FOREWORD

Inception of the School Education Sector Plan-SESP (2022-2030) since the running fiscal year 2021/2022 has introduced several new programs and/or new approaches for further heightening the development pace in the school sector of Nepal. Among others, the field of national assessment has obtained serious priority in the plan. The plan has apparently indicated tremendous space for improvement in whole cycle of the assessment business. In response to the strategic provisions of the plan, Ministry of Education, Science and Technology decided to initiate systematic and sustainable efforts by means of a comprehensive policy guideline on National Assessment of Student Achievement (NASA). As a result, the ministry has endorsed the present NASA Policy Guideline, 2022 upon the recommendation of Education Review Office to carry on in the execution. The policy guideline is considered effective for implementation immediately after it is officially published.

The policy guideline aims at improving the overall design, management and reporting of the NASA in all four grades for producing high quality assessment data and reports to be useful for informed reform initiatives. The guideline also prescribes several policy measures for using policy linking method to conduct NASA of grade-5 and 8 by establishing a system of comparability with the Global Proficiency Framework (GPF) aligning with reporting of the Sustainable Development Goal (SDG) 4.1.

This policy document is a product of intensive professional works performed by firmly following all the common methodological steps. Wider consultative processes and expert exercises were two major approaches employed while writing the document. The writing process utilized conceptual guidance of insights from the experience, inspiration from the stakeholders and direction from the SESP document.

In order to give legal shape to this policy document, Education Minister Devendra Paudel and Secretary Mr. Yadav Prasad Koirala remained instrumental with their positive outlook and wise decision. We are grateful to them for their incredible actions. Likewise, Dr. Hari Prasad Lamsal deserves our thankfulness for his kind initiation in formalizing the official proceedings.

whole course of preparation of this policy document was supported by World Bank with technical inputs and logistical arrangement. So, I like to extend my sincere gratitude to the Bank management and its education team for entire cooperation. Meantime, I should appreciate the efforts of ERO team in supplying relevant reading materials and feedback to refine the write up works.

Finally, we honestly welcome constructive suggestions from the experience during the course of implementation of this policy in order for improving the NASA practice in future.

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Asadh 2079

Contents

THE BACKGROUND

This policy guideline has been prepared to provide a comprehensive operational framework to conduct the National Assessment for Student Achievement (NASA) and to use the policy linking method to establish comparability with the Global Proficiency Framework (GPF) by aligning with the Sustainable Development Goal (SDG) 4.1 reporting system.

The present venture of preparing the policy guideline is documentation of in-depth exercise that includes tremendous works in reviewing an existing system, examining the policy linking prospects, and proposing policy guidelines for more effectively undertaking NASA and for linking policy by establishing a system of producing as well as reporting the assessment results for global comparison. The policy guideline document has been developed largely by confining within the purview of ongoing new education reform initiative, School Education Sector Plan-SESP (2022-2030) with a notion that the guideline will accordingly be updated or revised to align with strategic focus of the new plan beyond this period.

Methodologically, several activities were undertaken during the course of preparing this guideline. Review of literature, study of relevant plans and reports, rounds of interactions with stakeholders and consultations with experts have remained the major ones.

Furthermore, this guideline will be effective immediately upon the endorsement of Government of Nepal through Ministry of Education, Science and Technology (MoEST). Education Review Office (ERO) will be mandated to shoulder authentic responsibility for overall implementation of the policy guideline.

CHAPTER ONE:

REVIEW OF EXISTING SYSTEM

This chapter presents an overall review of the existing NASA practices and policy linking prospects for future course of action. In this chapter the discussion has been organized under different headings as Introduction, Existing frameworks, Reporting practices, Summary of NASA results, findings and recommendations, and major issues and gaps.

Introduction of NASA practice in Nepal

Student learning achievement refers to the measurement of students' knowledge and skills gained upon completion whole academic cycle of a grade in the given timeframe. It is the level of success achieved by the students in acquiring subject matter proficiency at a particular grade of school-level education. Since its inception, the Education Review Office (ERO) has accomplished several large-scale national assessments named NASA, Early Grade Reading Assessment (EGRA), Classroom-Based Early Grade Reading Assessment (CBEGRA), and National Assessment for Reading and Numeracy (NARN).

NASA, a large-scale assessment, is "designed to describe the achievement of students in a curriculum area aggregated to provide an estimate of the achievement level in the education system as a

whole at a particular age or grade level" (Greanery and Hellaghan 2007, 7). The assessments are conducted for both backward- and forward-looking purposes (ERO 2017). The backward-looking purpose is mainly concerned with building a database that analyzes both the strengths and weaknesses of educational policies and practices whereas the forward-looking purpose is concerned with information for policymakers to understand the changes that have occurred in student learning achievement over time (ERO 2019). The national assessment was started in 1995 as an integral part of education development and reform initiatives.

The NASA is conducted periodically in the national representation of students of a particular grade by applying systematic research proceedings with specific objectives that combine a) to find the national standard of students' achievement, b) to identify social, economic and psychological factors that influence learning achievement of the students and c) to analyze trends of achievement over the period by comparing the results and evidence.

The fundamental purpose of NASA is to provide authentic, valid and credible evidence-based feedback about key elements of students' learning to the policymakers and implementing agencies for improving the entire education system resulting in systematic reform within the classroom instruction process. Informed policy-making practice, design of responsive programs, adaptation of appropriate strategies of service delivery, and enhanced public accountability are common desirable changes that are brought by NASA campaign to raise the overall quality of education at the school level. Furthermore, there are several occasions where broader insights and guidance have been taken from the international practices of large-scale assessments such as PISA, TIMSS and PIRLS.

The national assessment system is characterized by common universal features that are as follows.

- Large-scale assessment of a representative sample
- Use of shared and participatory approaches
- Use of specific data analysis tools
- Standardization in key stages such as item development, piloting, administration, data analysis and reporting
- Comparison with other assessments (national and international).

In Nepal, the government has started to conduct large-scale national assessment with the institutional establishment since the year 2011 (2067 BS). In the early years, coverage of districts, schools and students was minimal. Along with the gathering experience and enhancing capacity, the size of the sample was expanded to cover the entire country so that the assessment result could be claimed as national evidence. The following table depicts the magnitude of NASA events accomplished over the past years.

Table 1: Summary of NASA undertakings

Grade/ Year	Subjects	Number of Sample				
		District	School	Student	Teacher	Head teacher
Grade 8 (2011)	Maths, Nepali, and social studies	25	1,201	48,682	1,156	11,58
Grade 3 (2012)	Maths and Nepali	28	1,690	38,753	1,690	1,690
Grade-5 (2012)	Maths, Nepali, and English	28	1,690	41,479	1,690	1,690
Grade-8 (2013)	Maths, Nepali, and Science	28	1,199	44067	1,199	1,199

Grade-3 (2015)	Maths and Nepali	23	1,542	33,863	1,542	1,542
Grade-5 (2015)	Maths, Nepali, and English	23	1,543	40,015	1,543	1,543
Grade-8 (2017)	Maths, Nepali, and Science	26	1,950	48,011	1,950	1,950
Grade-5 (2018)	Maths and Nepali	24	1,400	28,381	1,400	1,400
Grade-10 (2019)	Mathematics, Nepali, Science, and English	75	1,800	44,217	1,800	1,800
Grade-8 (2020)	Mathematics, Nepali, science, and English	76	1800	43003	1800	1800
NARN/ Grade 3 (2020)	Reading and numeracy	33	580	7,433	–	–

Source: NASA reports from 2011 to 2020.

Institutional set up

As envisioned in the School Sector Reform Plan (2009–2015), the Government of Nepal established Education Review Office (ERO) in 2010 as an independent and authentic assessment agency with a legal posture of a department under the Ministry of Education for carrying out research on the national assessment of students' achievement. In addition, the equally important mandate of this agency has remained to conduct performance audit of schools, education departments and key education programs within the entire country. The mandates are explicitly described in the Education Act 2028 (9th amendment).

As an authorized agency of national assessment ERO submits, disseminates and publishes the assessment reports of every event

with the sole purpose of creating genuine pressure for improvement in the education system. Organizational structure-wise, this institution is headed by a Director General (joint secretary) with the provision of different subject committees comprised of renowned experts and more than 12 professional staff belonging to Nepal education service under the Civil Service Act. There is a long tradition of officially utilizing consulting services in various subject areas for quality delivery of outputs. According to the formal structure, there are four units or sections functional under this organization a) NASA Unit, b) Performance Audit Unit, c) Research and Development Unit and d) Planning, Monitoring, and Administration Unit. Each unit is headed by a director (under-secretary) with a set of technical officials underneath. Besides, in the case of program implementation, ERO exercises legal authority to mobilize organizational networks functional under the MOEST at the province, district and local levels.

NASA Frameworks

Over the past several years, ERO has developed different frameworks for organizing NASA activities in different grades and subjects. The NASA frameworks were formulated in 2012, 2017, 2018, and 2019 to better coordinate the implementation processes on the ground, covering the roles and responsibilities of different stakeholders. The frameworks commonly prescribe the specifics for assessment in each of the grades and subjects are as follows.

1. Content domain-wise expected competencies of each subject based on the curriculum
2. Definition of general standards of competencies for Grades 8 and 10 with the following six levels:
    a. Level-1: Pre -Basic
    b. Level-2: Basic

c. Level-3: Proficient-1
d. Level-4: Proficient-2
e. Level-5: Proficient-3
f. Level-6: Advanced

3. Definition of general standards of competencies for the testing grades.

Table 2: Definition of general standards

Standard	Levels of standards	General descriptors
Basic: Students demonstrate partial mastery of prerequisite knowledge and skills that are essential for proficient work at the grade.	Level 1 (Basic 1)	Students demonstrate basic pre-requisite knowledge and skills needed for grade 10 curriculum.
	Level 2 (Basic 2)	Students demonstrate limited basic understanding of knowledge and skills set forth in the curriculum.
Proficient: Students demonstrate competency over subject matter, including subject-matter knowledge, application of such knowledge to real-world situations, and analytical skills appropriate to the subject matter.	Level 3 (Proficient1)	Students demonstrate adequate understanding of knowledge and skills set forth in the curriculum and demonstrate partial proficiency in applying such knowledge and skills.
	Level 4 (Proficient 2)	Students demonstrate adequate proficiency in understanding of and ability to apply knowledge and skills set forth in the curriculum
	Level 5 (Proficient 3)	Students demonstrate thorough proficiency in understanding of and ability to apply knowledge and skills set forth in the curriculum including the combining more than on relations together for solving the problem.

Advance: Students demonstrate outstanding performance with adequate level of abstraction	Level 6 (Advance)	Students demonstrate advance ability to apply knowledge and skills set forth in the curriculum in a new and unfamiliar situation, and ability to combine and use various relations and components of knowledge and skills in order to solve the problems and develop a new relation.

4. Domain- and criteria-wise content elaboration by the six general standards
5. Content domain-wise specification grid for item selection
6. Identification of contextual variables that are addressed in different tools such as head teachers' questionnaire, teachers' questionnaire, and background questionnaire
7. Methodological particulars with procedural details with regard to sample design, item development process, item piloting and finalization steps, activities of test administration, report writing with data analysis, and dissemination of the report.

NASA results and findings

Over the past 10 years, ERO has completed 11 NASA studies in grades 3, 5, 8, and 10 in particular years like 2011, 2012, 2013, 2015, 2017, 2018, and 2019. Table 3 provides a glimpse of these undertakings. The table below presents the grade-wise and subject-wise learning proficiency of students as found in the latest studies. The average achievement column of the table indicates the ratio of the student population having abilities above the national average points in achieving curricular outcomes given in the particular grade and subject. For the case of grade 10, the ratio signifies the population having abilities above the basic level category. Similarly,

the figures of achievement ratio in NARN study indicates the ratio of proficiency score in the particular subjects. In addition, the ratio under the achievement column signifies a ratio of student population achieving learning abilities as defined above the basic level category, meaning the population of students achieving learning abilities as defined under Proficient (level 1, 2 and 3) and Advance categories.

NASA result: National achievement of Students				
S. N.	**Year**	**Grade**	**Subject**	**Average Achievement (%)**
1	2011	8	Nepali	49
2		8	Mathematics	43
3		8	Social	49
4	2012	3	Nepali	63
5		3	Mathematics	60
6	2012	5	Nepali	60
7		5	Mathematics	53
8		5	English	54
9	2013	8	Nepali	48
10		8	Mathematics	35
11		8	Science	41
12	2015	3	Nepali	52
13		3	Mathematics	45
14	2015	5	Nepali	46
15		5	Mathematics	48
16		5	English	47
17	2017	8	Mathematics	54
18		8	Science	44
19		8	Nepali	68
20	2018	5	Maths	48
21		5	Nepali	61

22	2019	10	Maths	54
23		10	Science	37
24		10	Nepali	63
25		10	English	49
26	2020	8	Science	38
27		8	Maths	43
28		8	English	51
29		8	Nepali	59
30	2020	3 (NARN)	Reading comprehension	48
31		3 (NARN)	Numeracy (number knowledge)	61

Note: The achievement column indicates ratio of student population achieving the stipulated learning abilities above the basic-level, meaning 'proficiency to advance' level.

Key findings of NASA

Almost all 11 studies have concluded with similar findings with regard to trends of results and the influence of various social, economic and psychological factors associated with students over the level of learning achievement. The crux of the finding is that the progress of learning achievement is very slow, largely annual progress rate is nearly one percentage point. Similarly, factors related to students' access to physical facilities, learning support at the home, instructional approach of teachers and relationships with fellow colleagues are major ones to impact the achievement status. The following points summarize the findings.

a. There is a strong difference in achievement between students, schools, districts, and developmental regions/provinces.

b. Students are adaptive in tasks related to memorization and recall but are not effective in skills requiring application or ability at a higher cognitive level.

c. The low economic and social background is directly related to low results.

d. The achievement level still depends on caste/ethnicity and the home language of the students.

e. The achievement on assessment of Janajati and Dalit children is lower than other ethnicities.

f. There are no remarkable differences between boys and girls, rural and urban schools, and across ecological zones.

g. Similar trends are observed in student percentages in various proficiency levels in mathematics and science but some difference was found in the case of Nepali.

h. In Nepali and science, students' achievement was significantly lower for Madhesi compared to students from the hilly region, but in mathematics, the difference is not visible.

i. Prolonged hours of involvement in household chores impede children's learning.

j. There is a greater association of overaged schooling with lower achievement. Students perform better when they are enrolled at the appropriate age.

k. There is a negative effect of bullying and unfair treatment from teachers on student achievement.

l. The unavailability of textbooks is associated with a lower level of achievement.

m. Teachers' reluctance to assign and check homework is preventing students' progress.

n. After-school activities have an impact on student learning achievement.

o. Teachers' regularity has a positive relationship with learning achievement.

Major Issues and Gaps

Though the physical setup for NASA practice has been established and maintained over the past 10 years under the institutional framework of ERO, a significant number of lapses and limitations have been observed in establishing a resilient, credible, and high-quality system for conducting NASA even in the new context of federalized institutional arrangement. Based on experience, review of reports, and responses drawn from the implementing officials, the following points summarize the major issues realized in the whole course of NASA practice.

The existing provision of subject-wise frameworks for guiding the entire test operation system has not been sufficient to provide detailed guidelines and capture continuous changes in curricular, pedagogical, and assessment practices adopted by the school system.

Schools with a fewer number of students (for example, less than 25 students) have generally been underrepresented in sampling for the full test. Similarly, a geographical balance in selecting schools for piloting of the items could not be maintained due to the common tendency of opting for administrative convenience.

As the school head teachers and teachers have been held responsible for conducting the item piloting test, the question of reliability and validity in the testing process has always remained pertinent and unresolved.

Many students are confused while undergoing the NASA tests due to their unfamiliarity with the item patterns or structure of the items (questionnaires) in advance.

It has always been difficult to technically justify the relevance of evidence/data for present actions because of the delayed schedule of report publication. In many cases, around two years and sometimes even more time is taken for reporting after the date of test administration.

Almost all reports have been found to be general and technical in nature, which has led to limited understanding and no interest from all categories of stakeholders—teachers, parents, mass media, implementing actors, and so on. Ultimately, this practice has obviously hindered using the evidence and knowledge of the reports to the expected level.

Equal contribution of all ERO professionals could not be observed in the stages of NASA undertaking such as item development, item paneling, test administration, scoring, data preparation, and report writing for various reasons, the capacity deficit being the most vital one. In addition, a systematic initiative could not be taken for establishing a system of pooling, developing, and mobilizing a dedicated and official pool of experts for such an important function. This situation, no doubt, leads to a permanent challenge in the sustainability of the NASA business.

Due to the insufficient pragmatic system of advocacy and dissemination of the reports among stakeholders, the NASA practice has not genuinely been connected to the daily lives of schools, education departments, and policy-making authorities.

CHAPTER- 2

POLICY LINKING PROSPECT

This chapter covers global practices in the national and international assessment of students, an overview of the Global Proficiency Framework (GPF), and linking possibilities under Sustainable Development Goals (SDGs).

With large-scale national assessments, every country can begin their journey of high-quality education by assessing where they are and targeting where they want to reach. A well-designed and well-administered assessment can provide regular, system-level information on student learning to gauge the overall level of achievement and performance of specific subgroups that may be at higher risk of falling behind (OECD 2017). If the data of such an assessment are analyzed and released in a timely and useful manner, the government can determine the effectiveness of its policies and alter them accordingly.

National assessment practice in other countries

In **India**, the National Council of Educational Research and Training (NCERT) has the mandate to design and conduct national assessments of different grades. It carries out NASAs across the country. In **Australia**, the Australian Curriculum Assessment and Reporting Authority (ACARA) is an independent authority that

provides a rigorous, national approach to education through the national curriculum, national assessment program, and national data collection and reporting program. In America, the National Aptitude Test (NAT) carries out such national-level assessments. The National Assessment of Educational Progress (NAEP) nationally and periodically administers assessments in reading and mathematics, and in other subjects too. It provides a comparison of students' achievement across the United States in the subjects tested. It also provides a snapshot in time of student achievement and trends in this achievement over time for the nation. The NAEP enables the states to benchmark state performance against other states and the nation. In Bangladesh, the Directorate of Secondary and Higher Education (DSHE) conducts such assessments in literary and numeracy at the primary level through a rigorous process (IEA 2016).

In essence, countries like America, India and Bangladesh have created institutional systems responsible for the national assessment. They have quite a good deal of experience in producing data about students' learning of entire school education and in comparing the data across the states and districts with the sole focus on improving the education system.

International assessment practice

There are two categories of international assessment practices of student achievements: global assessments and regional assessments. The international assessments that are carried out in countries throughout the world fall into global assessments whereas the assessments that are carried out in a particular region fall into regional assessments. Mainly there are three global assessments practiced throughout the world: Program for International Student Assessment (PISA), Trends in International Mathematics and Science

Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS).

PISA is the project of Organization for Economic Co-operation and Development (OECD). PISA assesses the learners of age 15 who are at the end of secondary level education. This survey identifies students' performance in reading, mathematics, science and problem solving being started in 2001 and repeated every **three** years (IEA, 2016). Another international assessment, TIMSS started in **1995** is managed by the International Association for the Evaluation of Educational Achievement (IEA) and assesses the achievement in mathematics and science in the fourth and eighth grades every **four** years. It gathers information about the learning context for mathematics and science and provides countries with information to improve teaching and learning. TIMSS Advanced is a new variant that is administered to students in the final year of secondary school (usually 12th grade) to assess students' knowledge in advanced mathematics and physics. It is meant for students who have engaged in studies to prepare for the rigors of tertiary education (TIMSS & PIRLS International Study Center, 2012).

PIRLS is also another international assessment organized and coordinated by the IEA to measure trends in reading literacy achievement in primary school or 10-year-old learners to help strengthen the teaching and learning of reading abilities and national policy and practices related to literacy. It was first undertaken in 2001 and repeated every **five** years. So far, approximately 55 countries have been taking part in the international assessment.

To summarize, international assessments are conducted by different agencies for the past 25 years and they have been producing evidence for comparison of learning standards of students across the participating countries. Generally, the tests are administered

for both the primary and secondary levels in subjects like reading, mathematics, science, problem-solving skills and literacy efficiency. Some agencies conduct for the student's certain age like 15 or 10 years and some administer for students of a certain grade. All have adopted a scientific and standardized process of research for item development, test administration and reporting so that the countries are ready to pay huge amounts of money for their students to participate in the tests.

Global Proficiency Framework (GPF)

The GPF has defined the global minimum proficiency levels that students of particular grades and subjects are expected to demonstrate at the end of each grade level, from Grades 1 to 9. It was developed by educators, curriculum experts, and psychometricians with extensive experience in developing and implementing programs in a whole range of countries and contexts. Its development process began in October 2018 with development by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) International Bureau for Education (IBE) of the Global Content Framework of Reference for Reading (GCFRR). This GCFRR synthesizes content and assessment framework information from more than 50 countries around the world. It provides a picture of the common expectations the countries have for learners' performance in reading.

The purpose of the GPF is to provide a common framework with detailed descriptors of minimum proficiency to support countries in setting benchmarks on national assessments for reporting on SDG 4.1.1. The framework allows for aggregating, comparing, and tracking learning outcomes over time. It also reflects close matches with the educational goals and objectives of various organizations

including United States Agency for International Development (USAID), Department for International Development (DFID), and Department of Foreign Affairs and Trade (DFAT).

There are six sections to present the GPF in different ways. The first section defines the global minimum proficiency level as ***'does not meet'***, '***partially meets***', '***meets***' and ***'exceeds***'. The 'meets' level aligns with SDG 4.1.1 indicators.

About subject-wise features, the mathematics framework includes five domains- number knowledge, measurement, geometry, algebra, and statistics and probability to achieve vertical alignment. The reading framework includes three domains- comprehension of spoken or sign language, decoding, and reading comprehension, showing information on text complexity.

Table 4: Definition of Proficiency Levels

Proficiency Level	Descriptors
Below partially meets global minimum proficiency	Learners lack the most basic knowledge and skills. As a result, they generally cannot complete the most basic grade-level tasks.
Partially meets global minimum proficiency	Learners have limited knowledge and skills. As a result, they can partially complete basic grade-level tasks.
Meets global minimum proficiency	Learners have developed sufficient knowledge and skill. As a result, they can successfully complete the most basic grade-level tasks.
Exceeds global minimum proficiency	Learners have developed superior knowledge and skills. As a result, they can complete complex grade-level tasks.

Global Proficiency Level (GPL)

The GPF has articulated the minimum knowledge and skills that learners are expected to attain along their progressions at each of the targeted grade levels in the two subject areas. Whereas the purpose of the GPL is to provide detailed proficiency expectations that every country, along with regional and international assessment organizations, can use to link the existing reading and mathematics assessments to benchmarks needed for comparing results from different assessments, both within and across countries, and for reporting on SDG 4.1.1.

The current international commitments and plans focus more on student learning. The SDG 4 aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all." Nepal adopted SDG 4 in education and developed a national framework for SDG 4 for 2030. Nepal has developed a 10-year education sector plan for 2021–2030 by reaffirming the goal of enhancing student learning (MoEST 2021).

To check the competencies of national curriculum content and GPF content for Grades 5 and 8 in reading and mathematics. The following paragraphs draw a comparison:

The content domains, constructs, and sub-constructs of mathematics and reading reveal that the content competencies given in the national curriculum for Grades 5 and 8 in mathematics and reading are comparable with the content competencies given in the GPF. Most of the content of the national curriculum of mathematics corresponds with that of the GPF except for two missing elements of probability and direction and position of the shapes and figures in Grade 8. However, in the case of English reading, both in Grades 5 and 8, the national curriculum seems far behind in comparison to the GPF competencies. Table 6 shows an example of this.

Table 5: Comparison of reading competencies

S. N.	National Curriculum of Grade 5 (English)	GPF for grade 5
1	Retrieve specific information from short simple texts.	Identify symbol sound/finger spelling, and/or symbol-morpheme correspondences. Decode isolated words.
2	Get an idea of the content of simple informational materials with or without the help of visual support.	Say or sign a grade-level continuous text at pace and with accuracy.
3	Read and follow short and simple written directions on how to get from one place to another.	Recognize the meaning of common grade-level words.
4	Read and retrieve information from short factual texts with or without the help of pictures.	Retrieve explicit information in a grade-level text by direct or close word matching.
5	Read and understand simple stories.	Retrieve explicit information in a grade-level text by synonymous matching.
6	Make simple inferences from reading materials and consult an English dictionary.	Retrieve explicit information in a grade-level text by synonymous matching.
7	Read and understand simple poems. Guess the meaning of unfamiliar words from contexts.	Identify the meaning of unknown words and expressions in a grade-level text.
8	Consult an English dictionary to look for the meaning.	Identify the main and secondary ideas in a grade-level text.

CHAPTER- 3

POLICY GUIDELINES

This section is meant for proposing indicative policy guidelines for systematically improving and modernizing the entire NASA practice for grades of school education, that is, Grade 3 (NARN), Grade 5, Grade 8, and Grade 10. In addition, the proposition of policy guidelines for policy linking Grades 5 and 8 NASA programs is another important content of this section.

There is a sound rationale for selecting the grades for the test. Each of the grades is a terminal grade of the particular structure of education. Formulation of the curriculum has somehow followed an approach of integration in an arrangement of learning outcomes and contents at the said levels of education, for example, Grades 1–3, 4–5, 6–8, and 9–10.

The present policy guideline is an official product prepared through a meticulous review of past experiences, ongoing education policies, and plans and future expectations held by stakeholders. Similarly, the guideline is firmly synchronized with the program framework of School Education Sector Plan (SESP) to be implemented for 2022–2028. The guideline expects to serve the following purposes in the administration of NASAs.

- To raise the quality and credibility of test items, test administration process, and reporting
- To maximize the application and utilization of test results, evidence, and knowledge for planned and systematic reform, especially at the school and education system levels
- To functionally introduce the policy linking method in the existing structure of test items and reporting process for aligning with the GPF and SDG 4.1 reporting system
- To strengthen institutional capacity for sustainable, resilient, and credible functioning of ERO under the federalized administrative system.

Policy Guidelines for NASA

The guideline is primarily designed to supplement and add values to the existing system of NASA operation by covering the most essential milestones reform initiatives that are set forth in the following paragraphs.

1. The existing grade-wise framework will be revised every year before each NASA event to capture the continuous changes in curricular, pedagogical, and assessment practices in the schools. The framework will officially prescribe detailed specifics in the major areas, such as the domain of contents with maximal coverage of curriculum, subject-wise descriptors of general standards, content elaborations, specification grid for item writing, methodological design, and test administration modality.
2. For aligning the NASA practice with existing curricular provisions and with GPF system, the four-level general standards (table-6) will be adopted to serve as a technical framework for test development and reporting process.

Table 6: General standards

S. N.	Level of General standard	Descriptors	Consideration of the Cognitive domain
1	Poor (कमजोर)	Students cannot demonstrate prerequisite knowledge and skills that are minimum learning at the grade. ● Students largely being able to demonstrate the very few basic knowledge and skills required for the present grade, rather students demonstrate knowledge and skills taught in the previous grades.	Lower-order thinking skill ● Recalling
2	Fair (सामान्य)	Students demonstrate partial mastery of prerequisite knowledge and skills that are essential for proficient work at the grade. ● Students demonstrate limited understanding of knowledge and skills for the present grade which are not adequate to complete the grade. ● Students demonstrate partial proficiency in applying knowledge and skills set forth in the grade in a familiar situation.	Low-order thinking skill ● Understanding ● Applying
3	Proficient (प्रविण)	Students demonstrate competency in subject matter, including subject knowledge, application of such knowledge to real-world situations, and analytical skills appropriate to the subject matter. ● Students demonstrate an adequate understanding of knowledge and skills set forth in the grade and demonstrate partial proficiency in applying such knowledge and skills in a new and unfamiliar situation. ● Students demonstrate thorough proficiency in showing relationship between/ among different parts or chunks of knowledge and skills learnt in the grade.	Higher-order thinking skill ● Applying ● Analyzing and ● interpreting

4	Advanced (उत्कृष्ट)	Students demonstrate outstanding performance with an adequate level of abstraction. ● Students demonstrate their judgement, critique, and conclusion of knowledge and skills set forth in the grade ● Students demonstrate their creativity to produce new knowledge and skills putting their existing knowledge and skills together	Higher-order thinking skill ● Evaluating or Judging ● Creating

3. The schedule will strictly be maintained by conducting NASAs for every grade with at least fours' interval. Furthermore, NARN will be specially considered at three-year intervals to align with the requirement of baseline and end-line result assessments under SESP. Table 8 shows the schedule that will be maintained for the next seven years.

Table-7: NASA Schedule for the SESP period

S. N.	Fiscal Year	Event		
		NASA	Preparation	Reporting
1	2021/2022 2078/2079	Grade-5	Test development/ Piloting of Gr-10	Grade-8
2	2022/2023 2079/2080	Gr-10	Framework preparation for Gr-8 and NARN	Grade-5
3	2023/2024 2080/2081	NARN	Test development/ piloting for Gr-8	Grade-10
4	2024/2025 2081/2082	Grade-8	Test development/ piloting for Gr-5	NARN
5	2025/2026 2082/2083	Grade-5	Test development/ piloting for NARN	Grade-8
6	2026/2027 2083/2084	NARN	Test development/ piloting for Gr-10	Grade-5

7	2027/2028 202084/2085	Grade-10	Test development/ piloting for Gr-8	NARN
8	2028/2029 2085/86	Grade-8	Test development/ piloting for Gr-5	Grade-10
9	2029/2030 2086/2087	Grade-5	Preparation for the next (?) event	Grade-8

*Note: * NARN and its item piloting will be conducted within the same fiscal year.*

4. For the case of garde-12, special collaboration will be established with National Examination Board (NEB) to standardize item preparation and answer-copy checking practices of the regular board examination. A system of result analysis will be introduced in core subjects such Nepali, English and Social Study to find out national ratio of national students' achievement periodically like at least with three years' interval in order to serve the purpose of NASA-Grade-12.

5. Education Development and Coordination Units (EDCUs) will be authorized as local agents of ERO to conduct the full NASA test and the tests for item piloting by mobilizing independent test officials in each of the schools. The test administration process will be improved to ensure fairness and seriousness in performing tests on the part of the students.

6. A robust system will be introduced to complete the report writing task strictly after six months of the test schedule. The reports will be made simpler, interesting, and useful by customizing them to the needs of different stakeholders, such as teachers, implementing units, and policy-level authorities. Each report will comprise at least of two parts (a) main report and (b) statistical report. In addition, special scheme will be adopted for producing subject-wise and thematic capsule reports based on the main and statistical reports.

6. A pragmatic approach will be adopted for wider advocacy and dissemination of the study reports among the stakeholders by creating an appropriate interactive mode/means to connect to schools, education departments/units, and policy-level agencies.

8. A compendium of old test items will be published periodically with an idea that the school teachers of the respective grades will use them as a model to prepare question items for their regular examinations by following the standardized framework.

9. A formal arrangement will be made to create a designated pool of experts having higher qualifications and extensive experience in the field of student assessment to provide regular technical support to ERO in areas like test development, test administration, data preparation, and report writing.

10. An operational guideline will be prepared to formally define functional mandates of provincial and local governments with regard to NASA implementation. The local level will be mandated to conduct the Local Assessment of Student Achievement (LASA) for any one grade of basic level (preferably Grade 7) by strictly adhering to the fundamental essence of the NASA framework. Likewise, the provincial government will be mandated to prepare a detailed Provincial Assessment Report (PAR) of NASA annually on the basis of the original data set of every new NASA event to be handed over by ERO.

11. A formal provision will be made for ERO to prepare Annual Report Synthesis (ARS) of all study events, including NASA, for submitting it to the Cabinet through the Minister of Education, Science, and Technology.

12. Necessary arrangements will be made for the implementation of the National Early Grade Reading Benchmark recently prepared by ERO that defines 4-level (Pre-basic, Basic, Proficient and Advance) cut-off scores (benchmarks) in each of the reading subskills (Decoding, Oral Reading Fluency and Reading Comprehension) of three grades 1-3.

13. A system will be introduced to conduct Early Grade Reading Assessment (EGRA) against the defined benchmarks upon completion of periodic education program like SESP. An operational guideline will be developed for the local levels to implement Class Room-based Early Grade Reading Assessment (CB-EGRA) in all schools by aligning with the new integrated curriculum framework.

Policy Guidelines for Policy Linking

Policy linking is a method that allows countries or assessment agencies to link their assessments to SDG 4.1.1 and determine the benchmarks on those assessments for meeting global minimum proficiency (USAID 2019). In other words, the low-cost, practical method that relies on panelists' judgments to link assessments to the GPF for reporting on SDG 4.1.1 is called policy linking. In addition, policy linking is a psychometric approach that makes results, or scores, from one assessment comparable to another. This method requires aligning the assessment results data, content parameters, and assessment items along with reporting practices.

Toward the possibility of policy linking, the Government of Nepal (MoEST) has developed a framework for the implementation of SDG 4, which aims to ensure inclusive and equitable quality education for all, with the aim of achieving the foundational learning of children in reading and numeracy ensuring universal access to compulsory basic and free secondary education (MoEST 2019). This framework

provides pathways and key strategies to achieve SDG 4 targets, seeking to localize SDG 4 targets to national, provincial, and local level strategies, which are truly relevant to the people. This framework follows the fundamental principles of education such as education is the fundamental human right and public good; gender equity is inextricably linked to the right to education; and education for all is of sufficient quality to lead to relevant, equitable, and effective learning outcomes at all levels and in all settings (MoEST 2019).

The policy guidelines presented in the following paragraphs are designed to serve detailed procedural specifications for adopting the policy linking method to align the national assessment and data production system with the global monitoring provision under SDG 4.1.1.

1. A National Proficiency Framework (NPF) will be prepared based on the national curriculum of Grades 5 and 8 on reading and mathematics by closely following structure of the GPF and standards of the GPL. The NPF will be prepared to provide detailed guidelines to define the processes to be undertaken, including developing new items aligned both to the national curriculum and to the learning standards included in the Global Proficiency Framework in the corresponding school grade, pre-testing of NASA items to identify those with robust psychometric properties, conducting national large-scale assessment administration, data analysis of assessment results, standard setting methodologies to the assessment results, and using the standard-setting results for establishing proficiency benchmarks for SDG 4.1b and SDG 4.1c.

2. The NPF will be designed also to define parameters for comparison of the contents between national curriculum and

the GPF, to define content area wise construct and subconstruct, to explain 4-level proficiency standard wise descriptors and to describe testing producers.

3. The national system of reporting will be updated to follow the procedures of international practices to link the national assessment results with the SDG monitoring system.

4. At least 30–40 percent of NASA items for Grades 5 and 8 in mathematics and reading will be designed from the GPF constructs and sub-constructs. A special mechanism will be instituted for verifying the items, standardizing the test administration and reporting practice and sorting out reportable results to be made compatible with the UNESCO reporting system.

5. With an objective of easing the process of policy linking, up to 15% of the total number of test items in Reading (language), Mathematics and Science subjects will be taken from the released items of TIMSS/PIRLS and data analysis will accordingly be adjusted to compare the results.

6. A functional system will be made operational ERO to mobilize a designated team of staff comprising of a UNESCO or an international level expert in order for providing technical support in policy linking to the entire NASA undertaking.

Implementation arrangement

ERO remains with final authority for the implementation of this policy guideline. Upon the endorsement of this document by the MOEST, a systematic design will be undergone in the institutional approach and deployment of staff within the organizational functioning system of ERO. On the other hand, practical networking with

potential government and non-government agencies will be created especially for the purpose of pooling expertise, intensifying advocacy and mobilizing technical cooperation resulting in improving its performance efficiency. As the present policy is a vital response to relevant interventions designed under the SESP, government regular budgetary provision will be utilized for the implementation of the policy guideline. The following paragraphs present some more provisions of arrangement.

1. A formal collaborative mechanism will be instituted under the three-tier governance system by partnering with provincial and local levels to effectively deliver the defined mandates. In addition, the administrative strength and expertise of Education Development and Coordination Units (EDCU) will be deployed to conduct piloting tests and NASA tests in schools by mobilizing independent arrangements.

2. ERO will sincerely be directed to prepare the following documentation as essential implementational instruments.

    - Grade-wise NASA Frameworks,
    - Nepal Proficiency Framework for grade-5 and grade-8 (Mathematics and Reading) as a Nepali version of GPF,
    - Standard operational guideline for local levels and provinces to conduct PASA in grade 7 and PAR of NASA respectively,
    - Standard guideline for local levels to conduct CB-EGRA in schools
    - Standard Test Administration Handbook for conducting all NASA tests

3. All the possible energy will be utilized for establishing a useful **ERO-School link** for the purpose of sensitizing the entire school

community (teachers, students and parents) with results and recommendations of all NASA tests. Virtual, physical and other networking modes will be utilized in this regard.

4. Entire groups of stakeholders will also be bound in a loop so that they can get the benefit of free access to the NASA reports, database and other testing strategies.

5. Technical assistance of and collaboration with I/NGOs will be promoted to produce and print supplementary or customized reports based on the formal reports or database as published by the ERO. In essence, multi reporting system or multi-layer reporting scheme will be practised for optimum utilization of NASA knowledge leading to visible improvement in the daily lives of schools and the entire education system. For instance, existing reports will be synthesized and customized to the needed training manual for teachers and to the need of a reference booklet for the stakeholders at different layers.

6. Huge investment of public money in NASA will be proved to be worth spending by adopting several approaches and programs.

7. Sustainable momentum will be created in the field of capacity building of in-house professionals. Popular professional development schemes that combine in-country training, foreign training, and supervised engagement in a core professional assignment like item development, report writing, etc. will be adopted. Likewise, different avenues and occasions will be founded for hiring veteran experts to jointly develop products of varied segments under the NASA business.

8. Whole efforts of ERO will be directed to continuous improvement and innovations in the institutional business by introducing various schemes to collaborate with local

Development Partners (DPs), International/National None Government Organizations (I/NGOs), relevant agencies in the country and international agencies having specialization in the relevant field.

9. An integrated database system is another core function placed on the top priority whereby all the raw datasets of entire past years will be pooled together for consolidation. Furthermore, online documentation of all types of reports and relevant publications will be maintained and the ERO website will be upgraded to upload every bit of ERO products officially produced and prepared so far. There will be a designated in-house team to take on this responsibility.

The outcome

It is gravely assumed that the education system of Nepal believes in the present policy guideline being a powerful instrument to govern, regulate and grow national assessment practice in the country by integrating modern dimensions. This policy is a significant gap-filling course in response to confusion and deficits in the system transformation process. The points mentioned below announce some major milestones of expected outcomes to be realized along with the course of implementation of this policy.

1. Entire NASA operation proceedings will have improved with qualities of the modern, resilient and credible system in the federalized structure.

2. Trends of application and utilization of test results and knowledge will have increased visibly for planned and systematic reform, especially at the levels of classroom, school and education system.

3. A sustainable system of conducting Grade-5 and Grade-8 NASA in Reading and Mathematics will functionally have introduced to produce data or evidence of results comparable with the reporting system of SDG 4.1.1 through the policy linking method.

4. Institutional image of ERO will have spread with credible functioning and reflected in regular reform practice to be adopted in schools, education units and the entire education system.

Conclusion

In essence, the proposed policy initiation is a strategic response to a number of deficiencies experienced during the course of NASA operation so far, to some fresh reform interventions adopted by SESP and to a national aspiration for aligning result reporting practice with global system guided by the GPF. Therefore, the policy guideline is expected to introduce better practices in the national assessment domain and meantime to establish NASA-informed reform initiatives in the entire school education sector.

List of Acronyms

ACARA: Australian Curriculum Assessment and Reporting Authority

ARS: Annual Report Synthesis

CBEGRA: Community-Based Early Grade Reading Assessment

CDC: Curriculum Development Center

CEHRD: Center for Educational Human Resource Development

CTT: Classical Test Theory

DFAT: Department of Foreign Affairs and Trade

DFID: Department for International Development

EDCU: Education Development and Coordination Unit

EGRA: Early Grade Reading Assessment

EPC: Education Policy Committee

ERO: Education Review Office

GCFRR: Global Content Framework of Reference for Reading

GPF: Global Proficiency Framework

GPL: Global Proficiency Level

IBE: International Bureau for Education

IEA: International Association for the Evaluation of Educational Achievement

IRT:	Item Response Theory
LASA:	Local Assessment of Student Achievement
MoEST:	Ministry of Education, Science, and Technology
NAEP:	National Assessment of Educational Progress
NARN:	National Assessment for Reading and Numeracy
NASA:	National Assessment for Student Achievement
NAT:	National Aptitude Test
NCERT:	National Council of Educational Research and Training
NCES:	National Center for Education Statistics
NPF:	National Proficiency Framework
OECD:	Organisation for Economic Co-operation and Development
PASA:	Provincial Assessment of Student Achievement
PAR:	Provincial Assessment Report
PIRLS:	Progress in International Reading Literacy Study
PISA:	Program for International Student Assessment
SDG:	Sustainable Development Goal
SLC:	School Leaving Certificate
TIMSS:	Trends in International Mathematics and Science Study
UN:	United Nations
UNESCO:	United Nations Educational, Scientific, and Cultural Organization
USAID:	United States Agency for International Development

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