional Learning Hours for school education have been agreed to be 1200 hours per year for which the learners will be awarded 40 credits.
- For the purpose of calculation, 30 notional learning hours to be counted as one credit.
- Learners may take up additional courses beyond 40 credits to get additional credits for the same.
- Regulatory/autonomous institutions concerned will define the credits required to be earned from academics, skills, experiential learning, apprenticeship, internship etc.
- All credits will be earned through assessments.
- Assessment Bands i.e. stages at which learners need to be assessed for progression (e.g. 10th/12th Board Exams etc.) to be identified.
- Accumulation of credits to be permissible within the same assessment band.

## CHALLENGES AND FUTURE DEVELOPMENTS

While the NCrF brings numerous benefits, challenges may arise in its implementation, including the need for widespread awareness, effective communication, and collaboration among educational institutions and stakeholders. Additionally, continuous updates and adjustments to the framework are essential to keep it relevant and responsive to the evolving needs of society and the economy.

In conclusion, the National Credits Framework serves as a vital tool for promoting transparency, flexibility, and recognition within education and skill development systems. By facilitating credit accumulation and transfer, establishing qualification levels, ensuring quality assurance, and recognising prior learning, the NCrF contributes to a more inclusive and dynamic learning environment that empowers individuals to pursue diverse educational pathways throughout their lives.

## NATIONAL CURRICULUM FRAMEWORK AND EQUIVALENCE

### Time Allocation for Foundational Stage

| From | To | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|---|
| 9:00 | 10:00 | Maths | Maths | R2 | Math | R2 |
| 10:00 | 10:45 | R1 | R1 | R1 | R1 | R1 |
| 10:45 | 11:00 | Snacks | | | | |
| 11:00 | 12:00 | R1 | R1 | R1 | R1 | R1 |
| 12:00 | 13:00 | R2 | R2 | Maths | R2 | Art |
| 13:00 | 13:45 | Lunch | | | | |
| 13:45 | 14:45 | Art | Maths | Art | Art | Maths |
| 14:45 | 15:30 | Library | Gardening | Sports | Gardening | Sports |

*Source-NCF, 2023*

## Time Allocation for Preparatory Stage

| Illustrative timetable for the Preparatory Stage (Two Working Saturdays) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Time (hrs)** | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** | **Saturday** | |
| *830-855* | *Assembly* | *Assembly* | *Assembly* | *Assembly* | *Assembly* | *830-910* | TWAU |
| 900-940 | R1 | R1 | R1 | R1 | R2 | 915-955 | TWAU |
| 945-1025 | R1 | Library | R1 | Library | R2 | 955-1015 | *Snack break* |
| *1030-1045* | *Snack break* | *Snack break* | *Snack break* | *Snack break* | *Snack break* | 1020-1100 | R2 |
| 1050-1130 | Maths | Maths | R2 | Maths | Maths | 1105-1145 | Art |
| 1135-1205 | Maths | Maths | R2 | Maths | Maths | 1150-1230 | PE |
| *1205-1250* | *Lunch* | *Lunch* | *Lunch* | *Lunch* | *Lunch* | 1230-1300 | Lunch |
| 1250-1330 | TWAU | R2 | TWAU | R2 | TWAU | | |
| 1335-1415 | TWAU | R2 | TWAU | R2 | TWAU | | |
| 1420-1500 | PE | Art | Art | TWAU | PE | | |
| 1505-1545 | PE | Art | Art | TWAU | PE | | |

*Source-NCF, 2023*

## Time Allocation for Middle Stage

| Illustrative timetable for the Middle Stage (Two Working Saturdays ) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Time** | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** | **Saturday** | |
| *830-855* | *Assembly* | *Assembly* | *Assembly* | *Assembly* | *Assembly* | 830-910 | Library |
| 900-940 | R1 | Maths | Maths | Maths | Maths | 915-955 | Library |
| 945-1025 | R2 | R2 | R1 | Maths | R1 | 955-1015 | *Snack break* |
| *1030-1045* | *Snack break* | *Snack break* | *Snack break* | *Snack break* | *Snack break* | 1020-1100 | VE |
| 1050-1130 | SS | SS | SS | SS | SS | 1105-1145 | Art |
| 1135-1205 | SS | Science | SS | Science | Science | 1150-1230 | PE |
| *1205-1250* | *Lunch* | *Lunch* | *Lunch* | *Lunch* | *Lunch* | 1230-1300 | *Lunch* |
| 1250-1330 | Science | Art | Science | Art | R2 | | |
| 1335-1415 | Science | Art | Science | Art | R3 | | |
| 1420-1500 | PE | VE | R3 | PE | VE | | |
| 1505-1545 | PE | VE | R3 | PE | VE | | |

*Source-NCF, 2023*

## TIME ALLOCATION FOR SECONDARY STAGE

| Illustrative timetable for the Secondary Stage (Grades 9 & 10) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Time | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday(2) | |
| 0800-0825 | Assembly | Assembly | Assembly | Assembly | Assembly | 800-850 | SS |
| 0830-0920 | R1 | R2 | Maths | R2 | R1 | 855-945 | IDA |
| 0925-1015 | Maths | Maths | Maths | Maths | R3 | 950-1040 | R2 |
| 1020-1110 | Art | Science | Science | Science | Art | 1045-1135 | R3 |
| 1115-1205 | Art | PE | Science | Science | Art | 1140-1230 | R1 |
| *1205-1300* | *Lunch* | *Lunch* | *Lunch* | *Lunch* | *Lunch* | *1230-1300* | *Lunch* |
| 1300-1350 | SS | SS | SS | SS | SS | 1305-1355 | AEP* |
| 1355-1445 | IDA | VE | PE | VE | IDA | | |
| 1450-1540 | IDA | VE | PE | VE | IDA | | |
| 1545-1635 | AEP* | AEP* | AEP* | AEP* | AEP* | | |

*Source-NCF, 2023*

## UNDERSTANDING CREDIT TRANSFER IN SCHOOL EDUCATION

### Definition and Purpose:

Credit transfer involves the recognition and acceptance of academic credits earned by a learner in one educational institution when they enroll in another institution. The primary purpose is to acknowledge and value a learner's prior learning experiences, allowing for a smoother transition between schools.

### Flexibility in Course Selection:

One of the key advantages of credit transfer is the flexibility it offers to learners in selecting courses. Learners can choose courses based on their interests and academic goals, even if those courses are offered in different schools or districts.

### Accelerating Academic Progress:

The credit transfer system enables learners to accelerate their academic progress. For instance, if a learner has completed advanced coursework in one school, these credits can be transferred, allowing them to bypass redundant material in a new educational setting.

### Reducing Redundancy:

The system helps to minimize redundancy by allowing learners to avoid retaking courses they have successfully completed elsewhere. This not only saves time but also ensures that learners are continually challenged with new and relevant material.

**Recognition of Prior Learning:**

Credit transfer acknowledges and values various forms of prior learning, including experiences outside the traditional classroom. Learners may receive credit for work experience, internships, community service, or even online courses, promoting a more inclusive and holistic approach to education.

## IMPLEMENTATION OF CREDIT TRANSFER

**Articulation Agreements:**

Educational institutions often establish articulation agreements to facilitate credit transfer. These agreements outline which courses and credits will be accepted from one institution to another. Clear communication and collaboration between schools are essential for the successful implementation of credit transfer systems.

**Standardisation and Accreditation:**

Standardising credit systems and maintaining accreditation standards ensure that the transferred credits meet a certain quality threshold. This helps maintain the integrity of the educational process and ensures that learners are receiving a consistent and recognised level of education.

**Counseling and Guidance:**

Schools with credit transfer systems typically provide robust counseling and guidance services to assist learners in navigating the process. Academic advisors may help learners understand the implications of credit transfer on their academic and career paths.

## CHALLENGES AND FUTURE DEVELOPMENTS

**Administrative Complexity:**

Implementing and managing credit transfer systems can be administratively complex. Schools need efficient systems to evaluate and process credit transfers accurately.

### Awareness and Information Accessibility:

Ensuring that learners, parents, and educators are aware of the credit transfer opportunities available is crucial. Improved communication and easily accessible information can help address this challenge.

### Technological Integration:

Leveraging technology for seamless credit transfer processes can enhance efficiency. Digital platforms and databases can streamline the evaluation and transfer of academic credits.

## THE ACADEMIC BANK OF CREDITS AND EQUIVALENCE

Academic Bank of Credits (ABC) is generally associated with a system that allows learners to accumulate academic credits that are transferable across institutions or can be used to gain recognition for prior learning.

In some countries, academic credit banks have been established to facilitate the transfer of credits between universities, making it easier for learners to move between institutions or pursue education through a more flexible pathway. The idea is to recognise and value learning achievements, irrespective of where they occurred.

## CONCLUSION

The system of credit transfer in school education plays a vital role in creating a more flexible, adaptable, and learner-centric learning environment. By recognising and valuing diverse learning experiences, credit transfer systems contribute to the development of well-rounded individuals prepared for the challenges of an ever-changing world. As education continues to evolve, the thoughtful implementation and enhancement of credit transfer systems will be instrumental in fostering educational mobility and ensuring that every learner has the opportunity to thrive.

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