INNOVATIVE STRATEGIES FOR ACCELERATED HUMAN RESOURCE DEVELOPMENT IN SOUTH ASIA

STUDENT ASSESSMENT AND EXAMINATION

Special Focus on Bangladesh, Nepal, and Sri Lanka

ASIAN DEVELOPMENT BANK

50 YEARS

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FOREWORD

South Asia's contributions to the Asian economy and the global labor force are substantial and will continue to grow. The Asian Development Bank's priority in the region is to complement infrastructure investments with strategic support to human resource development to help people move up the value chain. With the aim to enhance capacity of policy makers in South Asia to integrate innovative approaches in policies and strategic plans in the education sector to improve quality and relevance of education to accelerate human resource development, this study on assessment of student learning outcome complements the other crucial themes in education and training today: teacher professional development, public–private partnership in education, and information and communication technology for education.

This report outlines current practices and reform initiatives in student assessment and examinations in Bangladesh, Nepal, and Sri Lanka. For each country, there is a well-established public examination system, and each has been updating its national education policy and national reform agenda to provide regulations and policy guidelines related to assessment. However, challenges remain, including the need for an assessment policy framework that clearly defines the governance structure of the assessment system and funding support to the designated responsible units of the government and/or collaborating institutions; as well as international benchmarking in good governance practices to assure quality, reduce risk, and eliminate errors. There is also a need for integration and institutionalization of various assessments to complement one another. The report recommends strategies for improvement such as ensuring reliability of assessment tools and maintaining integrity for high-stakes assessments, expanding the scope in assessing curriculum, lessening assessment anxiety and other psychological barriers, providing capacity building and institutionalizing professional development programs, and using information and communication technology in both assessment and learning.

South Asia's huge opportunities arising from its demographic dividend could be harnessed fully only if it can skill a large number of new entrants to the labor market every year, and upskill the expanding labor force that is still undereducated and inadequately trained compared with their counterparts in other regions. South Asia must capitalize on innovations, knowledge, and skills anchored on high-quality technical and vocational education and training and higher education. This can only be facilitated and made more effective by optimizing the benefits from effective and efficient mechanisms in the aforementioned four focus areas. South Asian countries are poised to transition from low-skilled labor to higher productivity and globally competitive labor, and they are all ready to build up investments in human capital development.

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PREFACE

For any country, it is important for policy makers, parents, and other stakeholders to know how the education system is performing and whether the learning outcomes of students are improving over time. There is also a great interest to assess how a particular country compares with its neighboring countries in the region and in the global scene through comparative studies and participation in international assessments (e.g., Trends in International Mathematics and Science Study, and Programme for International Student Assessment), which inform education leaders and encourage self-evaluation and investigation of good practices.

This report examines current practices and reform initiatives in the assessment of student learning outcomes in three focus countries in South Asia (Bangladesh, Nepal, and Sri Lanka), as well as the challenges confronted in implementing a more relevant and systematic assessment system. Overall, common issues identified revolve around effectiveness and efficiency of policy and program implementation. Ensuring quality, an enabling policy environment, sound institutional arrangements, and sustainable financing are among the persistent challenges.

The regional synthesis report was prepared by an international consultant, Richard Gonzales, and the country reports were prepared by the following national experts: Anowarul Aziz for Bangladesh, Ganesh Bahadur Singh for Nepal, and Senarath Nanayakkara for Sri Lanka. The country reports have been shared with government officials, particularly from education ministries, individual experts including practitioners, and researchers from academe and pertinent institutions in the respective countries. They benefited from the insights of Abul Basher, Siddiqur Rahman, Didarul Alam, Nishat Rahman, and Murshid Aktar in Bangladesh; Prakash Man Shrestha, Bhojraj Kafle, and Krishna Hari Tapa in Nepal; and Markandu Karunanithy in Sri Lanka.

The country reports were reviewed by colleagues from the South Asia Human and Social Development Division (SAHS) and resident missions in focus countries. The country reports, as well as the consolidated version, were also cross-referenced among the four national consultants in each country to ensure complementarity of findings. Brajesh Panth, then lead education specialist from SAHS, managed and coordinated the studies with support from Rhona Caoli-Rodriguez, the national program coordinator. Excellent administrative assistance was provided by Erwin Salaveria and Rosalia Baeza.

Sungsup Ra
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ABBREVIATIONS

ADB	Asian Development Bank
ASLO	assessment of student learning outcomes
CAPSQ	Classroom Assessment Practices Survey Questionnaire
CAS	continuous assessment system
CDC	Curriculum Development Center (Nepal)
CTEVT	Council for Technical Education and Vocational Training (Nepal)
DOE	Department of Examinations (Sri Lanka)
DPE	Directorate of Primary Education (Bangladesh)
DSHE	Directorate of Secondary and Higher Education (Bangladesh)
ERO	Education Review Office (Nepal)
GCE (A/L)	General Certificate of Education – advanced level (Sri Lanka)
GCE (O/L)	General Certificate of Education – ordinary level (Sri Lanka)
GDP	gross domestic product
HSC	Higher Secondary Certificate (Bangladesh)
HSEB	Higher Secondary Education Board (Nepal)
ICT	information and communication technology
JSC	Junior Secondary Certificate
LTA	learning, teaching, and assessment
MOE	Ministry of Education
MOPME	Ministry of Primary and Mass Education (Bangladesh)
NASA	National Assessment of Student Achievement (Nepal)
NCEA	National Certificate of Educational Achievement (New Zealand)
NCF	National Curriculum Framework
NCOE	National College of Education
NCTB	National Curriculum and Textbook Board
NEAS	National Education Assessment System (Pakistan)

NEP	National Education Policy (Bangladesh)
NEREC	National Education Research and Evaluation Centre (Sri Lanka)
NETS	National Evaluation and Testing Service (Sri Lanka)
NIE	National Institute of Education (Sri Lanka)
NSA	National Student Assessment (Bangladesh)
NVQ	National Vocational Qualifications
PEDP	Primary Education Development Program (Bangladesh)
PSC	Primary School Certificate (Bangladesh)
PISA	Programme for International Student Assessment
SBA	school-based assessment
SESDP	Secondary Education Sector Development Project (Bangladesh)
SLC	School Leaving Certificate (Nepal)
SSC	Secondary School Certificate (Bangladesh)
SSRP	School Sector Reform Plan (Nepal)
TIMSS	Trends in International Mathematics and Science Study
TVET	technical and vocational education and training
UGC	University Grants Commission
UNESCO	United Nations Educational, Scientific and Cultural Organization

EXECUTIVE SUMMARY

Assessment of student learning outcomes (ASLO) is one of the key activities in the teaching and learning process. It serves as the source of information in determining the quality of education at the classroom and national levels. Results from any assessment have an enormous influence on decision making, on policy development related to improving individual student achievement, and on ensuring equity and quality of an education system. Moreover, assessment plays a vital role in the teaching and learning process. It provides teachers and school heads with important information for making decisions regarding students' progress. The information gathered from an assessment allows teachers and school heads to understand their students' performance better and enables them to match instructional programs with students' learning needs. Additionally, educational policy makers and accountability practitioners use assessment data to determine how well students have learned. Likewise, teachers use assessment data to identify better strategies on how to promote higher level of learning.

"Student assessment," as used in this review, refers to the collection of information and/or evidence about a learner's achievement, aptitude, attitude, cognitive skills, and other characteristics. It also refers to any organized process of gaining information from tests, examination procedures, and other sources that are used to infer students' characteristics.

This report reviews ASLO in three South Asian countries—Bangladesh, Nepal, and Sri Lanka—with focus on public examinations, national assessment, school-based assessment, and classroom assessment practiced in the three countries. This review provides a conceptual framework for the various roles that assessment plays in education, and the educational assessment setup in the three countries.

General Overview of Status of Student Assessment

By and large, student assessments in the three South Asian countries reviewed are established and implemented similarly but governed differently. Three prevailing assessments are in place—public examinations, national assessment, and school-based assessment.

Public examinations (sometimes referred to as external examinations) are given by all countries at different grade levels for different purposes, and are considered high-stakes examinations. In all three countries, public examination is also seen as an indicator of

internal efficiency of the education system. In Bangladesh, public examinations are given at grade 5 for primary; and at grades 8, 10, and 12 for secondary, and are regarded as the annual highlight of schooling and completion of milestones in the education system. In Nepal, public examinations are given at grade 8, and the School Leaving Certificate (SLC) examinations at grades 10 and 12. Sri Lanka administers public examinations referred to as General Certificate of Education (GCE) - ordinary level (O/L) at grade 11, and GCE - advanced level (A/L) at grade 13. A public examination is given at grade 5, but it is used for scholarship purposes.

While all the three countries are administering public examinations annually, usually at the end of the school year, they differ in terms of governance. Sri Lanka has the most centrally controlled examination system in all levels, which is through the National Evaluation and Testing Service under the Department of Examinations of the Ministry of Education. Nepal has a combination of centralized and decentralized governance of its examination system. The grade 8 examination in Nepal is given by each district, while the grade 10 SLC is managed by the Office of Controller of Examinations. The grade 12 SLC is overseen by the Higher Secondary Education Board, and the technical and vocational education and training (TVET)–SLC is administered by the Council for Technical Education and Vocational Training.

Bangladesh's public examination system is the least centralized. The primary certificate examination is conducted by the Directorate of Primary Education, and the examinations for junior secondary, secondary, and higher secondary are conducted by the Board of Intermediate and Secondary Education. At present, in Bangladesh, there are eight examination boards located mainly in divisional headquarters.

National assessment or system assessment is another level of examination in these three countries but are being institutionalized in various degrees. System assessments are regarded as tools to provide information to decision and policy makers to determine the outcomes of schooling, using samples of students. Among the three countries, Bangladesh was the first to introduce a National Student Assessment (NSA) in 1998, which was carried out biennially through external projects funded by the Asian Development Bank (ADB) and the World Bank.

Nepal recently introduced the National Assessment of Student Achievement (NASA), which is part of the initiative of the School Sector Reform Plan (SSRP). Sri Lanka, on the other hand, once had a national assessment organized and funded by the United Nations Educational, Scientific and Cultural Organization (UNESCO), but this has not yet been fully institutionalized. Overall, national assessments in these countries are still very much donor-driven and are being considered an integral part of the assessment system to replace the high-stakes public examination system, as they are better indicators of learning outcomes and internal efficiency of schooling.

School-based assessment (SBA) and/or continuous assessment system (CAS) is another approach in assessing student learning outcomes. Comparable to national assessment, SBA and/or CAS are conceptualized analogously in all countries, but they are operationalized differently. The purpose of SBA and CAS is also defined differently among the three countries. It should be noted that Sri Lanka has the most established

and systematized SBA, though it still faces some challenges that Bangladesh and Nepal are hurdling.

Generally, the examination systems in all the three countries still rely heavily on paper-and-pencil types of tests. Many issues related to the development, handling, and transporting of these testing materials, as well as marking and scoring, are still posing significant challenges. None of these countries have introduced paperless examination, leaving much to be desired.

Strengths and Weaknesses

The well-established public examination system of the three countries that is aligned with their national policy and national reform is one of the primary strengths of the assessment of student learning. The governing boards of the examination systems at various levels of the education ministries clearly defined the structures and how each type or level of examination is coordinated. Although there is a debate whether to centralize external or public examinations, the pros and cons as well as the directions are still to be discussed further, along with institutional reforms in their education systems.

Bangladesh, which has the largest group of students taking the assessment annually, has a good reason to have several boards overseeing the assessment process, and can be used as a learning experience for other countries with a similarly large population. The move to further improve its centralized assessment system by introducing computerized application systems including marking systems is seen as a way to maintain standard procedures for the assessment process.

For Sri Lanka and Nepal, the aspiration to participate in regional and/or international assessment such as the Programme for International Student Assessment (PISA), Trends in International Mathematics and Science Study (TIMMS), etc. is an indication of the desire to benchmark to international standards. Likewise, the initiatives to institutionalize national assessment through various development partners are other indicators that these countries are seeing the relevance of assessment as a tool to determine internal efficiency of schooling through the systematized ASLO. At present, South Asian countries have not initiated any regional assessment in the manner their neighboring Southeast Asian countries have recently initiated and are presently piloting (such as the Southeast Asia Primary Learning Metrics).

Despite a well-established public examination system, the three countries are still struggling to come up with a well-defined assessment framework, which could be construed as weakness in the education system. All of them have been updating their educational policy and national education reform agenda, but only Sri Lanka has articulated the need to have a national school assessment policy under the present ADB-funded Education Sector Development Program. Hence, this could be seen as the primary weakness of the present assessment system.

In addition, the lack of a well-established assessment policy and well-structured assessment rules and implementing guidelines would open criticisms related to governance, quality assurance, and ability to reduce risks and eliminate errors. Consequently, the

assessment system in place would continue to strive to convince the public, particularly parents and employers, of the integrity of the entire assessment process. Furthermore, the seeming lack of a system to connect and establish the complementarity of public, national, and class-based assessment is viewed as a weak point in the assessment processes of the three countries.

Another point is the lack of capacity of the assessment units to maximize the full potential of information and communication technology (ICT) in the assessment process. Most of the countries' assessment procedures still rely on old-school procedures of many papers—from test development to release of information of test results. Most of the countries reviewed are still doing manual scoring and marking, thereby requiring more human resources to complete the tasks, which may be even more prone to errors. All of them struggle tremendously in ensuring that test results are released on time to the users of tests results. Technology needs to be harnessed fully in the assessment process not only to minimize errors committed in doing things manually, but also to efficiently shorten the process. Cutting down the cycle of assessment would also warrant that users of test results—students, parents, schools, employers, and government decision makers—do not miss any essential opportunity and development and reform agenda.

Given the many developments in the field of assessment, the present capacity of the assessment personnel and staff of the three countries varies, from needing much training to being able to provide training. Managing and administering an assessment system is a huge undertaking and requires much technical specialization. It was revealed during the consultation process that relevant technical and professional expertise of staff of assessment agencies is still deficient, particularly in managing and using large data to inform decision and policy making. Sophistication in data analysis and data mining are still wanting. Consequently, one of the identified weaknesses of the assessment system is the weak ability of the assessment agencies to provide comprehensive data and to inform policy reforms and educational development programs. It was evident in all countries reviewed that, after results are disseminated to students, the data are very rarely used again.

Lastly, there is still great preference for assessment of learning; that is, the stress is more on summative assessment, or what students have learned, not on how students are learning (assessment for learning) to inform improvement of instructional programs and least on how students are learning on their own (assessment as learning). Too much emphasis on summative assessment may encourage students to focus on developing simply rote knowledge, not competencies or skills, and teachers to teach for the exams, rather than support the learning process of their students. This may not be construed totally as a weakness of the assessment practice of teachers in all the countries reviewed, but the assessment process may lose its function as an important element in the teaching–learning process.

Issues and Challenges

The assessment system of learning outcomes in Bangladesh, Nepal, and Sri Lanka is viewed as complex, multilayered, and substantially similar, and so are the challenges they face. Undoubtedly, the assessment systems that are already in place in these three countries may

be perceived as functionally relevant. However, they are still faced with challenges related to ensuring smoother and systematic implementation of their assessment regime and getting the full benefit of the assessment.

Development of National Assessment Policy Framework

One of the main challenges in all three countries is to maintain the integrity of their high-stakes assessments. Issues related to weak capacity of the test implementers (such as examiners and markers) and test developers (such as item writers and reviewers) continue to instigate public criticism. Measures to ensure validity and reliability of the assessment tools and standards processes must be in place. For this reason, one of the major innovative strategies is for the governments of these three countries to develop and enact a national assessment policy framework aligned with their national education policy and curriculum standards. A well-articulated national assessment policy with some regulatory function is vital in realizing a well-accepted assessment system.

It is commonly accepted that a test or an assessment will either make or break a person or student. It is therefore extremely important that the quality of assessment is assured to gain public confidence and acceptance. Once more, it is strongly recommended that all these countries consider drafting a national policy framework, wherein safeguards toward quality and gaining public confidence are given a premium.

Institutional Functional Analysis and Review

The present setup of being centralized, as in the case of Sri Lanka, and partially decentralized, as in Bangladesh and Nepal, would necessitate the conduct of **institutional functional analysis** to determine whether good governance is in place and internal good practices are adhered to. Assessment agencies of these three countries are encouraged to adopt internationally benchmarked good practices in their system of good governance. Building/Improving the capacity of the staff of assessment agencies as well as supporting units is mandatory/necesary to ensure quality, reduce risks, and improve internal control.

Use of Information and Communication Technology in the Assessment Process

The use of too many papers and relying on manuals for procedures from application, administration, marking, and release of results would open the system to many human errors. While these countries attempted to develop item-banking systems, the current practice of contracting item setters and writers annually on a project basis still prevails. Items are written every time there are examinations, but there is no system to retain the usability of these tests in the future. Likewise, the use of individual persons as markers is still normal after any examination. While scannable answer sheets have been introduced, individuals doing manual scoring are still prevalent, thereby producing some errors and discrepancies in the process. Hence, **automated processes and use of ICT** is strongly recommended to minimize or eliminate human error, as well as ensure transparent and fair assessment processes, which consequently earn more acceptance by the public and stakeholders. This is in line with the recommendation of the United Nations Educational, Scientific and Cultural Organization (UNESCO) that using ICT would instill quality assurance in any assessment process.

Establishment of Efficiency in Investment Programming

All three countries have accessed and benefited from external support and funding either through grants or loans mostly from ADB and the World Bank. It was apparent that the assessment systems and regime have been installed and supported in different ways by various funding agencies. Notwithstanding past and ongoing support and investment toward improving the assessment system, the three countries must still consolidate their efforts in ensuring that funding support and investments are aligned with their education sector development frameworks to ensure that investments and funding **support adopt a sector-wide approach**, instead of being provided through a project approach. The sector-wide approach must be strongly considered to ensure that assessment systems are given equal importance and priority in the planning process, and are appropriately, sufficiently, and efficiently funded for sustainability.

Improvement of Mechanisms of the Current System

The contribution of a well-structured and appropriately implemented assessment system would more efficiently determine internal efficiency of the education system. The assessment system in Bangladesh, Nepal, and Sri Lanka must integrate applicable innovative practices and evidence-based curricula and instructional interventions to make assessment more relevant in the education system.

This review presents an assessment framework that suggests that all key actors in the education system (students, teachers, and administrators) must see assessment as a vehicle to improve achievement by having improved assessment modalities, continuous professional developments, and creation of learning communities engaged in improving assessment practices. Reforms in the assessment system must also include encouraging participation of the public and private sectors, both of whom are recipients and beneficiaries of a high-quality assessment system, including vertical collaboration of schools—from primary to higher education including technical and vocational education and training.

Innovative Strategies

Among the suggested innovative assessment solutions that the three countries may adapt are the following:

(i) **Performance assessment**. Essays are widely used in all assessments today, particularly in writing tests and as a supplement to the objective type of assessment such as multiple choice, identification, and matching type.
(ii) **Student portfolios**. Portfolio-based assessment has been introduced in Nepal through the CAS, and likewise in Bangladesh and Sri Lanka, but did not gain prominence. The use of student portfolios is effective as it supplements other information, as collected through manual collection of documents, assignments, and products, among others. However, the more innovative use of portfolio is through the use of computer-based and other technology-based procedures.
(iii) **Technology-supported assessment**. Although technology has been used widely in assessment in the past as in computer-assisted testing or computer-adaptive testing, recently introduced innovations using technology in assessment go beyond the traditional test administration, scoring, and marking. The advent of technological developments fostered the feasibility as well as relevance of

innovative applications which changed the landscape significantly. In schools where computers, laptops, and tablets are now readily available, computerized adaptive testing could be administered easily. Technology used in assessment can include computer software packages, computer-assisted learning, computer-based learning materials, networks, hypertext, and virtual reality, among others. Although the present practice of student assessment through technology does not include all these applications, the most popularly used is computer software from test development, item banking, test administration, marking, and report of results. Another commonly used method is online assessment or testing where students take tests or examinations remotely using computers and the internet.

(iv) **Multimethod assessment**. Using only one type of assessment, for instance, paper-and-pencil examination, does not provide a holistic picture of student learning outcomes. Incorporating a range of assessment regimes allows evaluation of a broader range of skills, and as such can be fairer and less discriminatory, thereby ensuring better validity and reliability of the assessment results. Multimethod assessment of student learning outcomes is more reliable because it is not dependent on any single method of assessment.

Lastly, the use of ICT and other applicable technologies must be an integral part of the assessment framework, not only to realize efficiency, but also to improve the entire assessment process including test development, item banking, scoring and marking, data analysis and reporting, and dissemination of results.

CHAPTER 1: INTRODUCTION AND BACKGROUND

Assessment of student learning outcomes (ASLO) is one of the key activities in the teaching and learning process. It serves as the source of information in determining the quality of education at the classroom and national levels. Results from any assessment have enormous influence in decision making and policy development related to improving individual student achievement and ensuring equity and quality of an education system. Moreover, assessment plays a vital role in the teaching and learning process. It provides teachers and school heads with important information for making decisions regarding students' progress (Jones and Tanner 2008). The information gathered from an assessment allows teachers and school heads to understand their students' performance better and to match instructional programs with students' learning needs (Metler 2009). Additionally, assessment data are used by education policy makers and practitioners (Vardar 2010) for accountability (*how well students have learned*) and instruction (*how to promote higher levels of learning*).

Assessment and its role in teaching and learning are defined in various ways. Generally, assessment is defined as the process of gathering and discussing information from multiple and diverse sources to develop a deep understanding of what students know, understand, and can do with their knowledge as a result of their education experience (Huba and Freed 2000). Allen (2006) also pointed out that ASLO involves the use of empirical data on student learning to refine programs and improve student learning.

Assessment is also defined as the systematic collection of information about student learning, using the time, knowledge, expertise, and available resources to inform decisions on how to improve learning (Walvoord 2004). Moreover, assessment is considered the systematic basis for making inferences about learning and development of students.

Student assessment, as used in this review, refers to the process of collecting information and/or evidence about a learner's achievement, aptitude, attitude, cognitive skills, and other characteristics. It also refers to any organized process of gaining inferences about the characteristics of students. Additionally, the term refers to the process of gathering, describing, or quantifying information about students' performance in the classroom, public examinations, and national assessments. This process is usually carried out using written tests, portfolios, products, and performances that measure a student's knowledge and skills in a subject area.

A. Basic Concepts in Assessment of Student Learning Outcomes

Assessment systems often refer to several sets of assessment based on different aspects. The most widely used distinctions for assessment are (i) formative and summative; (ii) formal and informal; (iii) objective and nonobjective or subjective; (iv) criterion-referenced, norm-referenced, and ipsative; and (v) self-assessment and peer assessment. In most educational contexts, all these dichotomies, except self-assessment and peer assessment, are widely practiced in varying degrees.

1. Formative and Summative Assessment

Assessments carried out during a learning–teaching process, while still in progress, are usually referred to as *formative assessments*. Providing feedback is the key feature in formative assessment; it is not necessarily used for grading and evaluation purposes. In contrast, assessments carried out at the end of a unit, year, term, or course are called *summative assessments*. Summative assessments are typically used to assign grades and evaluate pupils, and to award certificates or recognition.

2. Formal and Informal Assessment

Formal assessments usually include written tests and practical tests. Marks or grades are awarded at the end of the assessment based on the performance of pupils. Formal assessments are conducted in organized settings during a specified schedule and time limits. In contrast, *informal assessments* are carried out during day-to-day teaching–learning situations, without stopping classroom activities. The techniques used for informal assessment include observing pupils engaged in activities, listening to pupils' responses or presentations, marking homework or assignments, and oral questioning.

3. Objective and Nonobjective or Subjective Assessment

Objective assessment refers to a form of questioning that has a single correct answer. Objective assessment includes item types such as true or false, multiple choice, multiple response, and matching. *Nonobjective or subjective assessment* refers to a form of questioning that allows robustness of having more than one correct answer or the possibility of expressing the correct answer creatively. This type of question includes short answer, structured essay, and essay.

4. Criterion-Referenced, Norm-Referenced, and Ipsative Assessment

In assessment, a pupil's performance is always compared to another performance level to judge the level of the pupil's performance. Three approaches have been defined depending on what comparison is being made.

When a pupil's performance is assessed against predetermined criteria, objectives, or standards, it is referred to as *criterion-referenced assessment*. Often, but not always, criterion-referenced assessment is used to establish a pupil's level of competence. It is a way of assessment that categorically indicates whether the student has achieved the criteria or standards, or not. Hence, the "pass or fail" or "competent or not-competent" evaluation. Criterion-referenced assessments are used widely at the primary level to assess essential learning competencies, at the secondary level to assess competencies under school-based

assessment (SBA), and with technical and vocational education and training (TVET) students to assess competencies related to National Vocational Qualifications.

When the performance of a pupil is compared with that of another pupil or a group of similar pupils, it is referred to as *norm-referenced assessment*. School term tests, public examinations such as the Grade 5 Scholarship Examination, and the General Certificate of Education - ordinary level (GCE (O/L)) and General Certificate of Education - advanced level (GCE (A/L)) examinations are inclined more toward the norm-referenced type, wherein a student is ranked and compared against the performance of other students.

When performance is compared with a student's previous performance, with the purpose of determining any improvement or whether any "added value" was brought about, it is referred to as *ipsative assessment.* Such assessments usually involve setting the same test before and after undertaking a course or unit. At the primary education level in Sri Lanka, ipsative assessments are often done to find out whether the quality of a child's handwriting has improved through comparisons over a certain period. Teachers often use the results of ipsative assessments to provide feedback to students and their parents on learning progress.

5. Self-Assessment and Peer Assessment

In an educational setting, *self-assessment* involves pupils making judgments about their own work, based on self-prepared or supplied criteria, and monitoring their own learning progress. The form of assessment where pupils judge the work of their classmates based on criteria and make comments is referred to as *peer assessment* (Government of Sri Lanka, Ministry of Education 2008). Although teachers encourage students to carry out self- and peer assessments, it is not evident that these assessments are practiced by students in a systematic manner.

Other important assessment terms that need to be clearly understood are public assessment, national assessment, classroom assessment, and SBA. These terms are defined more thoroughly in the succeeding chapters.

B. Scope and Methodology

This report reviews ASLO in three South Asian countries: Bangladesh, Nepal, and Sri Lanka. The review focused on public examinations, national assessment, SBA, and classroom assessment. This review also attempts to provide a framework for conceptualizing the various roles assessment plays in education, as well as the educational assessment in the selected South Asian countries.

The three countries included in this report have achieved access to primary education and, to some extent, secondary education. However, it is a challenge for them to achieve quality education, as indicated by their national and public examinations.

The report is based on the country reports prepared by national consultants that were validated by the international consultant during country-based technical consultations and

review. Secondary sources, such as reports from the Asian Development Bank (ADB), were consulted to ensure a more comprehensive view of the review and analysis.

The scope of the review and assessment is broad, covering all levels of the education system up to higher education. The report endeavors to describe the overall examination and assessment systems of Bangladesh, Nepal, and Sri Lanka, and the overall development context and activities of the agencies of each country that are involved in the examination and assessment process.

While all levels of the education system are covered, the report focuses on school education and on governance and institutional arrangements of the assessment system; implementation processes and practices, from development to utilization of examination results; classroom assessment practices of teachers; capacity building; use of information and communication technology (ICT) in assessment; and impact on the human resource development and training of each country.

This review is limited by the parameters of the assignment. The review and assessment are by no means complete. It mentions, but does not examine, the quality of the assessment and examination materials. It also relies solely on the data provided by the respondents taken from the country papers prepared by the national consultants. Within the available time in the three countries, it was possible to visit a few schools and interview key stakeholders and officials who are responsible for examination and assessment.

C. Country Educational System

This subsection provides a brief overview of the educational system of the three countries covered in this report.

1. Bangladesh

The present education system of Bangladesh is a three-tiered structure: primary, secondary, and tertiary. Recently, a 1-year preprimary education program has been introduced for children under 5 years of age.

Primary education consists of 5 years of compulsory schooling from grade 1 to grade 5. However, the National Education Policy 2010 (NEP 2010) provided the introduction of 8 years of universal and compulsory primary education from grade 1 to grade 8.[1] The present secondary education consists of 7 years divided into three levels—junior secondary (grades 6–8), secondary (grades 9–10), and upper secondary (grades 11–12). Currently, new curricula, as defined in NEP 2010, are being implemented with the support of various projects and programs primarily funded by ADB and the World Bank (e.g., Third Primary Education Development Program, the Second Teaching Quality Improvement in Secondary Education Project, and the Secondary Education Sector Investment Program).

[1] The Bangladesh National Education Policy 2010 "embodies Bangladesh's verdict and aspirations, the spirit of liberation war and independence; it reflects people's goals and values. NEP's rationale is ensuring the rights and opportunities for education for all, eradicating all differences. The primary objectives of this policy are directed toward the cultivation of human values, prescribing ways through which citizens can be groomed to become leaders in pro-people development endeavours."

Madrasah education, which is also offered in Bangladesh, focuses on religion in parallel with general education. *Madrasah* education in Bangladesh is almost universally privately managed. However, externally funded education projects and programs are currently providing significant support to *madrasah* education to keep up with the general education quality and standards.

TVET is offered after grade 8 (junior secondary) as an alternative stream for students to obtain a trade certificate (Secondary School Certificate [SSC], and Higher Secondary Certificate [HSC] or vocational). Technical and vocational institutes offer bachelor's degrees in technical education.

Tertiary or higher education comes after students have passed the HSC at grade 12. A pass degree is awarded after successfully completing 3 years of study, while an honors degree is awarded after completing the required 4 years of study. Students who obtain pass rate can also obtain a master's degree after studying for another 2 years, while those who were granted honors may only need a year to obtain a master's degree.

Many programs, such as preprimary education, nonformal primary education, adolescent education, adult literacy, post-literacy, vocational education, equivalency education, parenting education, and quality of life improvement, are being provided through nonformal education, serving over 5 million learners. The Bureau of Non-Formal Education is the national organization responsible for nonformal education in Bangladesh.

2. Nepal

Nepal's education system is undergoing reforms, taking off from the School Sector Reform Plan (SSRP) of 2009. The proposed education system includes 8 years of basic education (grades 1–8) and 4 years of secondary education (grades 9–10 for lower secondary and grades 11–12 for upper secondary). This structure has already been submitted to Parliament for approval and immediate implementation once enacted.

The current structure covers grades 1–5 for primary level and grades 6–8 as lower secondary level. A preprimary year is also provided to prepare children for formal schooling, which begins at grade 1 at age 5. The secondary level comprises grades 9–10, and higher secondary level comprises grades 11–12. At present, the secondary level is governed by the Department of Education, while the higher secondary level is under the Higher Secondary Education Board. The SSRP and the National Curriculum Framework (NCF), however, propose that grades 9–12 be subsumed under secondary level and one governing body.

TVET in Nepal is provided by the Non-Formal Education Center and the Council for Technical Education and Vocational Training. The Non-Formal Education Center also provides formal technical education that can lead to general tertiary education. The present challenge in this subsector is to establish an equivalency mechanism for nonformal training and formal courses, and institutionalize a ladderized opportunity to higher education.

Tertiary education in Nepal, also called higher education, comes after completion of grade 12. It mainly aims to produce skilled workers essential to the overall development of the country, and to carry out research in various academic fields.

The Nepalese education system is composed of both formal and nonformal education. Aside from the government, various nongovernment organizations also provide literacy programs, general education, TVET, and other skills training. In Nepal, nonformal education is also referred to as the alternative learning system. It is considered one of the important modes to provide access to educational opportunity, particularly to children and youth who have dropped out of the formal education system. The Non-Formal Education Center oversees this subsector and supports the government initiative to introduce an equivalency mechanism between nonformal education and formal education to benefit mostly the deprived groups and those who have dropped out of the formal education system.

3. Sri Lanka

Sri Lanka is one of the few countries in the world that have a policy to provide free education from the primary level to the first-degree level of university education. Education is a shared function between the central government and provincial councils, as articulated in the 13th Amendment to the Constitution of Sri Lanka. The system of education is decentralized, forming a national structure with the line Ministry of Education (MOE), National Institute of Education, Department of Examinations, Department of Educational Publications, and nine provincial councils. The central ministry remains as the authority formulating national policy, managing national schools, designing the national curriculum, supervising to ensure standards are maintained, promoting teacher education, supplying textbooks, and conducting examinations. The provincial councils manage provincial schools and preschools through zonal education offices and divisional education offices.

Approximately 4 million schoolchildren are enrolled in about 9,800 government schools, including both national and provincial schools. There are about 600 state-funded *pirivenas* (temple-based education institutions); 25 special education schools; around 80 private schools offering the national curriculum; and approximately 150–200 international schools with a student enrollment of about 70,000, which prepare students for overseas examinations.

The current structure of the general education system consists of three main levels: primary (grades 1–5), junior secondary (grades 6–9), and senior secondary (grade 10–13). The tertiary education system consists of universities, professional colleges, and vocational training institutes.

Moreover, the government schools are categorized into four types: (i) Type 1AB—schools with grades 1–13 offering GCE (O/L) and GCE (A/L) subjects for arts, commerce, and science streams; (ii) Type IC—schools offering grades 1–13, or 6–13 offering GCE (O/L) and GCE (A/L) for arts and commerce streams only; (iii) Type 2—schools with grades 1–11 or 6–11 offering GCE (O/L) only; and (iv) Type 3—schools with grades 1–5, but with a few schools offering up to grade 8.[2]

Primary education is divided into three key stages. In key stage 1 (grades 1–2), learning takes place mainly through play and activity methods. In key stage 2 (grades 3–4), learning follows an integrated thematic approach while still using play and activity. Key stage 3 (grade 5) requires more desk and academic work. The primary school curriculum of

[2] Starting in 2013–2014, a fourth stream, technology, was introduced.

Sri Lanka is activity based and is presented through four subject areas: languages (first language such as Sinhala or Tamil, English, and a second national language); mathematics; environment-related activities; and religion.

Secondary education in Sri Lanka runs from grade 6 to grade 12. Grades 6–9 are classified as junior secondary, which is compulsory and is oriented to provide all basic skills before a student leaves the education system. Grades 10–13 are classified as senior secondary, which is further divided into grades 10–11 for GCE (O/L) and grades 12–13 for GCE (A/L). Each level has a required examination. Passing of GCE (O/L) is required to proceed to grade 12, and passing of GCE (A/L) is necessary to enter higher education or university.

For tertiary education, Sri Lanka has 15 universities, including Open University of Sri Lanka and 11 postgraduate institutes affiliated with the universities. These institutions operate under the purview of the University Grants Commission (UGC). In addition to these, there are three other universities outside the supervision of the UGC.[3] Furthermore, the Sri Lankan Advanced Technological Education Institutes, National Colleges of Education, and several private campuses of foreign universities also provide higher education opportunities to Sri Lankan students. However, only about 34% of those who completed grade 13 can get access to tertiary-level courses.

The TVET sector in Sri Lanka is composed of public or government, private, and nongovernment organization training providers, providing vast opportunities and courses of study to school leavers. The National Vocational Qualifications Framework has recently been introduced. This framework aims to enable those employed and trained in the technical and vocational fields to gradually achieve higher educational qualifications, leading even up to the degree level, by joining a college of technology and acquiring the relevant skills and knowledge while working, and/or after undergoing rigorous training programs.

The three countries reviewed clearly share a similar educational system and structure. All countries require a 1-year preprimary education, although referred to differently as preschool education, kindergarten, and early childhood education. All 5-year-old children in these countries are required to undergo preprimary education.

Similarly, the three countries have various levels of general education before university: primary, lower or junior secondary, and higher secondary for Bangladesh and Sri Lanka, while Nepal has primary, lower secondary, secondary, and higher secondary, which will eventually change under the SSRP into basic education (grades 1–8) and secondary (grades 9–12). They all have 5 years of primary education, 3 years of lower secondary or junior high school, and 3 years of upper secondary or senior high school. At the senior high school level, a track or streaming system was introduced to accommodate students who are academic bound and those in technical and vocational education streams.

After upper secondary or senior high school, students who qualify for university admission pursue bachelor's degrees. These require generally 4–6 years until completion for Bangladesh and Sri Lanka, and 3–5 years in Nepal depending on the stream. At every level

[3] The University of Vocational Technology (http://www.univotec.ac.lk/); Buddhist and Pali University of Sri Lanka (http://www.bpu.ac.lk/); and Kotalawala Defense University (http://www.kdu.ac.lk/)

of general education, a public examination is required to go to a higher level. In Sri Lanka, however, the grade 5 public examination is more intended to select high-achieving students for scholarships and entry to elite secondary schools. Bangladesh and Nepal administer examinations mostly for promotional purposes at grades 5, 10, and 12.

CHAPTER 2: PUBLIC EXAMINATIONS AND NATIONAL ASSESSMENTS IN SOUTH ASIA

This chapter provides an overview of the public and national assessments in Bangladesh, Nepal, and Sri Lanka; how these assessments are governed; and how they are aligned with the curriculum structure of their respective education system. It also discusses the many facets and practices of administering school-based assessments (SBAs).

Evidently, the countries included in this review have a clear understanding of the concept of assessment and processes related to it. However, because of some government policies and regulations, not all elements of assessment are implemented comprehensively. One example is the lack of continuous studies to improve the assessment tools and assessment process. (See Appendixes 1–3 for detailed discussions of the focus countries' assessment systems as well as the issues and challenges confronting them.)

A. National Examination and Assessment Policy and Framework

1. National Assessment Policy Framework

A national assessment policy framework is a document that provides overall policies, guidelines, and procedures for developing, administering, and managing an assessment system from the central or national level to the classroom level. This document is generally aligned with the national education policy and the national curriculum policy framework, and implemented interrelatedly and in parallel with each other.

A national assessment policy framework is an official document that states and discusses what an assessment system intends to achieve and what the assessment tools aim to measure (Australian Council for Education Research 2015). The policy framework provides stability or, where change is desired, it can be made explicit and implemented deliberately. Furthermore, it lays the principles upon which any assessment activity in the country is built. It serves several purposes and audiences such as the following:

- It provides a common language to various stakeholders for discussion of the areas of assessment.
- It directs assessment development, guaranteeing that each assessment tool serves the intended purposes and covers the spectrum of learning objectives and standards set.
- Where continuity from one year or one grade level to another is a concern, it realizes an articulated plan for the assessment.

While country examination and assessment systems are in place and currently implemented in the South Asian countries included in this review, there are no documented, existing, officially mandated assessment policy frameworks. Hence, the primary and fundamental governing policies used to operationalize examination and assessment systems are the National Education Policy 2010, Education Act and Regulations, and National Curriculum Framework for Bangladesh; the School Education Policy as well as the School Sector Reform Plan, 2009–2015 for Nepal; and the National Education Policy Framework and the proposed act for the general education sector for Sri Lanka. It is noteworthy that, in Sri Lanka, one of the objectives of the Education Sector Development Program, 2013–2019 is to formulate a national school assessment policy framework.[4] Hence, among the countries under review, Sri Lanka may be the first country to come out with a national assessment policy framework. Moreover, Bangladesh aspires to adopt a system-wide approach in the development of its education sector, and has also listed developing a national assessment system as one of its key performance indicators.

While all these countries have been implementing both public and national assessments, they still do not have approved student assessment policy frameworks. All their assessment activities are fundamentally governed by their national education policies, government directives, or education acts. Their public and national assessment activities are also implemented in accordance and aligned with their curriculum policy documents. Evidently, their curriculum and assessment systems are invariably interrelated and interdependent from primary to secondary as well as in higher education and technical and vocational education and training (TVET).

An example of a country with a well-defined assessment system and educational objectives is Finland, which uses formative, summative, and evaluative assessments. Finland has received international recognition because of its students' excellent performance on the Programme for International Student Assessment (PISA). In Finland, national, standardized high-stakes tests are not given to students until they matriculate secondary school and then only if they intend to enter higher education. As a replacement for high-stakes tests, the Finnish National Board of Education (2010) clearly defined and implemented the purpose of assessment, which is to improve learning, which is "encouraging and supportive by nature." It is imperative for Bangladesh, Nepal, and Sri Lanka to learn from the experience of Finland, where high-stakes public examinations and testing are minimal, and to revisit the objectives and goals of their assessment practices and consider whether to continue administering high-stakes public examinations.

2. The Curriculum and the Assessment System

In the three countries, curriculum and assessment are invariably interrelated and interdependent in all levels of education.[5]

[4] The Education Sector Development Program, 2013–2019 is jointly funded by the Government of Sri Lanka and ADB, and implemented by the National Education Commission.

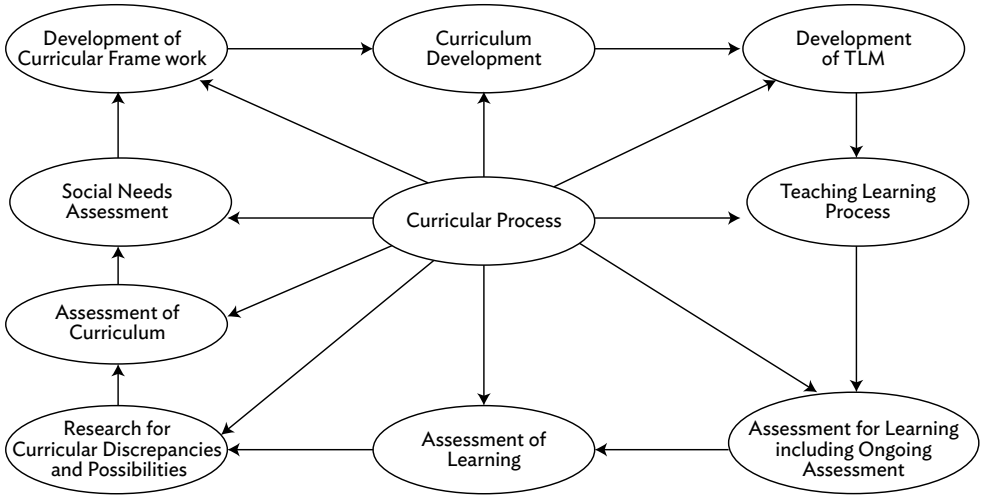
[5] Curriculum generally refers to a prescribed course of study. It includes a defined set of learning objectives to be achieved through the course of schooling. Assessment is regarded as a primary component of the curriculum, and the curriculum provides the basis for assessment.

Generally, these countries' assessment systems are anchored on the national curriculum framework. The tables of specifications of major national and public examinations reflect the major content and skills defined and articulated in the curriculum.

In each country, under the Ministry of Education (MOE), a separate agency is responsible for curriculum development: in Bangladesh, it is the National Curriculum and Textbook Board; in Nepal, the Curriculum Development Center (CDC); and in Sri Lanka, the National Institute of Education. These agencies or units are responsible for formulating the national curriculum from primary to higher secondary education. For higher education, the University Grants Commission of each country is responsible for curriculum development and implementation, except for some cases in Bangladesh, where higher education curriculum is approved by the National University.

The assessment system, on the other hand, is governed by a separate but complementary group of agencies that are also under the MOE, except in cases where independent examination boards are identified, such as the Higher Secondary Education Board for Nepal. Figure 1 presents the relationship between curriculum and assessment in Bangladesh, emphasizing that assessment and curriculum development are a continuous process, and that the assessment results provide new direction for the revision of the curriculum.

Figure 1: Interrelationship between Curriculum and Assessment—The Case of Bangladesh



TLM = teaching learming material.
Source: Appendix 1.

Again, while curricula are in place, these countries could learn from the Finnish education system, where the national curriculum provides clear guidance for assessing and evaluating students in early grades and throughout basic education. For the curriculum to be adhered to, these countries, just like Finland, must consider dividing classroom assessment into two categories—assessment during the course and final assessment (Henrichson 2012). The two periodic assessments are clearly defined and aligned with the national criteria. However, both assessments aim to achieve different goals and purposes. Furthermore, in Finland, the specific criteria for classroom assessment during the course are clearly defined in the national curriculum, but the teachers are empowered on how to conduct assessment during the course (such as SBA or continuous assessment system [CAS]) and the schoolwork along the national assessment criteria.

B. Public Examinations

All three countries have long histories of public examinations administered at various levels of education. Public examinations are commonly administered countrywide primarily for certification (such as secondary school certificate, higher secondary school certificate, school leaving certificate, primary school certificate, junior school certificate, General Certificate of Education [GCE], etc.) and for scholarships (in the case of grade 5 students in Sri Lanka), and are often given at the district level (as in the case of Nepal for grade 8 examinations).

Public examinations (sometimes referred to as *external examinations*) have played a crucial role throughout the history of education in these countries. These examinations are usually administered by a central agency under the auspices of the MOE. They are administered at the end of primary and secondary schooling when students are tested in the major subjects of the curriculum (typically, a national or local language, English, science, mathematics, and social studies).[6] Although public examinations serve several functions in the education system, they have been perceived negatively and have been criticized by the public for their quality. Most stakeholders perceive that these public examinations assess only limited areas of cognitive knowledge and skills, and they are not able to assess practical skills and knowledge relevant to the daily experiences of students outside their academic milieu. The examinations are also believed to be measuring mostly lower-level cognitive skills.

The negative perception of various stakeholders has two implications (Kellaghan and Greaney 2004). First, serious concerns arise about the impact of public examinations on the quality of teaching and learning that affect student performance and achievement. Public examinations normally affect teaching–learning because teachers tend to teach for the exams rather than develop competencies. Second, regarding validity, the tests are perceived as biased toward testing the knowledge and skills needed by the minority of students who will continue their education. They do not seem to reflect the goals of the curriculum set for students who will not proceed to higher education.

It was noted, however, that the negative perception has been mitigated, and the three countries have taken steps to improve the quality of public examinations. For instance,

[6] Summarized from the interview and from the country papers.

Bangladesh has introduced creative questioning in its public examinations and established the Bangladesh Examination Development Unit under the Directorate of Secondary and Higher Education (DSHE) to support the examination boards in setting quality test questions. In Sri Lanka, the National Evaluation and Testing Service (NETS) initiated item banking for the GCE examinations and introduced research and item analysis. In Nepal, the Office of the Controller of Examinations attempted to improve examinations by ensuring that the questions include assessment of higher-order cognitive skills and the ability of students for practical knowledge and skills they encounter outside school as well as in the classrooms.

While the public examinations in Bangladesh, Nepal, and Sri Lanka are primarily considered summative assessment, and intend to certify completion of a level of schooling, these countries have different names for the tests (Table 1).

Table 1: Summary of Public Examinations: Purpose, Frequency, and Approaches

Name of Examination	Purpose	Frequency	Modalities of Examinations
Bangladesh			
Primary School Certificate	To certify completion of primary schooling; given to grade 5 students	Once a year	Paper-and-pencil, mostly MCQ with short answer and essay type (creative) questions
Junior Secondary Certificate	To certify completion of junior high school given at grade 8	Once a year	Paper-and-pencil, mostly MCQ with short answer and essay type (creative) questions
Senior Secondary Certificate	To certify completion of lower secondary school; given at grade 10 Passing the Senior Secondary Certificate is required to enter college or higher secondary school	Once a year	Paper-and-pencil, mostly MCQ with short answer and essay type (creative) questions and practical exams in science subjects
Higher Secondary Certificate	To certify completion of higher secondary school certificate; given at grade 12 Passing the Higher Secondary Certificate is required to enter university and obtain a bachelor's degree	Once a year	Paper-and-pencil, mostly MCQ with short answer and essay type (creative) questions and practical exams in science subjects
Nepal			
Primary Education Certificate Examinations administered by schools	To certify completion of primary schooling and admission to lower secondary education	Once a year	Paper-and-pencil and practical exams in selected subjects

continued on next page

Table 1 *continued*

Name of Examination	Purpose	Frequency	Modalities of Examinations
District Grade 8 Examination	To certify completion of grade 8 and admission to grade 9	Once a year	Paper-and-pencil and practical exams in selected subjects
School Leaving Certificate	To certify completion of schooling at grade 10	Once a year, normally at the end of a year of a program	Paper-and-pencil and practical exams in selected subjects
Higher Secondary Education Certificate Examination	To certify completion of grade 12 and admission to higher education or universities	Once a year, normally at the end of a year of a program	Paper-and-pencil and practical exams in selected subjects
TVET–SLC	To certify completion of higher secondary for students who studied in TVET-administered schools	Once a year, normally at the end of a year of a program	Paper-and-pencil and practical exams in selected subjects
Sri Lanka			
Grade 5 Scholarship	To select top grade 5 students for scholarship programs and for admission to grade 6 in prestigious schools	Once a year	Consists of two question papers that are paper-and-pencil tests, including MCQ and short response questions
GCE - Ordinary Level	To certify and select students who can proceed to grade 12, given to grade 11 students	Once a year	Paper-and-pencil tests, including MCQ and short response questions for 52 subjects in Sinhala, Tamil, and English
GCE - Advanced Level	To certify and select students to get admitted to universities, national colleges, and private tertiary institutions Given to grade 13 students	Once a year	Paper-and-pencil tests, including MCQ and short response questions in 47 subjects in Sinhala, Tamil, and English

GCE = General Certificate of Education, MCQ = multiple-choice question, SLC = School Leaving Certificate, TVET = technical and vocational education and training.

Source: Appendixes 1, 2, and 3.

All three countries administer annual public examinations at various key endpoints of schooling—at primary, lower secondary, higher secondary, and senior secondary. All these public examinations are administered to be able to certify completion of a significant level of schooling and school leaving certification, except for Sri Lanka, where tests are administered to grade 5 students for scholarships and admission to the best schools for grade 6.

All public examinations are governed by national testing agencies and/or testing boards under the MOE. However, the grade 8 public examination is administered by education

district offices. These public examinations are generally administered annually toward the end of each school year, and are mostly paper-and-pencil tests that primarily consist of multiple-choice questions (MCQs). Public examinations are used to determine individual achievement rather than achievement of learning outcomes system-wide.

C. National Assessment

National assessments (sometimes called *system assessments, learning assessments,* or *assessments of learning outcomes*) are administered to a sample or population of students (such as grade 5, or 10-year-old students) to get information about the education levels - whether primary or secondary in the education system. They are not meant to assess the achievement of individual students. They are conducted annually or every 2 years to gather information of student achievement against well-defined curriculum standards and to inform educational policy planners. The results of national assessments are considered as rich information about "products" or "outcomes" of schooling, including achievement and inequalities in the school system. Results derived from national assessments are helpful and useful bases for policy making and decision making in education.

National assessments answer the question ***"How well are the students learning?"*** They are used to gather evidence on strengths and weaknesses in students' knowledge and skills. They are also used to determine the factors related to student achievement and the change of students' achievement over time.

National assessment can play a crucial role in demonstrating the efficacy or otherwise of all other investments in education (Department for International Development of the United Kingdom 2011). One of its major features is a survey of schools and students (and sometimes teachers) that is designed to provide evidence, at the level of the education system, on students' achievement in identified curriculum areas (e.g., reading or literacy, mathematics or numeracy, science).

All countries reviewed have introduced national assessment systems with the goal of determining the level of achievement of students against the new curriculum in primary education. Although Sri Lanka has institutionalized a national assessment system, it will still be defined further in the national student assessment policy framework being drafted under the Secondary Education Development Program.

In Bangladesh, national student assessment (NSA) is considered as sample-based assessment. It was first introduced under the Primary Education Development Program (PEDP-I) in 1998–2003, and then strengthened under PEDP-II in 2003–2008. It was institutionalized under the Directorate of Primary Education through the establishment of the National Assessment Cell under the Monitoring and Evaluation Division of the Directorate of Primary Education in 2006. As of 2014, the National Assessment Cell had already conducted three national assessments in grades 3 and 5. No national assessment had been introduced at the secondary education level. Another NSA was administered in 2015 and supported under the PEPD-III.

National assessment was introduced in Nepal as part of the School Sector Reform Plan (SSRP). The National Assessment of Student Achievement (NASA) is a system assessment administered to students in grades 3, 5, and 8. The national assessments for grades 3, 5, and 8 are expected to establish norms and standards for quality education by determining the achievement of students against the learning outcomes defined in the national curriculum framework. The Education Review Office under the MOE conducts the NASA every other year to selected students in grades 3, 5, and 8.

In Sri Lanka, the first national assessment was undertaken by the National Institute of Education (NIE) in 1994 for grade 5 students in collaboration with the Monitoring Learning Achievement Project organized by the United Nations Educational, Scientific and Cultural Organization (UNESCO). With the setting up of the National Education Research and Evaluation Centre (NEREC) at the University of Colombo with funds from the World Bank, national assessment was placed on a firmer footing. The NEREC has carried out the assessment at grade 4 since 2003. Since 2008, the World Bank has supported development of capacity to carry out assessment at the Open University, which conducted an assessment at grade 10 in 2009 (Department for International Development of the United Kingdom 2011).

From Table 2, it is undeniable that national assessments have been introduced and are seemingly in place. However, they need to be systematized and institutionalized in these three countries. Noting that these national assessments were all project driven and initiated as part of projects funded by ADB, the World Bank, or United Nations agencies, systematized and institutionalized assessment systems should have well-defined objectives, modalities, and reporting systems that adhere to the following principles:

(i) Student achievement in national assessment must be determined using standardized instruments (usually MCQ types), administration, and scoring or marking procedures.
(ii) National assessments must be administered to an agreed population of students (e.g., grade 4 or 5) or in most cases, to an identified sample of students that represents the agreed population.
(iii) Performance of individual students must be combined to determine the system-level performance, as well as at the regional or district level if there is a sufficiently large number of students per level. Often, comparison should be made between students attending public schools and students attending private schools.
(iv) Noncognitive information, such as personal and socioeconomic information of students, teachers, and sometimes parents, must be gathered using questionnaires to provide evidence of relationships between achievement and other factors (e.g., student characteristics, teacher characteristics, school and classroom resources, teaching–learning practices, and even family and parental characteristics).
(v) Lastly, data gathered from national assessments can inform and guide policy makers and education managers in making decisions regarding allocation of resources. For instance, the results of the national assessment must be used to identify areas of the curriculum where students are underachieving, and what components of the curriculum need to be strengthened. Furthermore, the data gathered from the national assessment, particularly the noncognitive factors,

Table 2: Summary of National Assessments by Type, Purpose, Frequency, and Approach

Type or Level	Purpose	Frequency	Approach	Remarks
Bangladesh				
National Student Assessment	Monitor student progress	Every 2 years for grades 3 and 5 only	Paper-and-pencil test, mostly multiple-choice questions with some short-response or essay type items	A biannual report is disseminated.
Nepal				
National Assessment of Student Achievement	Determine students' achievement against the learning outcomes defined in the curriculum	Every 2 years for grades 3, 5, and 8	Paper-and-pencil test, mostly multiple-choice questions	A national report is disseminated every assessment year.
Sri Lanka				
National Assessment	Determine impact of the curriculum, particularly on first language (Sinhala and Tamil), English and mathematics for grade 4; first language, mathematics, and science and technology for grades 8 and 10, and additional English for grade 10 only.	Grade 4: 2003, 2007, 2009; grades 8 and 10: 2005, 2008; grade 10: 2009	Paper-and-pencil test, mostly multiple-choice questions	An arbitrary score of 80% is used as the basis for determining mastery level. Students who achieved less than 80% are considered "non-masters."

Sources: Appendixes 1, 2, and 3.

must be considered. The results also must be used to identify training needs of teachers and additional resources needed for schools in specific areas.

Through the national assessments, these countries employ internationally accepted methodology and tools to measure learning outcomes and to benchmark the results internationally as well. In this process, with some technical assistance and financial support from international agencies such as ADB or the World Bank, they can build national capacity for carrying out national learning assessments and for informing and improving policy formulation and strategies on teaching and learning.

Bangladesh and Nepal have been implementing national assessments of student achievement to determine the system-level achievement of curriculum standards and objectives. The objective of the national assessment is to determine how a sample group of students showed achievement of the national curriculum. National assessments in both countries are implemented under an agency of the MOE. These national assessments are perceived as objective evidence of the extent to which the national curriculum policy standards have been achieved system-wide.

Both national and public examinations are intended to determine the level of achievement at the end of a significant stage of schooling. Hence, they are considered as **summative assessments**. As summative assessments, the goal of both public and national assessments is to improve instructional programs and curricular implementation based on how students have learned, as reflected by the individual results and system-wide results derived from the assessment tools (Harlen 2007).

D. Governance and Institutional Arrangements in Public Examinations and National Assessments

Governance of the assessment system in the countries reviewed varies from very centralized to decentralized structures, depending on the nature and scope of the assessment system. However, national education authorities are usually responsible for developing the guidelines, standards, and systems to govern student assessment activities. Sri Lanka has the most centralized system, while in Bangladesh and Nepal systems are leaning toward a decentralized system.

The primary purposes of assessment of student learning outcomes (ASLO) are quite similar in all three countries. Hence, the system of governance is also similar, that is, it is still centrally controlled to ensure that monitoring of the overall quality of education is in place.

1. Bangladesh

In Bangladesh, the MOE and the Ministry of Primary and Mass Education (MOPME) are the highest authorities to oversee the functioning of educational institutions and take policy decisions in all educational matters including public, national, and school-level student assessment. The Directorate of Primary Education implements all decisions for primary education, while the Directorate of Secondary and Higher Education (DSHE) is in charge of secondary and higher education. Both the Directorate of Primary Education and DSHE oversee examinations and assessment systems within their jurisdictions, particularly the national assessments. In the case of public examinations, eight education boards are responsible for implementing examination-related decisions under the law.[7] The boards conduct Junior Secondary Certificate (JSC), Secondary School Certificate (SSC), and Higher Secondary Certificate (HSC) examinations. The Directorate of Primary Education conducts the Primary School Certificate (PSC) examination.

[7] This regulation is framed under section 39 (2) (XI) of intermediate and secondary education (Amendment Ordinance No. XVIII of 1977) regarding holding and conducting examinations.

2. Nepal

The system in Nepal is highly compartmentalized,[8] although this is being studied in light of the SSRP. The SSRP emphasized that competency standards set by the Curriculum Development Center (CDC) should form the basis for student assessment and evaluation in each grade and level.

At present, there are three main agencies overseeing public examinations at various levels:

(i) **District Examination Committee**. This committee is the governing body for grade 8 examinations, wherein it develops, administers, scores, and provides reports.
(ii) **Office of Controller of Examinations**. This office is responsible for the development, administration, scoring, and reporting of tests for grade 10—the School Leaving Certificate (SLC).
(iii) **Higher Secondary Education Board**. This board is the authority to develop, administer, score, and report the grade 11 and 12 exams.

The National Curriculum Framework (NCF) and the SSRP recommended a regional examination at grade 10. However, this is not yet implemented. The two policy documents also suggested that the SLC at grade 12 would be conducted at the national level by an independent national examination board.

For national assessment, another important agency formed under the MOE in Nepal is the Education Review Office (ERO). This newly established office is tasked with conducting national assessments to provide feedback for policy formulation. Also, the ERO will undertake periodical NASA for grades 3, 5, and 8.

3. Sri Lanka

In Sri Lanka, the entire system of public examination is centrally controlled by the National Evaluation and Testing Service (NETS) of the Department of Examinations, which functions within the purview of the MOE. At present, there is no national assessment in place in Sri Lanka.

The Department of Examinations is headed by a commissioner general of examinations, assisted by nine commissioners of examinations. Through NETS, the Department of Examinations conducts two types of examinations—local and foreign examinations. Among the local examinations are three public examinations conducted for school-level candidates—Grade 5 Scholarship Exam, GCE (O/L) for grade 11, and GCE (A/L) for grade 13.

Through the Education Sector Development Framework and Program, and with the support of the Education Sector Development Program, one of the major reforms being introduced is the development of a national assessment policy framework that provides the guidelines and policies related to public examinations and integration of SBA into the GCE (O/L) and GCE (A/L) examinations. While in the past there was an attempt to integrate SBA scores into the GCE overall results, this was not systematically implemented or publicly recognized by various stakeholders. The national assessment policy framework aims to

[8] "Compartmentalized" as used here refers to the very rigid division or demarcation of responsibility between primary, secondary, and upper secondary levels. Each has a primary authority to govern them.

ensure systematic integration of SBA results into the GCE overall results and likewise strive for acceptance by the general public and various stakeholders.

E. Participation in Regional and International Assessments

International and regional assessments indicate where the achievement of students in a country stands relative to that of students in other countries. International or regional assessments are seen as benchmarking tools for countries to know their relative position in terms of delivering curriculum areas accepted and implemented across countries.

In many countries, including South Asia, international and regional assessments were initially conceptualized to investigate cross-national variation in educational institutions and processes and their relationship to student learning outcomes (Keeves 1995). Currently, national and international assessment programs are mainly used to monitor and evaluate the quality of student learning outcomes (Postlewaite and Kellaghan 2008). They are also used to compare performance of students from various countries over time.

Among the many international assessments, PISA is the one most commonly used to benchmark student performance. PISA measures reading literacy, mathematics literacy, and scientific literacy of 15-year-old children. This assessment is coordinated by the Organisation for Economic Co-operation and Development (OECD), an intergovernmental organization of 35 member countries. PISA was first implemented in 2000 and is conducted every 3 years.[9]

While PISA includes countries that are not OECD members, none of the countries included in this review have ever participated in PISA. Table 3 presents a summary of commonly used international and regional assessments of student learning outcomes.

Countries that have participated in international assessment studies, particularly PISA, have experienced direct and indirect benefits from participation. International assessment studies helped countries develop a more comprehensive and sophisticated educational monitoring system (Schleicher 2010). The results of international assessment studies have provided the participating countries with a baseline profile of the knowledge and skills of their students from an international perspective (Schleicher 2010). The recurring and continuing survey process also provided information about trends in student performance that is essential in formulating policies on educational reforms.

[9] In every PISA administration, one of the three subject areas is assessed more in depth, and considered the major area for that year. Although the other two areas and additional areas may be assessed in each year, they are considered minor areas. Assessing all three areas in each testing year will allow participating countries to have an ongoing source of achievement data in every subject area while rotating one area as the main focus over the years. The PISA administration cycle in various assessment years based on the Programme for International Student Assessment is as follows. Reading, mathematics, and science literacy are all assessed in each assessment cycle of PISA. A separate problem-solving assessment was administered in 2003 and 2012. The subject in capital letters is the major area for that cycle: 2000: READING, Mathematics, Science; 2003: Reading, MATHEMATICS, Science, Problem Solving; 2006: Reading, Mathematics, SCIENCE; 2009: READING, Mathematics, Science; 2012: Reading, MATHEMATICS, Science, Problem Solving; 2015: Reading, Mathematics, SCIENCE.

Table 3: Summary of Commonly Used International and Regional Assessments

Name of Assessment	Purpose	Other Information
Programme for International Student Assessment (PISA)	A worldwide study by the Organisation for Economic Co-operation and Development (OECD) in member and nonmember countries of 15-year-old school pupils' scholastic performance on mathematics, science, and reading.	It was first administered in 2000 and then repeated every 3 years. It is administered with a view to improving education policies and outcomes.
Trends in International Mathematics and Science Study (TIMSS)	An international assessment of the mathematics and science knowledge of students around the world. In most of the cycles, the TIMSS assesses grades 4 and 8 students. It is administered by the International Association for the Evaluation of Educational Achievement (IEA).	This study was first conducted in 1995, and has been performed every 4 years thereafter. For each student, contextual data on the learning conditions in mathematics and science are collected from the participating students, their teachers, and their principals via separate questionnaires.
Progress in International Reading Literacy Study (PIRLS)	An international study of reading achievement in grade 4. Conducted by IEA, it is designed to measure children's reading literacy achievement and establish a baseline for future studies of achievement trends. It is also administered to collect information about home and school experiences that may influence the ability of students to learn how to read.	This study was introduced in 2001.
Early Grade Reading Assessment (EGRA) and Early Grade Mathematics Assessment (EGMA)	The EGRA and EGMA are simple and low-cost assessment tools that intend to determine the literacy and numeracy skills of early grade children in the most efficient way. They were developed by Research Triangle International under the United States Agency for International Development EdData II Project.	The EdData II Project developed the EGRA methodologies, and later those of EGMA, and has applied them in 11 countries and 19 languages.

Sources: Compiled by the author.

Other international and regional assessments include the Pacific Islands Literacy and Numeracy Assessment, the Australian Longitudinal Literacy and Numeracy Assessment, and the annual Status of Education Report. Recently, ADB began to pilot the Early Grade Learning Assessment (EGLA) in Literacy and Numeracy in the North Pacific, an assessment tool that aims to determine the literacy and numeracy knowledge and skills of grades 3 and 5 in the Marshall Islands and the Federated States of Micronesia (ADB 2013).

F. Innovations in Public and National Examinations and Lessons Learned from International Assessments

Among the countries reviewed, there is no country that has participated yet in any international level assessment such as PISA, the Progress in International Reading Literacy Study, and Trends in International Mathematics and Science Study (TIMSS). However, the existing national assessment and public examinations have, in many ways, adapted or adhered to the procedural features of the international assessments. The national assessments of Bangladesh and Nepal, for example, have attempted to develop assessment tools that would measure knowledge and skills in a way that allows comparison of all participating schools in the system.

While Bangladesh has not yet participated in the international assessment programs, a plan to use the published items of PISA and/or TIMSS is being strongly considered to determine the school learning level of Bangladeshi children compared with their international counterparts. Through the leadership of the Bangladesh Examination Development Unit, items from PISA and TIMSS are analyzed for how they could be modeled in the national student assessment and in the public examinations.

Similarly, Nepal has not participated in any of the regional or international assessments such as PISA or TIMSS, but it has conducted some research studies using the TIMSS items that are publicly available. In particular, New ERA conducted the Survey for Nepal Community Management Schools Impact Evolution undertaken by the World Bank in 2008 and 2010. In this survey, New ERA used published items from TIMSS. While ERO has given some international flavor to its NASA test in the sense that some test items were developed based on insights from studying international assessments such as PISA and TIMSS with the perspective of comparing Nepal's student achievement with the international tests and their results.

Lastly, Sri Lanka has also not yet participated in any international assessment, although attempts have been articulated; however, because of lack of funding support from the government, the participation remains at the planning stage. In an interview with the director of planning of MOE conducted by the international consultants in December 2013, the director mentioned Sri Lanka's plan to participate in PISA as part of the country's attempt to benchmark its students' achievement with the international assessment system. According to the director, a fund is allocated under the Education Sector Development Program Framework to ensure the success of Sri Lanka in the international assessments, particularly in PISA.

Policy makers must be encouraged to move toward participation in international and regional assessments, especially considering the success of Viet Nam when it first participated in PISA in 2012 (Box 2). Furthermore, the countries that participated previously in PISA, TIMSS, and/or the Progress in International Reading Literacy Study have learned much from the experience. They were able to benchmark their students'

Box 1: National Assessment in Australia

Based on its experience, Australia established its National Assessment Program along with the National Goals of Schooling.[a] The ministers of education approved the National Assessment Program, which collects, analyzes, and reports nationally comparable student achievement data in each of the following areas—literacy, numeracy, science, information and communication technology (ICT), and civics and citizenship. Current state-based literacy and numeracy programs in Australia annually assess the full cohort of students in years 3, 5, and 7, while the science, civics and citizenship, and ICT assessments test a sample of students in every state and territory, in both government and nongovernment schools, on a rolling triennial basis.

The national approach to assessment and reporting in Australia involves a deliberate process of consultation to reach consensus on issues and at each stage of the assessment and reporting cycle. This process supports a truly national assessment regime that provides high-quality comparable data.

[a] Adelaide Declaration on National Goals for Schooling in the Twenty-First Century. http://www.scseec.edu.au/archive/Publications/Publications-archive/The-Adelaide-Declaration.aspx.

Source: Ministerial Council on Education, Employment, Training and Youth Affairs Performance Measurement and Reporting Taskforce.

performance against other countries and improved their practices and standards in terms of their curriculum development and delivery systems.

The national assessment system of Australia (described in Box 1) provides good insight into how the three South Asian countries could design and implement their national assessment system. At present, the national assessments are administered to augment and complement public examinations. However, they should learn from how Australia implements national assessment wherein rich data from the international assessments, such as PISA and TIMSS, are used to determine the impact and full benefits of a national assessment.

The strategy of having a full-cohort literacy and numeracy assessment provides robust data about individual student performance and supports teachers to develop learning activities plan for students. They also empower schools to establish a more comprehensive view of their students' performance by being able to compare the performance of their students with that of students from other schools and against the statewide standards. Moreover, the strategy of introducing a triennial sample and the use of innovative assessment delivery systems are great lessons for the countries being reviewed. Innovative assessment includes utilizing state-of-the-art assessments tools and delivering it online and using technology-supported assessment approaches.

In Australia, all the schools benefit from the national assessments, particularly because data are presented and reported in an aggregated manner, made available through comprehensive and standardized national reports that are accessible online. Any school in Australia uses the information it gets from the national assessments to benchmark

with other schools and even with other states and territories. With the results and benchmarking, the schools are able to determine the strengths and weaknesses of their students, which will allow the schools to develop more responsive teaching and learning programs. Moreover, at the system's level, the South Asian countries must also learn how the national assessment results are used in Australia. In Australia, ministers use the results of the national assessments to develop relevant policies and investment priorities in relation to their curriculum areas, teacher development, and response to the demands of inclusive education including responding to the specific needs of special groups such as women, children with disabilities, and indigenous students.

Hence, while Australia benefits from national assessments that provide comparable data about student performance across the country, the nonexistence of national assessments in the three countries reviewed will not allow them to do such comparison. The public examinations given in these countries will only let them get information about the performance of individual students relative to their peers but not a nationally comparable data about student performance across the country. Ultimately, the national assessments are influential and effective in improving the capacity for data-driven decision making about policy development, human and fiscal resourcing, and systematic teaching–learning culture. Likewise, the national assessments are used to establish accountability and effectiveness of the system, where the people and key stakeholders have the right to know about the effectiveness and efficiency of the schools, particularly government schools, in realizing quality education.

Other countries can learn from Finland and Singapore. While Finland deemphasizes the high-stakes public examinations, it has consistently performed well in international assessments such PISA. On the other hand, the Singapore Examination and Assessment Board gives emphasis to public examinations. These are two conflicting paradigms that are both worthy as a learning situation and provide a benchmark for Bangladesh, Nepal, and Sri Lanka, which also are presently administering high-stakes public examinations. In Singapore, examinations are conducted at the end of term from grade 1 to grade 5 prior to Primary School Leaving Examination at grade 6.[10] At the secondary level, GCE Normal (N), GCE Normal Technical [N(T)], and GCE Normal Academic [N(A)] as well as GCE (O/L) levels are administered. Furthermore, the Singapore–Cambridge GCE "A" Level is given at the tertiary level. The overemphasis on external examinations in Singapore is seemingly working well in their educational system. In the 2012 PISA results, Singapore obtained the highest score of 562 in problem solving based on the PISA proficiency scale.[11] The 2012 PISA results published by the OECD also indicated that Singapore had the highest number of top-performing students in problem solving. In Singapore, 29% of 15-year-old students reach the proficiency level of 5 or 6, against the 11% for all OECD countries. Morever, about 92% of the students can complete tasks at the baseline level, which is level 2 or higher in problem solving; this implies that most 15-year-old students in Singapore can solve problems in a moderately complex situation with ease.

The opposing view of the impact of public examinations in Finland and Singapore brings arguments and debates on the benefits of public examinations. It is a common

[10] The international Primary School Examination (iPSLE) is offered to Singaporeans studying abroad and whose school has adopted a curriculum similar to that offered in Singapore.

[11] http://www.oecd.org/pisa/keyfindings/pisa-2012-results.htm.

practice in the three countries to administer public examinations because of common beliefs that these examinations help provide regular and objective feedback on student learning outcomes and achievement against the curriculum standards. Another benefit of public examinations is that they motivate both students and teachers to improve their performance—teachers want to prepare their students well because the achievement of their students reflects their teaching performance. In this way, students try to study harder and teachers attempt to become more effective in their teaching methodology.

On the other hand, public examinations have certain drawbacks. Public examinations have a poor predictive quality because they only assess students' ability under set conditions and limited time. In many instances, a student who is otherwise good in class may experience test anxiety or confusion under strict examination conditions and may not perform up to the mark. Public examinations also encourage the practice of "teaching to the test"—that is, teaching a fixed curriculum focused on passing a specific examination, rather than teaching students to develop defined competency standards, which may be different than what the public examinations measure. The practice of teaching to the test limits the curriculum to a set range of knowledge and skills. Hence, such practice does not provide many educational benefits.

These drawbacks must be taken into account by the South Asian countries in this review to ensure that their public examinations result in educational benefits to both students and teachers. The benefits of public examinations must far outweigh their drawbacks, taking off from the experiences of Australia, Finland, and Singapore.

G. The National Assessment System: Learning from International Assessments

The national assessments of Bangladesh and Nepal have been developed using the paradigm of international assessment, such as PISA, where specific grade levels and/or age groups are assessed on core subject areas—English, Bangla for Bangladesh and Nepali for Nepal, mathematics, social studies, and science. They also attempted to model the procedures for selecting schools and students, wherein samples are used rather than the entire population. In Sri Lanka, on the other hand, national assessment was conducted to determine the effectiveness of the curriculum, particularly in the first language (Sinhala or Tamil), mathematics, and English (grade 4); first language, mathematics, science, and technology (grades 8 and 10); and English language (grade 10).

The national assessments were developed in a manner similar to that of the international assessment, where the developers identified procedures to measure the outcomes of different curricula. Although each has a national curriculum framework and standards, the three countries are aware that their curricula are implemented differently within the system. They are also aware that since the curriculum is taught differently, there is potential of arriving at varying achievement levels of an age group or grade-level group.

Sri Lanka is also aware that the instruments of national assessments, like those of the international assessments, must be translated into one or more languages. Hence, if

assessment is given in one or more languages, such as Sinhala or Tamil in Sri Lanka, the comparison between performances assessed in different languages may be affected by the differences in the language in relation to the level of difficulty of the tasks included in the assessment.

Another challenge faced by Bangladesh and Nepal is the reporting of results. This is also a problem faced in reporting PISA and TIMSS. PISA, for example, has had difficulty reporting the ranking among countries in terms of the average scores of the sample of each country. This is also a dilemma faced in the national assessment when ranking of average scores of schools are reported. Oftentimes, this is exaggerated by the media, creating issues against the goals of conducting national assessments.

The experiences of Viet Nam (Box 2) and South Africa (Box 3) in participating in international assessments provide some lessons for Bangladesh, Nepal, and Sri Lanka. Acknowledging how Viet Nam showed impressive results when it participated in PISA for the first time in 2012 would provide insight to these South Asian countries in considering and preparing their students to participate in international examinations.

Viet Nam's experience and determination to participate in PISA to establish benchmarks of their students' performance against other countries is a remarkable lesson. Bangladesh, Nepal, and Sri Lanka, which are attempting to improve the quality of their education and delivery systems, are encouraged to learn from Viet Nam. Like Viet Nam, these countries have a long history of high-stakes public examinations, but have not seriously determined the impact of their investments in education externally. The results of their public examinations and national assessments show some degree of disparity, calling into question the validity of both examination systems. Participating in an international assessment such as PISA would provide important data for better policy development and decision making. It is strongly recommended that these countries participate in international and/or regional assessment systems to ensure that they are on par with international standards and widely accepted levels of education quality.

While the benefits of participation are obvious, the greatest challenge to Bangladesh, Nepal, and Sri Lanka would be funding. Although Sri Lanka is planning to make a large investment to participate in PISA, the source of this funding is still unclear. If the model of Viet Nam were followed, external funding through ADB and/or the World Bank would be sought. Participation in international assessment would be beneficial to these countries, particularly if it is supported by expanded capacity of the government unit in charge of assessment to maximize use of the data to improve the quality of education and inform policy makers to improve the education sector as a whole.

Should these three countries decide to participate in international assessments, they should also learn from the experience of South Africa in terms of managing the assessment system and ensuring that all staff members involved in the administration of the international assessment are properly trained. Also, they should recognize the need to improve relevant infrastructure and organizational arrangements to guarantee the smooth implementation of the international assessment, avoiding any possible internal reasons for invalidity of results.

Moreover, the three countries must also learn from a neighboring country in the region, Pakistan. The National Education Assessment System (NEAS) of Pakistan was initiated in 2003 (Ho 2013). The first assessment was conducted in Pakistan under NEAS in 2005 as a countrywide initiative to build assessment capacity at the national and provincial levels. This project was supported by the World Bank and the United Nations Children's Fund (UNICEF). The NEAS results were used by Pakistan to inform policy makers on the extent to which background and process factors were linked to student performance, and how the curricula were translated into students' knowledge and skills. The NEAS results also help policy makers to identify the principal determinants of student performance and strategies to improve resource allocation mechanisms, in addition to improving pedagogy and the delivery of professional development programs for teachers.

All the countries reviewed have yet to participate in international assessments such as PISA or TIMSS. However, Nepal, for instance, had tried using TIMSS items in an attempt to benchmark student achievement internationally. With technical assistance and financial support from international development organizations, such as ADB or the World Bank, these countries endeavored to adapt the process and procedures introduced in international assessments such as PISA to establish their national assessments and even their public assessment systems.

Box 2: Viet Nam's Stunning Performance in the Programme for International Student Assessment 2012

The Ministry of Education and Training of the Socialist Republic of Viet Nam decided to participate in the Programme for International Student Assessment (PISA) in 2012. The results were stunning, showing Viet Nam's general education system is comparable to and considerably more successful than systems in many wealthier countries in providing students with strong basic cognitive skills such as reading literacy and numeracy. The 15-year-old students of Viet Nam were found to be on par with their peers in Austria and Germany and better than those in two-thirds of participating countries. The success of Viet Nam can be attributed to the country's investment into expanding enrollment at the primary and secondary levels and efforts to define and enforce minimum quality standards, the "fundamental school quality level" in primary education. Second, the results can be attributed to the high level of professionalism and discipline of Vietnamese teachers, with teacher absenteeism virtually unknown and student attendance very high. Viet Nam still experiences early school leaving, particularly among the disadvantaged and poorer students and minorities. The results of PISA assessment competencies of 15-year-olds in school suggest that it only captured those students who remained in upper secondary education—who are typically better off and likely better-performing students. Hence, despite the remarkable performance of Viet Nam in PISA, it does not really show that it is meeting the challenge of reducing early school dropout rates among the disadvantaged students.

Source: Bodewig, C. 2013. What explains the stunning performance in PISA 2012? Asia & Pacific on the rise (blog). The World Bank. http://blogs.worldbank.org/eastasiapacific/whatexplains-vietnam-s-stunning-performance-pisa-2012

Box 3: South Africa's Experience with International Assessments

"South Africa's experience with [Trends in International Mathematics and Science Study (TIMSS)] and Third International Mathematics and Science Study-Repeat (TIMSS-R) underlines the problems facing implementers of international assessments. Howie (1999) noted that deadlines imposed by organizers can be difficult, if not impossible, to meet in situations where there may be no mail or telephone services or funds for travel to schools. Other problems include the lack of accurate population data on schools; poor management skills; insufficient attention to detail, especially in editing, coding, and data capture; lack of funding to support project workers; and difficulty in securing quality printing on time. The instruction given to test administrators—for example, to walk up and down the aisle—is obviously inappropriate where classrooms do not have an aisle."

Source: T. Kellaghan and V. Greaney. 2004. *Assessing Student Learning in Africa.* Washington, DC: The World Bank. p. 44.

CHAPTER 3: SCHOOL-BASED ASSESSMENT AND CONTINUOUS ASSESSMENT SYSTEM

Aside from public and national assessments, school systems are encouraging assessment of student learning in the classroom as an integral part of the teaching and learning process. Classroom assessment is a considerably powerful tool and activity as it provides immediate information about how individual students are achieving the identified learning outcomes, normally based on periodic learning goals. In the three countries reviewed, classroom assessment is widely used. However, this type of assessment is more often referred to as school-based assessment (SBA) and/or continuous assessment system (CAS).

This chapter deals with SBA and/or CAS, an assessment approach carried out in schools by the classroom teachers. SBA and CAS may be regarded as classroom assessment routines where the teacher's goal is to help students determine their strengths and weaknesses, making SBA or CAS a formative as well as diagnostic assessment system.

SBA is defined as an approach where assessment is carried out in schools by teachers. The main purpose of SBA is to determine students' achievement based on the assessment of individual teachers, for providing feedback to students for the improvement of learning. Hence, SBA is implemented as a formative assessment by teachers to help students identify strengths and weaknesses and subsequently guide their learning. Teachers use SBA as a formative assessment to help students determine their learning problems, to identify remedial strategies, and to make suggestions to improve students' learning process (Sparks 2005). On the other hand, CAS, as practiced in Nepal, is an integral part of SBA.

Despite being widely practiced by schools in Bangladesh, Nepal, and Sri Lanka, SBA and CAS have been perceived by students and parents as subjective and informal with less bearing on the grades of students, and much more on the entire learning process. However, SBA and CAS are as powerful and effective as the formal assessment because the results are immediate and the process is ongoing and spontaneous because SBA and CAS are taking place while learning occurs. Also, student performance and behavior are monitored timely and appropriately, ensuring that the assessment process is more responsive to the teaching and learning process. SBA and CAS are both efficient in determining an individual student's level of knowledge, skills, or behavior and in diagnosing a potential problem that a student may face. However, the lack of information about these special features has caused some of the negative perceptions about SBA and CAS.

Hence, the negative perceptions of some stakeholders toward SBA and CAS have prompted the countries involved in this review to further improve the implementation of these assessments, ensuring that the deficiencies of the assessment system are

responded to and improved through further capacity development of teachers to conduct SBA and/or CAS. This report also examined the results and impact of SBA and/or CAS, and how they were used to further improve the assessment regime in the school system.

A. Status of School-Based Assessment and Continuous Assessment System

SBA in Bangladesh, Nepal, and Sri Lanka was meant to be a complementary approach to paper-and-pencil tests and other formal assessments. All three countries, particularly Nepal and Sri Lanka, believe that paper-and-pencil tests have limitations and are unable to measure other indicators of student achievement and performance. Also, the public examinations that are given at the end of the school year do not provide quick information on how teaching and learning should take place. Hence, SBA was introduced to serve as a formative and diagnostic assessment, thereby allowing more responsive interaction with learning as it occurs, better monitoring of student performance and behaviors not captured by paper-and-pencil tests, and as a way of diagnosing the strengths and weaknesses of students to help them in the next instructional program.

1. School-Based Assessment in Bangladesh

SBA in Bangladesh was introduced through externally funded projects,[12] particularly those that supported the improvement of quality in secondary education. The Ministry of Education (MOE) issued a circular to the effect that SBA would be implemented from 2005 in grades 6–9 in all secondary education in the country. The circular also clearly indicated that SBA results would not be considered part of the Secondary School Certificate (SSC) examination. In the same order, the MOE denoted that SBA functions as a formative assessment and implemented year-round adherence to the criteria set.

The introduction of SBA in Bangladesh was project driven and completely relied on the expertise of international consultants, who provided technical support in the implementation. To implement SBA, a teachers' guidebook on SBA was prepared and a 2-day training workshop was conducted for all head teachers and for 62,125 classroom teachers (about 28% of the country's 223,555 teachers). These activities were supported by the Secondary Education Sector Development Project (SESDP). Besides the head teachers and classroom teachers, all education officers of the Directorate of Secondary and Higher Education involved in supervision and monitoring were given a 2-day training under the SESDP. However, after 2007, no training was given on SBA implementation. Hence, little attention was given to provide further capacity of the teachers to implement SBA.

SBA in Bangladesh still needs much improvement: SBA has not taken off as a complementary assessment modality to the paper-and-pencil tests in the classroom. Unlike in Sri Lanka where assessment modalities such as projects, student reports, product-oriented assessment, and process-oriented assessment have been introduced as part of SBA, these are still not commonly employed by most teachers, even those trained to

[12] ADB-supported projects include the Teaching Quality Improvement for Secondary Education Project and SESDP. A project supported by the International Development Association was the Secondary Education Quality and Access Enhancement Project.

conduct SBA. While the concept of SBA has been introduced widely, the implementation and use of various SBA modalities still leave much to be desired.

Problems related to SBA implementation in Bangladesh include the use of poorly constructed or focused questions, a prevalence of questions that require short answers that involve factual knowledge, the re-creation of responses that require repetition of what they memorized rather than reflection or analysis, and lack of techniques and strategies intended to develop the higher cognitive skills and critical thinking of students (Ho 2013).

To respond to these identified problems in SBA implementation, the Secondary Education Sector Investment Program, funded by ADB, included a major component that provides support to mitigate the problems in SBA implementation. This includes training of teachers in the planning and implementation of SBA and improving their skills in creative questioning. Another project funded by the World Bank, the Secondary Education Quality and Access Enhancement Project (SEQAEP) is also supporting the improvement of SBA implementation including enhancing the quality of education at the secondary level by facilitating access to information through quality teaching and assessment. At the primary level, the ADB-funded Third Primary Education Development Program (PEDP) is also strongly supporting assessment and improving quality at the primary level. Aside from training teachers on SBA, it conducts a biannual National Student Assessment (NSA) using a significant number of samples all over the country.

The current ADB-funded projects, the Secondary Education Sector Investment Program and the Second Teaching Quality Improvement in Secondary Education Project, are implementing programs to strengthen the skills of the head teachers who are responsible for overseeing school-level examinations, particularly terminal, annual, and continuous assessment or SBA. The head teacher of a school generally convenes an examination committee for conducting these examinations. Test questions and answer scripts are prepared and evaluated by subject teachers of the schools with the supervision of the school examination committee chaired by the head teachers. Under the Second Teaching Quality Improvement in Secondary Education Project, head teachers are trained on how to supervise and monitor SBA and other assessment activities, including adherence to creative questioning, even at the classroom level.

2. School-Based Assessment in Nepal

SBA is practiced in Nepalese schools as part of the country's CAS. The CAS is an assessment practice in which students are examined continuously over most of the duration of their education. The results of CAS are cumulatively taken into account at the end of each topic or period and at the end of the school year. This is proposed in Nepal as an alternative to the final examination system.

In the CAS, teachers are tasked to prepare examinations for their own classes and subjects in the classroom during and after lesson delivery. The main goal of SBA and CAS is to decide whether to promote students in a school year by observing change in their behaviors. Absences in school are also taken into consideration in SBA and CAS. SBA, as part of CAS, includes the teacher's periodic assessment using various assessment tools to evaluate the formative learning process.

Because of the still prevalent backwash effect of external formal examinations that provide marks and labels to students as "pass" and "fail," there is a need to shift toward formative and continuing assessment. Hence, the CAS was implemented as an effective tool for formative assessment to mitigate this backwash effect. The rationales of SBA or CAS are distinctly provided in documents such as the National Curriculum Framework (NCF) and the School Sector Reform Plan (SSRP) as well as curriculum and training materials. The primary objectives of SBA in Nepal are to (i) improve student learning, (ii) conduct continuous and comprehensive assessment at the classroom level, (iii) complement summative assessment for grade promotion, (iv) ensure teacher accountability, and (v) inform course and curriculum improvement.

In Nepal, SBA and CAS are aligned with the government policy that no student should be retained in grades 1–7. SBA and CAS are used to support students who are considered performing below the standards and who must be given remedial support to reach the minimum standards. On the other hand, the NCF is realized through SBA and/or CAS through the provision of remedial support based on the diagnosis of students' performance or learning difficulties. The results of SBA or CAS are used to design an instructional plan to promote learning and increase student overall academic performance.

The emphasis of SBA as part of CAS is **formative assessment and evaluation**, particularly at the primary level. The main aim is to improve students' learning level through continuous assessment taking place in the classroom, and providing remedial support when necessary (Shrestha 2014). This goal is well articulated in the SSRP where it is stated that students who are performing below the standards must be given remedial support based on the diagnostic assessment of individual students.

In the implementation of the CAS in Nepal, various assessment modalities are practiced. However, the practice of asking each student, particularly those in grades 1–3, to maintain a student portfolio is considered an innovative strategy of CAS and/or SBA. In the Nepalese context, a student portfolio is a compilation of academic work and other forms of educational evidence put together by the students for the purpose of (i) evaluating their knowledge and understanding on specific topics or assigned tasks; (ii) determining whether students have met learning standards or subject requirements or assignments; and (iii) creating a lasting archive or collection of their academic work products, accomplishments, and other documentations such as projects, reports, and teacher's feedback, among others. This student portfolio is updated according to the student's classwork, project work, behavioral change, and attendance, among others. Another key feature of CAS is that the school should inform parents about the subject matter taught and students' progress, which are also recorded in the student portfolio. However, classwork is given more premium than homework. This practice of student portfolio in Nepal is considered a tool to provide a richer, deeper, and more accurate picture of what students have learned and what they are able to do than assessing them through paper-and-pencil tests and final examinations.

The Curriculum Development Center (CDC) is the implementation unit of the MOE for CAS in grades 1–3. The NCF, SSRP, and level-wise curriculum prepared by the CDC provide the guidelines for CAS, portfolio, and liberal promotion practices.

3. School-Based Assessment in Sri Lanka

SBA has been implemented in the Sri Lankan school system from grade 1 to grade 13 since 1999. Sri Lanka is the only country being reviewed that is implementing SBA in the entire school system.

Improving the quality of learning, teaching, and assessment is the primary aim of SBA in Sri Lanka. It is a response and an alternative to the high-stakes General Certificate of Education (GCE) examinations and other one-time examinations in the school system. SBA was introduced in Sri Lanka because many objectives of the curriculum cannot be assessed through written tests or during a short period.

Other assessment modalities, which are the essence of SBA, are believed measures and skills that paper-and-pencil tests could not accurately assess. As such, through SBA, a teacher can assess a student several times, over a certain period, using different methods of assessment. In Sri Lanka, the SBA grade is awarded to a student for a given subject based on the average ratings of various assessment modalities.

Moreover, SBA was introduced in the school system to enhance the validity and reliability of assessments. The validity of any assessment can be assured with the use of multiple and various assessment tools that are identified to measure a targeted skill. Through SBA, the reliability of an assessment is enhanced by considering assessments of student performance over time. The introduction of SBA and providing comprehensive training to teachers on SBA has resulted in improving student engagement in the learning process because of the various innovative strategies introduced as SBA modalities such as group work, group project, and experimentations, among others. Also, while teachers in Sri Lanka are guided by SBA modalities, from the observations and interviews with them, SBA allowed more creativity in the teaching–learning process because assessment is integrated into the process and taken as a separate task as in paper-and-pencil assessment. Because of this, there was a move from the government to include SBA results in public examinations such as in the GCE (A/L) and GCE (O/L) levels, although its systematic integration is still being discussed.

It is envisaged that the implementation of SBA in the school system in Sri Lanka will support the initiatives to improve learning, teaching, and the evaluation regime in the classroom.

Under the present setup, the National Institute of Education (NIE) is mainly responsible for the implementation of the SBA scheme for grades 6–9, with assistance from the National Evaluation and Testing Service (NETS). On the other hand, the Department of Examinations, through NETS, is mainly responsible for implementation of SBA in GCE (O/L) and GCE (A/L) grades, with corresponding support from the NIE.

B. Modalities of School-Based Assessment and Continuous Assessment System

In Bangladesh, the SBA model evolved for use in secondary schools. It has three parts: (i) assessment of coursework, (ii) assessment of individual development, and (iii) assessment of students' progress in midyear and final examinations. The coursework

consists of class tests (or quizzes), classwork, practical work, homework, assignments, oral presentations, and group work. These are evaluated as follows: coursework would merit 30 marks, and 70 marks are earmarked for final examinations given by the teacher at the end of school year. Although teachers are trained and provided a guidebook for moderating, SBA moderation in Bangladesh still needs further improvement. A study conducted in 2012 on the SBA system revealed that head teachers and education officers from *upazilas* still lack the capability to supervise and monitor the implementation of SBA, much less implement a systematic moderation system (National Curriculum and Textbook Board 2012).

In Nepal, the SBA modalities are aligned with liberal promotion up to grade 3, which include portfolios. The individual student portfolios, as part of CAS or SBA, are used to evaluate and determine whether students have met the learning standards for that grade level. Since student portfolios need to be updated periodically, the feedback provided by teachers would allow students to meet the standards toward the end of the school year. However, for grades 4 and 5, SBA or CAS includes written and annual examination. Under SBA, students are required to pass the written examination for grade promotion. In other grades, formative assessments are used during the educational activities to improve student learning, but it is the year-end test that decides a student's promotion to the next grade. For CAS, the NCF suggested assessment tools such as classwork, project work, community and group work, unit tests, achievement tests, observation, and formative and innovative work such as projects. These SBA and CAS modalities are used to assess the expected learning outcomes, behavioral change, attitude, competency, skills, and application of feedback for teaching and learning activities.

In Sri Lanka, students at the primary level are continuously assessed by their own teachers, using an appropriate combination of both informal methods (e.g., observations, oral questioning, and listening to students), as well as formal methods (e.g., written tests). Informal methods are used more often than formal methods. Through this process, students' learning process is enhanced as teachers' teaching practices are adjusted to meet the diverse students' level of achievement and learning. This is because SBA provides more immediate feedback to both students and teachers compared with the formal summative assessment that only comes toward the end of the instructional period or school year. SBA modalities in Sri Lanka are used throughout the school year, and teachers use specific modality according to the learning tasks and achievement targets. In many cases, teachers use more than one SBA modality to ensure that learning goals are met and skills targeted are developed accordingly.

C. Evaluation and Moderation System

The evaluation of SBA is basically done by the teachers, although in some limited instances, such as in Sri Lanka, evaluation is done collegially, wherein two or more teachers collaborate in scoring and evaluation of SBA papers and projects. The reliability and validity of marks given to SBA is done through the process of moderation.

Moderation is a set of processes and procedures implemented by examination agencies and/or boards, mainly to establish comparability and consistency of SBA marks or grades

across all schools for each subject assessed internally. Moderation is done to ensure the quality of SBA or CAS as well as the credibility, validity, and public acceptance of SBA certificates.

In Nepal, the CDC developed the *SBA Support Manual* in 2006 and the *SBA Support Booklet* in 2009. However, they contain no clear process of evaluation and moderation. These two documents lack the guidelines on how to diagnose learning needs and make the required instructional plan. Hence, the CAS or SBA moderation process is also lacking in Nepal.

Sri Lanka, on the other hand, indicated the existence of several methods for SBA grade moderation that includes group moderation, moderation by inspection, statistical moderation, and multitechnique moderation. These moderation procedures are described more comprehensively in Appendix 3.

The modalities used in SBA and CAS are not limited to the traditional paper-and-pencil assessment. While modalities of SBA are diverse and more defined, the systematic evaluation and moderation remain the greatest challenge of SBA. This led to the issues related to the validity and reliability of SBA scores and, hence, the difficulty of having the SBA scores integrated into the public examination results and, national assessment results.

D. Integration of Results into the Public Examinations and National Assessment System

Among all the countries reviewed, Sri Lanka has the most advanced level of SBA integration. At present, SBA grades are reported separately from the GCE (O/L) and GCE (A/L) examination results, and not integrated into the overall final grade, which is perceived to have further adversely affected the already poor examination results. Hence, in the MOE of Sri Lanka, the Education Sector Development Program Framework has proposed that information from public examinations and SBA be combined to provide a better picture of students' learning outcomes to provide a better monitoring process. However, prior to more widespread integration of SBA with other performance, it was proposed under Education Sector Development Program (ESDP) - Sri Lanka that the NCF will be reviewed and to determine an appropriate National Student Assessment Policy Framework to ensure that the curriculum and assessment are aligned. Consequently, better student performance monitoring will be introduced.

SBA in Bangladesh is generally meant to be an assessment within the class that runs throughout the year, including daily, weekly, fortnightly, and monthly examinations. While the idea is commonly acceptable, the integration of these assessment results into the national assessment system and into the public examinations remains a big challenge. The perception of SBA marks being very subjective and lacking fairness is prevalent among all stakeholders, including students. Although there is an attempt to have a certain amount of marks (usually 25%) of the first- and second-term exams added to the third-term (i.e., annual) exam score to determine the final grades or marks for selecting students eligible for promotion to the next higher grade, there is no system yet to integrate class test results into the national assessment and public examinations.

In Nepal, SBA is integrated, to some extent, into the SLC exams. In the SLC and Higher Secondary Certificate (HSC) exams, practical marks are given by the subject teachers in the school for selected subjects. These marks are registered in the practical column in the student's mark sheet. In 2012, the CDC developed a report card format in which scores are reported on separate forms for periodic assessment and the CAS. Otherwise, SBA and terminal examinations at grades 5 and 8 are not integrated into the SLC or HSC exams, which are conducted simultaneously countrywide for the applicable grades.

In Sri Lanka, SBA grades awarded to students by their schools are included in the certificates, in a separate column, alongside the examination grade, from 2002 onward for the GCE (O/L) and from 2005 onward for the GCE (A/L). This initiative is further supported by the new ADB-funded Education Sector Development Program that specifically supports the integration of internal SBA into external examinations.

To ensure successful integration of SBA into the high-stakes public examinations, the schools must administer the assessments under strict directions and supervision regarding the process and content of these tasks. It is also strongly recommended that the conditions of implementation and its scoring process and procedures be closely monitored. Lastly, as described in Hill (2010), the moderation process to adjust SBA scores must be well defined before the scores are combined with the public examination scores.

E. Progress of School-Based Assessment Implementation

After 6 years of SBA implementation in Bangladesh, a survey study was carried out in 2012 by the Curriculum Development Unit of the National Curriculum and Textbook Board to evaluate the progress of SBA implementation. The study paints a dismal picture in secondary schools. It revealed that only 7% of the schools have been fully implementing the SBA system, 83% are implementing it partially, and 10% of the schools are not implementing SBA at all. The three major problems identified are teachers' heavy workload, large class sizes, and SBA results not being included in the results of public examinations. The major problems identified have given rise to the negative perception of SBA in Bangladesh.

Since its introduction, SBA in Nepal has not achieved any remarkable milestones. Apart from short-term teacher training on SBA and CAS in Nepal, periodic sharing, technical backstopping, and intraschool sharing are lacking. Teachers are still experiencing confusion, and moderation practice is still very much lacking.

In Sri Lanka, SBA is given more prominence through the ADB-funded Education Sector Development Program. The project categorically supports the systematic integration of SBA marks into the external examinations—the GCE (O/L) and GCE (A/L). As another move toward integrating examination results and the SBA grades, starting in 2007, all students who appeared for the GCE (A/L) written examinations in aesthetics subjects (music and dance) were required to appear for the practical tests conducted by the External Board of Examiners appointed by the commissioner general of examinations.

Previously, only those candidates who scored more than 35% in the written test were allowed to sit for the practical test.

Australia; Hong Kong, China; New Zealand; Singapore; and others have adopted SBA as a measure to reduce examination pressure and enhance the validity and relevance of public examinations. These economies regard SBA as an integral part of their teaching and learning process because it provides rich and immediate information about students' learning progress.

Box 4 summarizes the experiences of New Zealand in using SBA to improve the reliability and validity of public examinations, while Box 5 describes Singapore's experience of using SBA in improving teachers' assessment literacy through professional development. The case of Singapore not only illustrates the use of SBA to strengthen the validity of public examinations but also how it supports the teaching and learning process.

Box 4: Use of School-Based Assessment in Improving Reliability and Validity of Public Examinations in New Zealand

New Zealand has a long history of school-based assessment (SBA), particularly in upper secondary schools, and has also developed a wide range of teacher support materials and associated research studies. In the Curriculum Framework of New Zealand, the primary purpose of SBA is clearly defined: to improve student learning and the quality of learning programs. SBA was also implemented to provide feedback to parents and students, to award qualifications at the upper secondary school level, to monitor overall national educational standards, and to identify learning needs of students to effectively target resources.

From 2002 to 2004, the National Certificate of Educational Achievement (NCEA) replaced the previous secondary school qualification. The new NCEA is implemented as a standards-based or criterion-based system of assessment, which is now an integral part of the national curriculum and qualifications framework. The NCEA results are used to confer achievements of students for a number of credits according to the standards of the National Qualifications Framework.

Despite criticisms raised on NCEA, it has gained wide acceptance. The criticisms included issues related to consistency of results across years, the credibility of SBA, and the possible bias in external examination papers. However, in 2004, after issues raised on the intersubject and interyear disparities in the NCEA results were thoroughly discussed, a number of enhancements and research programs were introduced. For instance, the New Zealand Qualifications Authority now conducts quality assurance checks on a sample of assessment decisions of the SBA (referred as internal assessment) and if necessary, provides assistance to schools for improving their assessment practice.

The role of the the New Zealand Qualifications Authority in the SBA process in New Zealand has become more prominent. The authority provides school reports to principals on how effectively assessment is managed in each subject area in their schools.

As a result, the 2007 version of the New Zealand curriculum emphasized the use of assessment for improving learning and teaching. The documents describe what constitutes good assessment practice that is valid and fair.

Source: E. S. Ho. 2013. Student Learning Assessment. *Asia-Pacific Education System Review Series.* No. 5. Bangkok: UNESCO.

Box 5: School-Based Assessment in Singapore: Improving Teachers' Assessment Literacy through Professional Development

School-based assessment (SBA) in Singapore is an official policy of assessment for learning and encourages teachers to explore different forms of SBA. The use of SBA is not geared toward strengthening the validity of public examinations but toward supporting improvement in teaching and learning.

Singapore administers high-stakes public examinations that create pressure on teachers to "teach to the test," making them preoccupied with preparing their students for these public examinations. This pressure to teach to the test has resulted in classroom assessment tasks and assignments that are not highly intellectually or cognitively demanding. SBA tasks did not require students to demonstrate a deep understanding of the subject matter, nor application of advanced concepts and skills, neither making connections to the real world.

To respond to the negative issues of public examinations and SBA, Singapore introduced innovations such as "Thinking Schools, Learning Nations" and "Teach Less, Learn More." Through these initiatives, a series of curriculum and assessment innovations were also developed, including interdisciplinary project work, strategies for active and interdependent learning, and science practical assessment. The Centre for Research in Pedagogy and Practice also conducted several intervention studies to examine teachers' classroom practices. One of them explored up to what extent and how particular forms of assessment, such as authentic assessment, affected student learning and performance.

The results show that, after the series of interventions and innovations in assessment, teachers' capacities improved, and they were also able to make better use of the program input in designing high-quality school assessment tasks, and in using reliable and valid scoring rubrics for assessing student work.

Source: E. S. Ho. 2013. Student Learning Assessment. *Asia-Pacific Education System Review Series.* No. 5. Bangkok: UNESCO.

The experiences of New Zealand and Singapore clearly show that SBA is useful in improving the education system. However, it is also evident that there is a need to evaluate SBA as an assessment system. Hence, Bangladesh, Nepal, and Sri Lanka should also consider this in the implementation process of their SBA and/or CAS programs, as part of their assessment process.

Primarily, just like New Zealand and Singapore, the three countries must ensure that SBA is made prominent in their curriculum and education policies. The countries should be cognizant that restructuring all assessment, including introduction of SBA and integrating it into the public examinations, would minimize any possible negative impact on the overall assessment system.

CHAPTER 4: CLASSROOM ASSESSMENT PRACTICES OF TEACHERS: IMPLICATIONS ON TEACHER TRAINING

This study undertook surveys on classroom assessment in Bangladesh, Nepal, and Sri Lanka, with assessment established as "the process of gathering information about a student's abilities and using such information to make decisions about the student and future instruction." The survey was conducted among 450 teachers in Bangladesh, 359 in Nepal, and 451 in Sri Lanka.

Classroom assessment plays a very important role and function in the teaching and learning process. It provides teachers with evidence that is helpful in making decisions about student progress. The data and evidence gained from the classroom assessment allow teachers to have an understanding of the performance of their students and align instruction with the students' learning process. Classroom assessment is highlighted in this chapter as an integral part of the teaching and learning process. The practices of teachers in classroom assessment vary from simple to complex, and yet the goal of classroom assessment must be clear and precise because these would also define the approaches and methods used in assessing students at the classroom level (Gonzales and Callueng 2014).

"Classroom assessment practices" refers to an array of tasks or activities accomplished by the teacher that include developing paper-and-pencil tests and performance measures, scoring and marking, assigning grades, interpreting standardized test scores, communicating test results, and using assessment in decision making (Gonzales and Fuggan 2012). Classroom assessment practices also include the activities that teachers perform in relation to conducting classroom assessment—from test planning, to reporting, to using test results.

The study finds and implies that teachers must be made aware that, to be effective, they must present a lesson with the goal of helping students understand. Teachers must also underscore that fact that learning will only occur when assessment is integrated into the teaching–learning process.

Therefore, the surveys in the three countries intended to

(i) find out teachers' assessment preferences, practices, and use of assessment tools;
(ii) identify the level of questions that teachers prefer using in their assessment;
(iii) determine the needs of teachers in assessment; and
(iv) establish correlates of teachers' assessment practices.

To conduct this survey, the Classroom Assessment Practices Survey Questionnaire (CAPSQ), a questionnaire developed by Gonzales and Callueng (2014), was utilized in which teachers' perceptual responses were registered on a five-point scale. The CAPSQ was translated from

English into Bangla for Bangladesh, Nepali for Nepal, and Tamil and Sinhala for Sri Lanka. A forward–backward translation was done to ensure the validity, reliability, and quality of the translation. A copy of the questionnaire in English is included in Appendix 4.

The CAPSQ was administered to 450 teachers in Bangladesh, 359 teachers in Nepal, and 451 in Sri Lanka, for a total of 1,260 teachers from primary to secondary levels. The surveys were administered from January to June 2013.

A. Classroom Assessment Preferences

Teachers' classroom preferences were gathered through the CAPSQ to determine prevailing preferences and practices. The CAPSQ measures four classroom preferences: assessment *as* learning, assessment *of* learning, assessment to inform, and assessment *for* learning. Table 4 shows the mean score and standard deviations of all respondents from the three countries.

Table 4: Means and Standard Deviations of Classroom Preferences of Teachers

Classroom Assessment Preferences	Bangladesh		Nepal		Sri Lanka	
	Mean	SD	Mean	SD	Mean	SD
Assessment *as* learning	3.86	0.62	3.03	0.73	3.90	0.71
Assessment *of* learning	**4.09**	0.66	**3.96**	0.64	**4.13**	0.71
Assessment *to* inform	3.40	0.71	3.12	0.69	3.40	0.70
Assessment *for* learning	**4.01**	0.67	**3.56**	0.59	**4.09**	0.88

SD = standard deviation.

Source: Classroom Assessment Practices Survey Questionnaire (CAPSQ) 2013 conducted by the authors.

The survey results from the three countries, as presented in Table 4, show that the teachers' most preferred classroom assessment is assessment *of* learning, and the least preferred is assessment *to* inform. This implies that the teachers in these countries prefer to determine the status of student achievement against learning outcomes and, in some cases, how their achievement compares with that of their peers (Earl and Katz 2006). The teachers' focus is still on summative assessment as they aim to improve instructional programs based on how students have learned, as reflected by the results of various assessment measures given at the end of the instructional program. Hence, this factor describes practices that are associated with summative assessment (Glickman, Gordon, and Ross-Gordon 2009). Teachers conduct summative assessment to make final decisions about the achievement of students at the end of the lesson or subject (Stiggins et al. 2004).

The second assessment preference is assessment *for* learning. This implies that teachers from these three countries conduct assessment to determine the progress in learning by administering short paper-and-pencil tests and other SBA modalities to measure and evaluate learning during instruction. Assessment *for* learning, as often referred to as formative assessment, requires teachers to use learning tests, practice tests, quizzes,

unit tests, and SBA modalities. These assessment regimes are used by teachers to cover some predetermined segment of instruction that focuses on a limited sample of learning outcomes. While this preference may have been influenced by the SBA and CAS implementation process, it requires systematic planning so that teachers can maximize the use of assessment data to determine the level of knowledge and understanding of students, and being able to apply these knowledge and skills in tasks that require the ability to undertake higher and more complicated learning targets. Similar to the SBA and CAS goals, assessment *for* learning allows teachers to assist students in identifying their strengths and weaknesses, and subsequently guide them to their learning during instructional program. Consequently, teachers who prefer and engage in this assessment type would help students learn to determine their learning problems, identify remedial strategies, and make suggestions to improve their learning as well as teaching process.

Assessment *to* inform and assessment *of* learning are closely related. They both intend to provide information useful to parents, which is the performance of their children in school. In these countries, teachers reported that they use assessment to give final marks, rank students, and provide a more precise representation of student achievement in class.

The least preferred classroom assessment practice is assessment *to* inform. This reflects teachers' reluctance to maximize the important role of assessment in communication of student achievements. Communicating clearly the results of assessment would allow various stakeholders to make more responsive and solidly anchored data-based decision making. Teachers must use the assessment results to inform various stakeholders such as parents, other teachers, school administrators, and even future employees.

Noting this result and the importance of sharing results with various stakeholders imply that this is an area wherein innovative strategies would be designed to ensure that teachers use assessment data to inform the design of the curriculum; development and implementation of assessment regimes at various grade levels; and largely for policy decisions related to continuous or liberal promotion system, granting scholarships to students, and evaluating the internal efficiency of the school system.

B. Classroom Assessment Practices and Tools

Each country has its preferred classroom assessment practice and tools (Table 5). In Bangladesh, teachers reported a preference for paper-and-pencil tests using various types of items such as multiple-choice, true or false (right or wrong), matching items, short and long constructed items, and essay. The teachers also use class presentations and other forms of assessment at the classroom level. Obviously, Bangladesh still places much emphasis on paper-and-pencil tests. This may be taken as an offshoot of the present national and public assessment systems that are purely paper-and-pencil tests. Performance and product assessment are not seemingly practiced much, which confirms the high dependence on written summative assessments. Moreover, the results also show that while teachers were trained to implement SBA that involved modalities other than paper-and-pencil assessments, these have not been translated into actual practice at the school level. Hence, these results imply opportunities to train teachers on innovative assessment strategies.

Table 5: Means and Standard Deviations of Classroom Practices and Tools

Classroom Assessment Tools	Bangladesh		Nepal		Sri Lanka	
	Mean	SD	Mean	SD	Mean	SD
Multiple choice	**4.02**	0.93	3.15	1.10	3.40	1.01
True or false; right or wrong	**3.72**	1.07	3.51	1.02	3.30	1.11
Matching items	**3.73**	1.07	3.44	1.06	3.37	1.07
Short, constructed response	**3.89**	1.07	**3.69**	0.89	3.52	1.06
Essay	**3.87**	0.93	3.16	1.02	3.33	1.11
Performance assessment	3.57	0.91	3.09	1.15	3.55	1.02
Portfolio assessment	2.87	0.96	2.15	1.08	3.42	1.03
Graded oral exams	3.09	1.12	2.96	1.15	3.09	1.18
Term papers or projects	3.07	1.10	**3.59**	1.11	**3.78**	1.02
Class presentations	**4.03**	0.99	2.41	1.17	3.61	0.96
Assignments	3.41	1.07	**3.60**	1.14	**3.78**	0.92
Other forms of assessment	**4.31**	0.85	**4.39**	0.84	**3.95**	0.87

SD = standard deviation.

Source: Classroom Assessment Practices Survey Questionnaire (CAPSQ) 2013 conducted by the authors.

In Nepal, the teachers reported using various forms of assessment, including term papers, projects, assignments, and homework. The teachers most often use short, constructed response type of items when giving written examinations. The other forms of assessment reported in the survey include those that are used by the teachers in CAS, which could imply that the introduction and implementation of CAS may influence the practices and tools that teachers use in their assessment regimes. Surprisingly, the CAS in Nepal, which emphasizes student portfolio, was noted here as the least practiced assessment tool. Further inquiry on this result revealed that teachers perceived portfolio as an instructional tool more than an assessment tool. This signifies the teachers' need to undergo training on assessment literary and practices.

Similarly, teachers in Sri Lanka disclosed that they use various forms of assessment at the classroom level as part of SBA. Term papers and assignments, as well as projects, are the most preferred tools of assessment. In the questionnaire, these two assessment tools were also revealed as the most used and practiced assessment in SBA. Hence, it can be inferred that assessment practices and tools used by teachers in student assessment may have been influenced by SBA.

The glaring dependence on paper-and-pencil assessment tools denotes that the teachers have a strong need to be trained in more innovative assessment practices. It may also mean that at the teacher training institutions, only the traditional assessment approaches are taught, although the use of other forms of assessment is evident in all countries. These results are relevant in both preservice and in-service training programs as they would tackle

assessment topics congruent to the needs of the teachers, rather than understanding concepts and theories mostly covered in introductory preservice assessment courses. It should be noted that, as Zhang and Burry-Stock (2003) opined, the literacy and knowledge in assessment and testing have significant impact on teachers' assessment practices and skills.

C. Levels of Questioning

The results presented in Table 6 show similar trends. Obviously, the teachers in the three countries are only measuring or assessing lower-order thinking skills as reflected in their level of questioning, i.e., assessing only knowledge and understanding skills. These denote that the assessment tools that the teachers provide can only measure and assess students' ability to recall or remember what is taught in class. This implies that the teachers only asked questions about facts, which encourages rote memorization and not the ability to analyze or apply the information learned in class. This result implies much room for teacher training, particularly in relation to developing students' skills for the 21st century to become more critical thinkers.

Table 6: Means and Standard Deviations of Level of Questioning

Levels of Questioning	Bangladesh		Nepal		Sri Lanka	
	Mean	SD	Mean	SD	Mean	SD
Remembering	**3.79**	0.69	**4.05**	0.66	**4.28**	0.83
Understanding	**3.38**	0.84	**3.61**	0.84	**4.03**	0.88
Applying	3.30	0.82	3.02	0.84	3.95	0.88
Analyzing	3.21	0.88	2.84	0.83	3.81	0.85
Evaluating	2.99	0.94	2.60	0.86	3.78	0.90
Creating	3.13	0.99	2.18	0.96	3.78	0.91

SD = standard deviation.

Source: Classroom Assessment Practices Survey Questionnaire (CAPSQ) 2013 conducted by the authors.

The level of questioning is important in any assessment process. It reflects the cognitive level and skill that any assessor would like to determine in relation to the curriculum intent and instructional objectives or goals.

Despite the attempt to examine the ability of students to explain ideas and concepts, the teachers do not ask questions or require tasks wherein students can use the information or concepts learned in class in a new way or in a new situation. The teachers also do not require their students to analyze situations (analysis) and to justify a stand or decision (evaluating).

D. Professional Capacity-Building Needs of Teachers on Assessment

The last item in the survey relates to the professional needs of teachers toward assessment and examinations. In general, the results show that, in all three countries, the teachers have strong professional development needs not only in the assessment per se but also in topics and skills related to assessment, such as writing learning outcomes and linking them with the assessment process.

The results clearly imply that each country has specific professional needs for assessment (Table 7). However, all three South Asian countries reviewed have one common interest: to have professional development related to administering tests and examinations; scoring and marking tests and other assessment tools; and reporting assessment results to students, parents, and various stakeholders. It is evident that teachers need capacity building on administration and management of assessment at the classroom level, and basic assessment literacy, from writing learning outcomes to reporting the results gathered from assessment data.

Table 7: Means and Standard Deviations of Professional Needs of Teachers on Assessment

Areas of Professional Capacity-Building Needs	Bangladesh		Nepal		Sri Lanka	
	Mean	SD	Mean	SD	Mean	SD
Writing learning outcomes	**4.24**	0.92	**4.35**	1.01	**3.92**	1.15
Constructing objective tests	**4.20**	0.83	**3.95**	1.12	3.67	1.01
Defining tasks for performance	**3.97**	0.82	**3.96**	1.01	3.77	1.08
Choosing the most appropriate item type for the test	**4.23**	0.88	**4.21**	0.95	**3.85**	1.07
Asking essay questions	**3.73**	0.98	3.72	1.11	3.55	1.18
Preparing observation checklists	**3.65**	0.97	3.92	1.07	3.70	1.08
Creating rubrics	3.20	0.87	**4.08**	0.98	3.69	1.11
Developing assessment plans	**3.73**	0.94	**4.20**	0.92	3.92	1.01
Linking learning outcomes with assessment process	**3.89**	0.87	**4.19**	0.89	3.87	1.05
Administering tests and exams	**4.22**	0.80	**4.24**	1.03	**4.14**	1.02
Scoring and marking tests and other assessment tools	**4.15**	0.86	**4.21**	0.88	**4.00**	1.05
Reporting assessment results	**3.98**	0.93	**4.19**	0.96	**4.01**	1.02

SD = standard deviation.

Source: Classroom Assessment Practices Survey Questionnaire (CAPSQ) 2013 conducted by the authors.

Another shared interest of teachers toward professional development on assessment is writing learning outcomes or competencies and choosing appropriate test items or tasks to assess the identified or defined learning outcomes for their classes. This result implies that teachers want to establish the link between learning outcomes and assessment, or ensuring that assessment is aligned with the curriculum. Suggestions to improve assessment are provided in Box 6.

E. Synthesis

The survey attempted to investigate the classroom assessment preferences and practices of primary and secondary teachers of Bangladesh, Nepal, and Sri Lanka using a survey tool called Classroom Assessment Practices Survey Questionnaire (CAPSQ) to identify the implications and impact of teachers' assessment preferences and practices on teacher training.

Box 6: Suggestions to Improve Classroom Assessment

The following are suggestions designed to improve classroom assessment procedures:

1. Assessment should be an integral and frequent aspect of teaching, and should feature tasks that focus on meaningful aspects of learning.
2. Teachers should set reasonable but attainable expectations for all students.
3. The focus should be diagnostic and formative aspects of assessment, rather than normative aspects such as the ranking of students based on results.
4. Teachers should require tasks that require students to exercise higher-order thinking skills (not just recall) and inferential and deductive reasoning.
5. Students' understanding of the general principles of curriculum domain should be assessed, as should their ability to use appropriate methods and strategies in problem solving.
6. Clear and prompt feedback should be provided to students.
7. The manner in which students approach and analyze problems, rather than just the product of their work, should be assessed.
8. Assessment should encourage students to reflect on their own learning.
9. Tasks should require students to explore the issues raised, not merely to repeat information.
10. The results of assessments, where appropriate, should be communicated to parents and other interested parties (for example, other teachers).
11. The use of criterion-referenced assessments can enrich classroom assessment practice. Periodic administration (every few weeks) of such assessments can provide information on what students have learned, help identify situations in which there is a need for further teaching, and help identify students in need of additional help.

Source: Adapted from T. Kellaghan and V. Greaney. 2004. *Assessing Student Learning in Africa*. Washington, DC: The World Bank. p. 49.

The study suggests that the results would be useful in both preservice and in-service capacity-building initiatives, particularly in introducing new, innovative approaches in classroom assessment. Although the data are self-reported, it is not easy to assume high scores would imply better assessment practices and preferences as well as professional needs. Hence, the data gathered in this survey of selected teachers from the three countries were useful to unearth the present status and conditions.

The results of the survey have shown the teachers' preference for assessment *of* learning, which implies that teachers are very much inclined toward using summative assessment rather than formative assessment. The result might have been heavily influenced by the current assessment practices in the countries, where summative assessments are predominant—that is, public examinations are considered high-stakes tests, and even if SBA or CAS systems are implemented, teachers are still inclined toward using summative assessment, or assessment *of* learning.

The findings have revealed a number of implications for classroom practice and professional development and teacher training. First, while it is not imperative to have a balance of assessment of learning (summative) and assessment for learning (formative), the role of each assessment must be well understood by the teachers to guide their decisions in using appropriate assessment tools. Teachers are encouraged to attend more professional development programs on classroom assessment that are specifically designed to handle diverse students' needs as well as large class sizes among the three countries. Hence, the results have suggested that there is a need to revisit the present preservice and in-service training programs, which would allow teachers to be provided with a larger reservoir of assessment tools and techniques given the need to give more assessment activities and use more evaluation tools to ensure objectivity in determining students' performance. In relation to this, the training programs designed for teachers in the preservice programs must also include knowledge, concepts, and approaches in implementing SBA and/or CAS. In this way, the need for in-service programs for SBA and CAS would be lessened, and the focus would be on innovative assessment.

Second, the results have also shown that, at present, teachers in Bangladesh, Nepal, and Sri Lanka prefer to assess lower-order thinking skills (recall and remembering), indicating that process and product assessment are not practiced. Assessing students at these cognitive levels indicates that development of higher cognitive skills is not given emphasis, particularly if assessment is used to grade and promote students. It should be noted that assessment is associated with the end product of the learning process, and if assessment is focused only on lower cognitive skills, development of more crucial skills may not take place. Again, these results impact not only the training of teachers, but also the design of the curriculum and formulation of assessment policies.

Lastly, the survey has some implications not only for further research but more so for policy development. The generalizability of specific results of this study may be limited but the scope of themes included in the survey and participating respondents are broader. However, the information provided on the preferences and practices suggest that policy related to the scope and contents of preservice and in-service teacher training must be developed. The policy must respond to the strong established relationship between the

assessment preferences of teachers and their assessment skills. The emphasis should be on how assessment skills are maximized to improve the assessment practices of teachers.

This chapter reports the classroom assessment practices and tools used. The survey results have shown that the objective type of tests (i.e., paper-and-pencil) still prevails among the teachers. The levels of questioning were still basically focused on lower-order thinking skills (i.e., focused on remembering and understanding), implying that teachers are not adept at asking students to perform tasks requiring application, analysis, evaluation, and creativity, even if SBA requires them to assess such cognitive skills.

CHAPTER 5: IMPROVEMENT STRATEGIES, INNOVATIVE SOLUTIONS, FUTURE CHALLENGES, AND FUNDING SUPPORT IN ASSESSMENT OF LEARNING OUTCOMES IN THE REGION

This chapter attempts to introduce student assessment as one of the flagships of many educational improvement efforts. Policy makers expect that any changes made in the assessment process will result in a better teaching and effective learning process. Darling-Hammond and Wise (1985) view assessment reforms as initiatives to set more appropriate targets for students, focus staff development efforts, enhance curriculum, design more appropriate instruction, and develop useful instructional materials.

Some improvement strategies, innovative solutions, future challenges, and funding support in assessment of learning outcomes in the region are explored. This chapter also discusses how such issues and challenges would inform and support the improvement of teacher training, information and communication technology (ICT), and policy development in the region. Lastly, the chapter ends with recommendations toward innovations and reforms in assessment of student learning outcomes (ASLO) and development of policies and funding requirements.

A. The Assessment System in the Region

In Bangladesh, Nepal, and Sri Lanka, ASLO is complex, multilayered, and substantially similar, and so are the challenges they face. All the countries' assessment systems include public examination, national assessment, and school-based assessment (SBA) regimes that are implemented with varying degrees of effectiveness and efficiency. Except for SBA, both public and national examinations are administered through paper-and-pencil tests.

Public examinations in all the countries are given at the end of particular education levels—usually grade 5 for primary, grade 8 or 10 for lower secondary, and grade 11 or 12 for upper secondary school. While the names given to the public examinations vary from country to country, all these assessments are considered high-stakes assessment, because results determine their chances for scholarships, as in the case of Sri Lanka for grade 5, and their future careers, such as proceeding to upper secondary education and to higher education or university. These public examinations are also administered to indirectly assess the school effectiveness and determine the quality of education. Hence, the results of public examinations in these countries are only used for selection and certification purposes.

Among the countries reviewed, national assessment is introduced as a way to determine system-level achievement of the whole education system. Although national assessments are administered to a defined sample of students, they are not used to determine performance of individual students. Among the countries reviewed, only Bangladesh and

Nepal have introduced national assessment systems with the goal of determining the level of student achievement against the new curriculum in primary education. Sri Lanka has also institutionalized a national assessment system that will be defined further in the national student assessment policy framework that is being drafted under the Secondary Education Development Program. It is envisioned that the national assessments being introduced in Bangladesh and Nepal would provide added value to the public examination results; provide better feedback into the entire education system; and inform policy makers in improving teaching and learning, as well as providing capacity development for teachers.

Like in many countries, SBA has been introduced and implemented in Bangladesh, Nepal, and Sri Lanka. However, much remains to be done in the implementation processes to make the assessments effective in these countries. All three countries have maintained that SBA has always been an essential component in the teaching and learning process and has been used as a strategic tool to gather data to inform instructional methodologies, thereby functioning as a formative assessment. However, it evident that all three countries have a strong need to improve SBA methodology, standardization and moderation processes, reporting systems, and other operational rigors of SBA. While SBA is widely used, its acceptance is low among major stakeholders, especially among parents, making it challenging to integrate the results of SBA into the more established public examination system. Evidence of the validity and reliability of SBA or continuous assessment system (CAS) marks is still to be established; this would require further technical support and even funding assistance.

Although there is a growing clamor for participation in international assessment studies, such as the Programme for International Student Assessment (PISA), Trends in International Mathematics and Science Study (TIMSS), or the Progress in International Reading Literacy Study, none of the countries have done so. Recognizing the benefits of participating in international assessment, these countries have attempted to integrate some of the processes and procedures of international assessments into their national assessment systems. However, these countries are challenged in terms of their capacity to undertake international assessment and their ability to fund this endeavor.

In sum, the countries have been implementing assessment of learning outcomes in different forms and at different levels of the education system. Their assessment systems are aimed toward providing information to improve student achievement at an individual level, to improve teaching and learning at the school and system levels, and to inform policy makers to improve the entire education system.

B. Innovative Assessment Solutions

According to Harris and Bell (1990), innovative assessment solutions are not concrete approaches or tools, but they refer to an overarching philosophy of optimizing resources and applying them strategically to make policy decisions related to student learning process.

In this report, we discuss innovative assessment in terms of its characteristics and its mission. As Mowl (n.d.) puts it, innovative assessment is not just a case of adopting one of the many recognized innovator's tools of the trade, but it is more on committing to

the goals or philosophy of innovative assessment. He further argues that, innovative assessment is literally defined as any form of assessment that involves the application of a new assessment that encompasses a whole range of different assessment techniques and methods. Regardless of what new assessment techniques are introduced, the goal of any innovative assessment is to improve the quality of student learning.

Innovative assessment solutions are also what Heron (1981) called *"the redistribution of educational power"* when any assessment becomes not just something that teachers "*do to* their students," but also what teachers "*do with the students*" and "*done by"* the students. Hence, innovative assessment solutions are regimes that are designed and provided to students as the learner and for them to be able to learn. It is about what students are getting to know and the quality of their learning. Hence, innovative assessments send a message to students, educators, and parents about the learning that is most valued in the system; and in many cases, innovative assessment has triggered changes in practice.

Innovative assessments, as referred to in this report, are carried out for three different groups of people: the learner, the teachers, and the outsiders or "stakeholders." Hence, assessment used in the schools must reflect the professional practice articulated in the curriculum framework to ensure that students will actually acquire what they are expected to learn; teachers provide instructional programs that equip students; and stakeholders use the results of the assessment process.

Assessment of skills—whether by standardized tests or classroom-based assessments—is the foundation of effective teaching and learning. Meeting the demands of skills for the 21st century in all schools requires a shift from largely determining discrete knowledge to measuring student's critical thinking ability; examine and analyze problems; gather information; and make reasonable and logical decisions while using technology. Hence, innovative assessment solutions should focus more on student's operational skills rather than on the ability to provide a correct response.

The current assessment landscape in the three countries is mainly characterized with assessments that measure simply lower-order thinking skills on the core content areas such as language arts, sciences, mathematics, and social studies. Noticeably, assessment and evaluation processes are not yet responsive to the demands of the 21st century skills.

Among the three countries,

(i) the current assessment systems are not developed to measure higher-order thinking skills—that is, students are not assessed on their ability to apply their knowledge and skills to new situations, and students are encouraged to integrate the use of technology in solving problems and communicating their ideas;
(ii) while schools and teachers are strongly encouraged to enhance their assessment practices by introducing SBA or CAS, the assessment approaches are designed and implemented to support teachers to make decisions toward more effective teaching and learning processes; and
(iii) existing assessment systems are hardly developed to measure and evaluate the contributions of a school or district in the overall performance and achievement of their students, including teachers' development.

Hence, innovation to assessment must meet the demands of the present complex global environment and technological development, and would require a paradigm shift. There are so many suggested innovative approaches to assessment that balance traditional assessment regimes. Assessment would be innovative if it

(i) encompasses prompts or tasks that are more multifaceted than is typical in a printed test, such as hands-on materials, video, or multiple types of materials;
(ii) proposes various response options such as written response, collection of materials (student portfolios and projects), or interaction with a computer or any digital technology, demanding therefore more sophisticated marking, scoring, and reporting procedures; or
(iii) is administered and managed in a state-of-the-art way, typically by computers, tablets, digital technologies, or even smartphones.

Among the suggested innovative assessment solutions that the three countries may adapt are the following:

(i) Performance assessment. Practical exams and essays are widely used in all assessments today, particularly in tests of writing, science literacy, and to complement the objective-type of assessment such as multiple choice, identification, and matching type.

In the United States, for example, students learning in colleges and universities are assessed using the Collegiate Learning Assessment, which is an assessment that is administered online. It uses both writing tasks and performance tasks to respond to a diverse set of tasks. On the other hand, in Queensland, Australia, the assessment system is developed for both diagnostic and evaluative function. It provides diagnostic information about individual students that is used to compare students' performance across states and territories. Both multiple choice items and performance tasks are included, but performance tasks are given at the direction of the educators and must be aligned with the curriculum.

(ii) Student portfolios. Portfolio-based assessment has been introduced in Nepal through the CAS, and likewise in Bangladesh and Sri Lanka, where they did not, however, gain prominence. The use of student portfolios is effective as it supplements other information collected through manual collection of documents, assignments, and products, among others. However, the more innovative use of portfolio is through the use of computer-based and other technology-based procedures.
(iii) Technology-support assessment. Although technology has been used widely in assessment in the past as in computer-assisted testing or computer-adaptive testing, innovations in the use of technology in assessment that have been recently introduced go beyond traditional test administration, scoring, and marking. The advent of technological developments fostered the feasibility as well as relevance of innovative applications which changed the landscape significantly. At the schools where computers, laptops, and tablets are now readily available, computerized adaptive testing could be administered easily. Technology used in assessment can include computer software packages, computer-

assisted learning, computer-based learning materials, networks, hypertext, and virtual reality, among others. Although the present practice of student assessment through technology does not include all these applications, the most popularly used is computer software from test development, item banking, test administration, marking, and reporting of results. Of course, another commonly used is online assessment or testing where students take tests or examinations remotely through the internet.

(iv) **Multi method assessment**. Using only one type of assessment (for instance, paper-and-pencil examination) does not provide greater picture of student learning outcomes. By incorporating a range of different methods of assessment regimes, a broader range of skills can be assessed, thereby being fairer and less discriminatory, and ensuring better validity and reality of assessment results. The use of multi method is a more reliable ASLO because it is not dependent on any single method of assessment.

C. Challenges in Improving Strategies and Innovative Assessment Solutions

Undoubtedly, the assessment systems that are already in place may be perceived as functionally relevant. However, there are still some challenges to ensuring more systematic implementation of any assessment regime and to getting the full benefit of the assessment. Some of the challenges in improving the strategies and initiating some innovation in the assessment practices are discussed below.

1. Ensuring Reliability of Assessment Tools and Maintaining Integrity of High-Stakes Assessments

One of the main challenges among the countries reviewed is the integrity in the assessment system. Public examinations or external assessments, particularly those that are used for certifications such as the Secondary School Certificate (SSC), School Leaving Certificate (SLC), and General Certificate of Education (GCE), are considered high-stakes assessments since the future of the students relies on the test results.

The governance and management of assessment systems among the countries are well defined. Although the structure and procedures are still far from international standards, there is an attempt to ensure integrity in the assessment process, from test development to reporting results to various stakeholders. Nepal's plan to consolidate testing and examination bodies to align with the integrated school structure is an example of an attempt to improve governance and management in assessment systems. Through improved governance, the validity of tools and integrity of assessment process is further ensured.

The phenomenon of cheating during assessments and examinations by students is a worldwide problem, and the countries under review are no exception. While it may not be significantly rampant in these three countries, it remains a serious threat to the validity and integrity of the entire assessment and examination system, particularly the high-stakes public and national examinations. Hence, it is necessary to install some measures to curb

such practice in the assessment process, especially because there is no clear and well-established assessment policy framework yet in place. It should be noted that each country has established units within its ministry or department of education to serve as regulatory and enforcement bodies to secure examination and assessment processes and prevent cases of suspected malpractice.

Also, each country has been updating its national education policy and national reform agenda to provide regulations and policy guidelines related to assessment. There are also some regulations in place or promulgated that provide for order and guidance on the proper execution of student assessment, from classroom, to district, to national levels. However, there are no well-articulated procedures in handling complaints and dealing with cases of malpractice in the assessment process.

It is therefore vital for the government of each country, through its ministry of education, to develop a **national assessment policy framework** aligned with the national education policy and the national curriculum policy framework. While there is an attempt to incorporate the assessment policy in other education documents, a clearer and well-articulated assessment policy with some regulatory functions is necessary. In Sri Lanka, through the ADB-funded Education Sector Development Program, this initiative is being implemented and it is hoped that other countries in the region will follow, either through foreign-funded projects or programs or through the government's own initiative.

It is also strongly recommended that the assessment policy clearly define the governance structure of the assessment system, including funding support for the identified units of the government that will administer and manage the assessment system. A sample assessment policy framework prepared for Samoa is presented in Box 7.

2. Establishing Quality in Assessment and Gaining Its Public Acceptability

Examinations, particularly terminal public examinations such as SLC, SSC, and GCE, are definitely high-stake. These exams either make or break a student. Hence, it is extremely important to assure the quality of the assessment system to gain public confidence and acceptance.

Major decisions are made from the exam results. More often than not, the score on a single exam is used to inform a life-altering decision, such as for scholarships, admission to higher education, and employment. However, there are still some instances where examination processes are questioned by the public and stakeholders because of errors and perceived malpractice.

It is imperative then for each government to strongly consider drafting a **national assessment policy framework** wherein safeguards toward quality and gaining public confidence are stressed.

Moreover, to ensure quality of the assessment system, it is necessary to conduct institutional functional analysis to determine whether good governance is in place and international good practices are observed. It is extremely important that assessment boards or examination units or agencies adopt internationally benchmarked practices in their

Box 7: The Samoa National School Assessment Policy Framework

The Samoa National School Assessment Policy Framework relates to learners, community members, schools, teachers, school management and governing bodies, government, and other related agencies. This framework provides the rationale, principles, values, and best practices that guide all assessment and evaluation, testing and measurement, and examinations in the formal preschool, primary, and secondary school system of Samoa.

Vision
A national assessment framework that is sound in its philosophical and ideological underpinnings and practical in implementation to enable all learners in Samoan schools to enhance their learning and capabilities to become fully participating members of Samoan society economically, socially, and culturally.

Mission
The Samoa National School Assessment Policy Framework is committed to the following:

(i) teaching and learning policies, assessment principles and practices, systems, and environments that enable all learners to realize their potential while at school, that encourage them to extend their learning beyond school, and provide pathways to achieve this;

(ii) the provision of reliable evaluative and diagnostic evidence that validates the success of education initiative at individual, system, national, and international levels; and

(iii) the use of reliable and consistent evidence for the purposes of certification and/or selection.

Source: Government of Samoa, Ministry of Education, Sports and Culture. 2010. *Samoa National School Assessment Policy Framework*. Apia.

system of good governance to assure quality, reduce risk, and minimize if not eliminate errors. Some of the suggested steps that can be considered for quality assurance of the assessment systems, as adopted from the United Nations Educational, Scientific and Cultural Organization (UNESCO) series on Assessment in Asia-Pacific, are as follows (Hill 2010):

(i) systematizing recruitment and training of examination personnel, adhering to international best practice;
(ii) creating a culture in which all stakeholders assume responsibility for improving quality;
(iii) establishing an effective system of internal control;
(iv) automating processes (use of ICT) to eliminate human error; and
(v) designing and implementing fair and transparent results and appeal processes.

3. Covering Wider Scope in Assessing Curriculum

The assessment and examination systems in Bangladesh, Nepal, and Sri Lanka are typically paper-and-pencil tests, with most items simply measuring remembering and understanding, and only sparingly for applying and analyzing. Although SBA and/or CAS are introduced to ensure that a wider range of curriculum objectives and learning outcomes are assessed in addition to the written examinations, the introduction of such an assessment system at the school level is still developing.

Relative to the introduction of SBA and/or CAS, issues of reliability, consistency, and uniformity of assessment remain as challenges in all the countries reviewed. As such, SBA moderation was introduced, but the state of moderation, even in the more advanced SBA of Sri Lanka, still leaves much room for improvement. This aspect of SBA is also strongly identified as a critical area for professional development of teachers and school heads.

SBA was introduced in Bangladesh, Nepal, and Sri Lanka to allow teachers to assess and measure a wider range of learning outcomes that are not readily and directly measured by paper-and-pencil tests and/or public written examinations. In Bangladesh, SBA was introduced and implemented with the support of external funding agencies such as ADB. However, since its initial implementation, challenges to the reliability and validity of SBA are still intractable. Teachers who initially implement SBA view the initiative as an additional task that would eat up some of their instructional time with the students. Another challenge of SBA is the difficulty of its integration into the external examinations. Although Sri Lanka has attempted to integrate SBA into the GCE exams, SBA marks are still not perceived as trustworthy; hence, SBA is not accepted favorably by the public and stakeholders.

Another issue confronting assessment in the three countries is the lack of a system to assess language ability. All countries are emphasizing communicative skills in both national and foreign languages, particularly English, but none respond to this need in its present assessment system, except for Sri Lanka, which recently came up with a policy on testing language skills, particularly speaking and listening. These countries should consider including the assessment of language skills beyond written tests or grammatical knowledge.

With the advent of technology, particularly ICT, measuring and assessing language skills, particularly listening and speaking, may be strongly considered part of the innovation in the assessment system in enhancing competitiveness and international benchmarking.

4. Lessening Assessment Anxieties and Other Psychological Barriers

In all three countries, examinations at the end of the primary, lower secondary, and upper secondary levels create academic pressure and impacting psychological mind-sets of the students since these are considered high-stakes tests. Being considered high-stakes, these tests generate negative “backlash” effects. Students as well as teachers, and even the entire school system, continuously pay attention to preparing for the examinations, thereby creating anxiety, examination-related stress, and academic pressure. Similarly, schools, particularly in the case of Bangladesh and Nepal, tend to focus their attention on preparing students, rather than on ensuring that curriculum content and standards are delivered appropriately. Cognitively, students are prepared but emotionally, they are not prepared; hence, psychological impact affects performance of students in the examinations.

While there is a policy of mass or liberal promotion in the case of Nepal, the pressure to go to higher education is common in all the three countries, particularly in Sri Lanka, where limited slots are available for students in government universities. Students are cognitively and emotionally pressured to secure a slot in the best higher educational institutions and training organizations. Hence, assessment is perceived by students and parents not only as a social barrier but also as a psychological impediment to greater access to upper secondary and higher education.

The countries reviewed also introduced SBA or CAS as one way to reduce pressures and anxieties created in taking public and external examinations. Through SBA, students are exposed to examination conditions that will prepare them for the public examinations. SBA is also considered an alternative assessment system to the traditional paper-and-pencil tests. SBA introduces several modalities that are not equally popular among various stakeholders, who perceive these modalities as either subjective or unsystematic. Despite the negative perception of SBA or CAS, the countries reviewed continue to implement them, to improve the assessment process by incorporating them into the results of public examinations. However, the process of incorporating SBA or CAS results into the examination process to contribute to a significant proportion of final assessment is not yet well established. Although Sri Lanka, again through ADB support, is undertaking an initiative for the integration of SBA into the GCE (O/L) and GCE (A/L), the other countries are yet to consider this system.

The absence of any alternative route and opportunities for students to gain entry to higher education is another source of pressure among students toward assessment. At present, except for the program to encourage students to pursue technical and vocational education and training (TVET), there are no second-chance opportunities for students to gain entry to higher education. Hence, in the case of Bangladesh and Sri Lanka, where entry to Dhaka University and Colombo University respectively, is very selective, students tend to gain access to higher education through private universities, where tuition fees are high and quality is not well established. It is therefore recommended that the government provide alternative routes to gain access to higher education without relying so much on public examinations. For instance, the Philippines used to have the National College Entrance Examination in the 1970s and 1980s, wherein those who did not pass were denied access to colleges and universities. There was doubt on the results of the examination as the best determinant of qualification to pursue higher education. Hence, in 1994, the Philippine government abolished it and left the admission decision to colleges and universities, including state or government universities.[13]

Lastly, because of the goal of achieving high marks in external and public examinations, the attention of students as well as schools is diverted to passing the examinations, rather than on developing the knowledge and skills or defined competencies and learning outcomes that are often not assessed directly by the examination systems.

5. Expanding and Responding to Diverse Needs of Students

The Millennium Development Goal of ensuring wider access to education entailed expanding and responding to the diverse needs of students. Likewise, the prevailing

[13] Most universities conduct their own entrance examinations.

strong support for disadvantaged and marginalized groups to pursue higher education has increased the diversity of students' needs and has many implications for assessment, not only in teaching but also in learning.

The countries reviewed offer a wide range of subjects for assessment, including applied and vocational subjects. Although the core subjects assessed are languages (English and local language), mathematics, and science, other subjects are also being assessed. For instance, in Sri Lanka, aside from the arts, science, and business streams in the GCE, the assessment stream has been expanded to include technology in response to the growing need for engineering and ICT in higher education.

Moreover, in all countries reviewed, qualifications frameworks for vocationally oriented subjects are also in place, although these are being implemented variably. The TVET sectors in these countries offer some pathways to work and further study. However, these are not yet linked systematically with the existing assessment systems.

Considering the diversity of students, the countries' standards are still biased toward students who are diligent in their studies and achieve a "passing grade," as most of the currently used assessment tools measure more of academic knowledge and rote memory, indicating that only lower-level thinking skills are being assessed. The current examination tools do not provide a high level of challenge to the most able students. Nevertheless, there are attempts to ensure that rigorous processes are in place for maintaining standards over time, but again to varying degrees.

It is also common in the countries reviewed that while they intend to use both norm-referenced and standards- or criterion-referenced approaches, they still greatly adhere to criterion-referenced testing in reporting examination results. Results are still reported in percentages, except in Sri Lanka, where reports are based on standardized scores. Hence, it is usual to see better-performing students obtaining passing scores based against criteria or standards, rather than being compared with other students. Bangladesh and Nepal are adhering to standardized testing, but not yet to standards-based testing, through which achievement of learning outcomes and student competencies are better measured, monitored, and assured.

It is therefore important for Bangladesh, Nepal, and Sri Lanka to come up with a clear policy on referencing, veering away from either norm or criterion referencing toward standards referencing. This is to ensure that the diversity of students is considered, and that all are given equal opportunity and access to higher education, which is currently limited because of the high-stakes examination system.

In norm referencing, examination results are reported with fixed percentages of students under each category, regardless of the level of performance they achieved against those standards. On the other hand, a standards-referenced approach reports examination results based on a defined standard of performance or level of competence. There are no fixed percentages, and students are not categorized. The advantage of a standards-referenced approach is that criteria or standards are constant and are transparent to all students and other stakeholders. The standards, however, must be well defined in the curriculum framework.

Hence, to live up to the expectations for skilled and competent human resources for the 21st century, it suggested that governments consider setting up an examination system where a standards-referenced approach is adopted. This approach would reflect a wider range of student abilities and allow the policy and decision makers and other stakeholders to make better evaluations and judgments. In some developed countries, such as Australia, there are written descriptors of what a typical student must achieve to get an award. Explicit standards are also helpful to higher education institutions and employers in making selection decisions.

The implication of this approach on assessment is that it would require test developers to provide questions that assess students' higher-order thinking skills such as application, analysis, and evaluation, as opposed to lower-order thinking skills such as rote memorization.

6. Providing Capacity Building and Institutionalizing Professional Development Programs

The present capacity of the assessment personnel and staff in the three countries varies from needing much training to being able to provide training. In general, personnel of assessment boards and examination units began as teachers or staff members and then rose through the ranks to become officers or managers. In some cases, like in Bangladesh, staff members of examination units and/or boards are continually supported to study abroad. After a few years of service, however, they transfer to another unit, leaving the unit again wanting trained and qualified personnel.

Managing and administering an assessment system is a huge task and requires technical specialization. Assessment is a professional field that also requires specialized training, from conceptualization of the examination materials to dissemination of results.

The survey revealed that the primary areas for capacity building among teachers in all three countries are still test administration, scoring and marking tests, and reporting assessment. This was supported by another finding that teachers often least practice "assessment to inform." The results also imply that capacity building and professional development for teachers should include the management and administration of the assessment system. Structurally, all examination systems in the three countries covered are administered and managed centrally, usually by central units of the ministry or department of education, except in Bangladesh, where an examination board has been created for each division. Hence, professional development in this area is much needed.

From the interview and technical consultation, it was found that assessment boards and staff need more technical professional development, particularly in developing tests, preparing tables of specifications, writing items, assembling tests, conducting item analysis and psychometrics, and preparing test reports.

Another area that needs to be supported is the capacity building of assessment boards and units to utilize exam results for policy development and decision making. Year in and year out, they gather large volumes of data, but these data are not used to inform policy and educational development programs. After results are disseminated to students, the data are very rarely used again.

While there is an attempt among all three countries to come up with annual national assessment reports, more sophisticated data analysis and data mining are still needed. Similar to the PISA and TIMSS, the current assessment personnel at the central level lack the skills to produce reports that can inform education reforms at various levels.

7. Using Information and Communication Technology in Assessment of Learning

One of the major recommendations given by UNESCO in installing quality assurance in any assessment system is to tap the robustness of ICT, wherein assessment processes can be automated to eliminate human error and achieve better efficiency.

The use of ICT varies in degree in the three countries, from simple data encoding to full automation of the assessment process. In all countries, there is no fully automated item-banking system where selection of items is done based on approved tables of specifications.

The present practice is to write items annually, i.e., every time tests and exams are administered, and item setters are contracted on a project basis. The assessment boards and units, such as the National Evaluation and Testing Service (NETS) in Sri Lanka, still rely heavily on external item writers, and the function of the examination board or agency is to manage contractual item writers, reviewers, and examiners. This process is seemingly not efficient and prone to leakage of items.

Hence, it is urgent for the governments of the three countries to consider improving the governance and management of the assessment system by installing information systems and the use of ICT.

8. Establishing Efficiency in Investment Programming and Budget Support

Over the years, the three countries included in this review have received grants and support from various international donor and funding agencies, such as ADB, Canadian International Development Agency, Danish International Development Agency (Danida), Japan International Cooperation Agency, Swedish International Development Cooperation Agency (Sida), the World Bank, and even the United Nations system. This support came in the form of direct grants, loans, or budget support to the government to improve the quality of education and institutionalize education policy reforms.

This review was focused on ASLO, describing the process of public examination or external assessment, national assessment or system assessment, and SBA, including CAS in the classroom. All of these assessment and examination activities are geared toward determining student achievement at both the individual and system levels.

From the previous support provided by donor and funding agencies, it is apparent that all types of examinations are supported in different ways and vary by country. Various projects have invested in improving Bangladesh's public examination system, which has resulted in the introduction of reform in public examination with the use of creative questions. Bangladesh was also supported in introducing national assessments of pupils in grades 3 and 5 through the Primary Education Development Program (PEDP) and PEDP II. Under the PEDP, the government was also supported in restructuring its assessment of implementation agencies at the primary level, where the National Assessment Cell has

been functioning under the Monitoring and Evaluation Division of the Ministry of Primary and Mass Education (MOPME) since 2006.

In Nepal, assessment of student performance and achievement was studied through support from PEDP and the Basic and Primary Education Program, funded by ADB and the World Bank. Under the ADB-funded Secondary Education Support Project, the assessment system was also supported by introducing student assessment units at the Office of Controller of Examinations and the Higher Secondary Education Board, including capacity-building programs for assessment and examination personnel of the Department of Examinations. Sri Lanka has been supported by various donors in terms of institutionalizing SBA in the school system. In addition, the Education Sector Development Program is developing its national student assessment policy framework.

Despite previous and ongoing support and investment toward improving the assessment system, the three countries must still consolidate their efforts in ensuring that funding support and investments are aligned with their education sector development frameworks to ensure that investments and funding support are channeled to the sector-wide approach, instead of being provided through a project approach. The sector-wide approach must be strongly considered to ensure that assessment systems are given equal priority in the planning process, and are appropriately, sufficiently, and efficiently funded for sustainability.

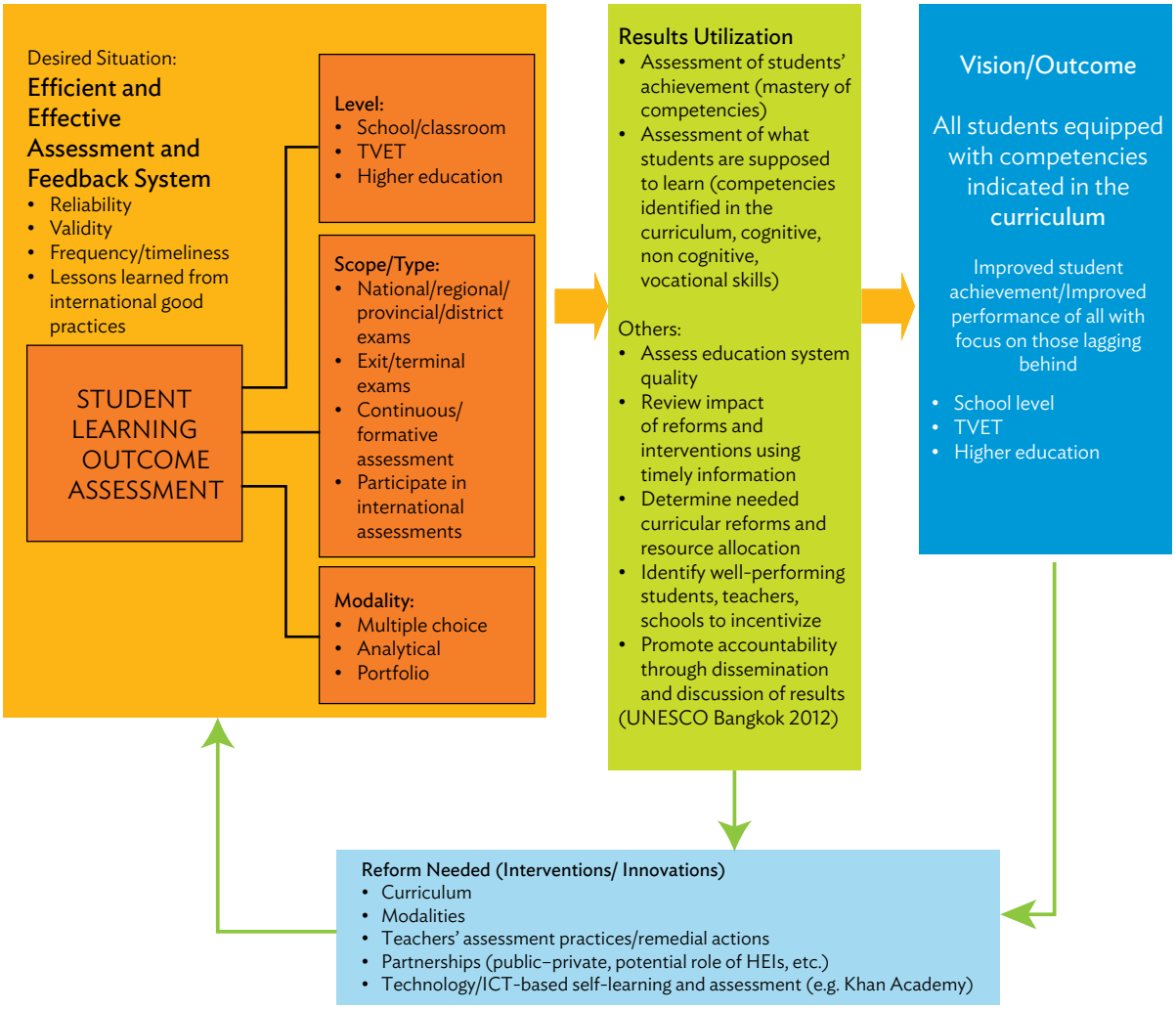
D. Conceptual Framework for Innovation in Assessment of Student Learning Outcomes

This section introduces ASLO as one of the flagships of many educational improvement efforts. Policy makers expect that changes in assessment will result in improvement in teaching and learning practices among teachers and in schools. Darling-Hammond and Wise (1985) view assessment reforms as initiatives to set more appropriate targets for students, focus staff development efforts, enhance curriculum, design more appropriate instruction, and develop useful instructional materials. Figure 2 provides a schematic presentation of the proposed conceptual framework for innovations in ASLO in South Asian countries, particularly the countries included in this study.

1. Assessment at All Levels

Assessing of student learning outcomes is conceptualized as one of the key features in the entire education system—from primary to higher education including TVET, from classroom to international benchmarking, and from paper-and-pencil tests to performance tasks. Each education level must have a policy with implementing guidelines incorporated in the country's national student assessment policy framework. Hence, it is imperative for each country to have such a policy framework to guide implementation and inform policy makers on how to improve, develop, and sustain ASLO to support quality learning and teaching. The main focus at all levels is to improve the quality of learning not only for learners or students, but also for teachers and other stakeholders.

Figure 2: Conceptual Framework for Innovation in Assessment of Student Learning Outcomes in South Asia



HEI = higher education institution, ICT = information and communication technology, TVET = technical and vocational education and training.

Source: Authors.

2. Types and Scope of Assessment

ASLO must include public examinations, well-defined SBA, and national sample-based assessment, including participation in regional and international assessments such as PISA and TIMSS. The use of multi method assessment system is a considerably innovative approach to the present assessment setup in the three countries where high-stakes tests are only given via paper-and-pencil assessments, which are normally summative in nature.

Public examinations, which are administered at the end of primary, lower secondary, and upper secondary schooling, are a centrally managed activity and must ensure that students are tested in line with well-defined educational learning outcomes or standards. The results of the public assessments should provide a systematic approach in certifying, granting scholarships, and admitting students to higher education. Furthermore, devolution of responsibilities is also proposed for administering public examinations to divisions, regions, provinces, and/or districts. However, these should be coordinated by the central national assessment council, which would serve as the clearinghouse and regulatory and oversight body to implement the national assessment policy framework of each country.

National assessments—which are sample based as opposed to public examinations that all students are required to take—should be administered with the intention to describe the level of achievement of the whole education cycle or a clearly defined part of the education cycle (e.g., grade 3, 5, 7, or 9), and not of individual students. The main purpose of the national assessment should be to collect data in schools, primarily from students in groups responding to assessment tools. This assessment must be able to answer the question "How well are students learning in the education system?" The results of national assessments should inform political leaders, government officials, policy makers, and the public of the need for more effective education and support policies related to curriculum development; development, promotion, and retention of students; professional development of teachers; public–private partnerships; and improving management efficiency in the system.

As part of CAS, SBA should also be an integral part of the assessment system. Periodic tests, such as quarterly, midyear, and year-end tests, must be systematically programmed into the assessment system to minimize issues such as academic fatigue and examination pressure.

Lastly, the assessment system must attempt to include participation in regional and international benchmarking of student performance, such as PISA, TIMSS, the Progress in International Reading Literacy Study, EGRA, etc. It would also be good to introduce a regional test for South Asia like what the member states of the Association of Southeast Asian Nations (ASEAN) are starting to introduce—the Southeast Asia Primary Learning Metrics, a regional assessment anchored on UNESCO's Learning Metrics, which aims to measure literacy, numeracy, and global citizenship among grade 5 students in ASEAN member states.

3. Modalities of Assessment

The modality of assessment in the framework will include paper-and-pencil tests, as well as measure process skills and product skills. This will ensure that the assessment tools cover knowledge, process, understanding, and product skills. Likewise, some innovative assessment approaches will also be introduced, such as the use of various computer software and hardware, and even smart gadgets such as mobile phones and tablets.

4. Effectiveness and Efficiency of Assessment and Feedback Systems

When assessing student learning outcomes, learning targets must always be very clear. Being clear means that the knowledge, skills, and products must be defined and stated in behavioral terms to assess and measure more easily as well as observe more objectively.

The value one gets from an assessment activity is largely dependent on the quality of the assessment process and tools. The framework must ensure that the assessment tools are valid, reliable, fair, generalizable, and practical. In addition, the tools must be efficient in all situations.

Validity pertains to the degree to which tests measure what they are supposed to measure, while *reliability* of an assessment refers to the consistency with which it yields the same results for individuals who take the assessment more than once. It basically underscores consistency in the scores and rank of students even if assessment is given on two or more different occasions.

Fairness is another important characteristic of a high-quality assessment. All assessment procedures need to provide fairness to the highest degree.

Lastly, a high-quality assessment must also possess generalizability, which makes the test applicable and relevant in the same or similar situations.

The assessment system must reflect lessons from the experiences of international and regional assessment programs, which guarantee the assessment of student attainment and performance against specific curriculum standards and goals for each grade level.

5. Result Utilization

The primary reason why students are assessed is to collect information about their performance in the school system. However, it should also be realized that teachers are not the end users of information gathered from any assessment. The students are definitely the main beneficiaries since they want to know how they perform in any assessment process. Collectively, though, ASLO aims to improve the effectiveness of learning and teaching, thus improving the quality of the education system.

One of the challenges in the assessment system is the ability of each country to maximize its use of the results. Results must be utilized to inform innovations and reforms related to the quality of the entire education system that, in turn, is measured efficiently by a national sample assessment. The results of assessments must also be used to review the impact of educational reforms and the interventions in a timely manner.

Another principle in the assessment is to ensure that results will provide feedback that will help initiate and support curricular reforms, including resource allocation to support the implementation of the reforms.

Lastly, the assessment system must be geared toward identifying well-performing students, teachers, and schools, as well as promoting accountability through dissemination of results to all key stakeholders of the assessment process.

6. Reforms Needed: Interventions and Innovations

The assessment framework must integrate identified applicable innovative practices and curriculum interventions, improving modalities of assessment, continuous professional development of teachers, and development of learning communities engaged in improving assessment practices.

Reforms must also include the participation of public and private sectors—both recipients and beneficiaries of a high-quality assessment system—including the vertical collaboration of schools from primary to higher education.

Lastly, the use of ICT in the assessment process must be an integral part of the assessment framework, not only to ensure efficiency but to improve the entire assessment process, including test development, item banking, scoring, and reporting and dissemination of results.

REFERENCES

Adelaide Declaration on National Goals for Schooling in the Twenty-First Century. http://www.scseec.edu.au/archive/Publications/Publications-archive/The-Adelaide-Declaration.aspx.

Allen, M. J. 2006. *Assessing General Education Programs.* Bolton, Massachusetts: Anker Publishing Company.

Arthur E. Wise, Linda Darling-Hammond, Milbrey W. McLaughlin and Harriet T. Bernstein.1985. Teacher Evaluation: A Study of Effective Practices. The Elementary School Journal Vol. 86, No. 1, Special Issue: The Master Teacher (Sep., 1985), pp. 60-121

Asian Development Bank (ADB). 2013. *Quality of Primary Education in the North Pacific.* Technical assistance report. Manila.

Australian Council for Education Research. 2015. *South-East Asia Primary Learning Metric: Assessment Framework.* Bangkok.

Bodewig, C. 2013. What Explains the Stunning Performance in PISA 2012? *Asia & Pacific on the rise (blog). The World Bank*. http://blogs.worldbank.org/eastasiapacific/what-explains-vietnam-s-stunning-performance-pisa-2012.

Buddhist and Pali University of Sri Lanka. http://www.bpu.ac.lk/.

Darling-Hammond, L., and A. E. Wise. 1985. Beyond Standardization: State Standards and School Improvement. *Elementary School Journal*. 85 (3). pp. 315–336.

Department for International Development of the United Kingdom. 2011. *Guidance Note: A DFID Practice Paper*. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/67619/nat-int-assess-stdnt-ach.pdf.

Earl, L., and S. Katz. 2006. *Rethinking Classroom Assessment with Purpose in Mind.* Western and Northern Canadian Protocol for Collaboration in Education. https://www.wncp.ca/media/40539/rethink.pdf.

Finnish National Board of Education. 2010. *Education.* www.oph.fi/English/education.

Glickman, C. D., S. P. Gordon, and J. M. Ross-Gordon. 2009. *Supervision and Instructional Leadership: A Developmental Approach.* Boston: Allyn & Bacon.

Gonzales, R. D. L. C., and C. M. Callueng. 2014. Classroom Assessment Practices of Filipino Teachers: Measurement and Impact of Professional Development. In C. Magno and M. J. Gaerlan, eds. *Essentials on Counseling and Education: A Festchrift of Prof. Rose Marie Salazar-Clemena*. Manila: Asian Psychological Services and Assessment (APSA). pp. 220–242.

Gonzales, R. D. L. C., and C. G. Fuggan. 2012. Exploring the Psychometric and Conceptual Properties of Classroom Assessment. *The International Journal of Educational and Psychological Assessment*. 9 (2). pp. 45–60.

Government of Samoa, Ministry of Education, Sports and Culture. 2010. *Samoa National School Assessment Policy Framework.* Apia.

Government of Sri Lanka, Ministry of Education. 2008. *Secondary Education Modernization Project II.* Colombo.

Harlen, W. 2007. *Assessment of Learning*. London: Sage Publications.

Harris, D., and C. Bell. 1990. *Evaluating and Assessment for Learning*. London: Kogan Page.

Henrichson, K. A. 2012. Assessment in Finland: A Scholarly Reflection of One Country's Use of Formative, Summative and Evaluative Practices. *Mid-Western Educational Researcher.* 25 (1–2). pp. 33–43.

Heron, J. 1981. Assessment Revisited. In D. J. Boud, ed. *Developing Student Autonomy in Learning.* London: Kogan Page.

Hill, P. 2010. *Asia-Pacific Secondary Education System Review Series No. 1: Examination Systems.* Bangkok: UNESCO.

Ho, E. S. 2013. *Asia-Pacific Education System Review Series No. 5: Student Learning Assessment.* Bangkok: UNESCO.

Huba, M. E., and J. E. Freed. 2000. *Learner-centered Assessment on College Campuses: Shifting the Focus from Teaching and Learning.* Boston: Allyn & Bacon.

Jones, S., and H. Tanner. 2008. *Assessment: A Practical Guide to Secondary Teachers (Second Edition)*. London: Continuum.

Keeves, J. P. 1995. *The World of School Learning: Selected Key Findings from 35 Years of IEA Research.* The Hague: International Association for the Evaluation of Education Achievement.

Kellaghan, T., and V. Greaney. 2004. *Assessing Student Learning in Africa*. Washington, DC: The World Bank.

Kotalawala Defense University. http://www.kdu.ac.lk/.

Metler, C. A. 2009. Teachers' Assessment Knowledge and Their Perception of the Impact of Classroom Assessment Professional Development. *Improving Schools.* 12 (2). pp. 101–113.

Mowl, G. n.d. Innovative Student Assessments: What's the Point? Red Guides Paper. No. 17. https://www.northumbria.ac.uk/static/5007/arpdt/academy/redguide17.pdf

National Curriculum and Textbook Board, Curriculum Development Unit. 2012. *A Study on SBA System Report.* Dhaka, Bangladesh.

Postlewaite, T. N., and T. Kellaghan. 2008. National Assessment of Educational Achievement. *Education Policy Series*. No. 9. Paris: UNESCO, International Institute for Educational Planning; and Brussels: International Academy of Education.

Schleicher, A. 2010. International Evaluations. In Y.J. Ni and N. Griffin, eds. *International Encyclopedia of Education: Educational Evaluation.* UK: Elsevier. pp. 681–689.

Shrestha, P. 2014. Alternative Assessment Approaches in Primary English Language Classrooms. Journal of NELTA.

Sparks, D. 2005. *Learning for Results*. Thousand Oaks, California: Corwin Press.

Stiggins, R. J., J. A. Arter, J. Chappuis, and S. Chappuis. 2004. *Classroom Assessment for Student Learning: Doing It Right—Using It Well*. Portland, Oregon: Assessment Training Institute.

Teacher Evaluation: A Study of Effective. Practices. Arthur E. Wise. Linda Darling-Hammond. Milbrey W. McLaughlin. Harriet T. Bernstein. Rand Corporation. Washington, DC. The Elementary School Journal. Volume 86, Number I ? 1985 by The University of Chicago.

University of Vocational Technology (UNIVOTEC). http://www.univotec.ac.lk/.

Vardar, E. 2010. Sixth, Seventh, and Eighth Grade Teachers' Conception of Assessment. Unpublished master's thesis. Graduate School of Social Sciences, Middle East Technical University, Ankarra.

Walvoord, B. E. 2004. *Assessment Clear and Simple.* San Francisco: Jossey-Bass.

Zhicheng Zhang and Judith A. Burry-Stock. 2003. Classroom Assessment Practices and Teachers' Self-Perceived Assessment Skills. APPLIED MEASUREMENT IN EDUCATION, 16(4), 323–342, Lawrence Erlbaum Associates, Inc.

APPENDIX 1: STUDENT ASSESSMENT AND EXAMINATION IN BANGLADESH

Bangladesh had a population 153.60 million people, with an average annual growth rate of 1.5% in 2008–2013.[1] In 2013, the gross domestic product (GDP) of Bangladesh was estimated at $112 billion (at 2011–2012 prices) and GDP per capita was $840. The GDP growth rate stood at 6.0%, and foreign exchange reserve was $12.5 billion.[2]

Despite sustained domestic and international efforts to improve economic and demographic prospects, the country remains a developing country—one of the poorest and most densely populated countries in the world. Its agro-based economy is dependent on agriculture, with rice cultivation the single most important economic activity. Major barriers to growth include frequent cyclones or typhoons and floods, the inefficiency of state-owned enterprises, a rapidly growing labor force that cannot be absorbed by agriculture, inadequate infrastructure such as energy and power supplies, and slow implementation of economic reforms.

Table A1.1 shows the number of schools, students, and teachers in Bangladesh in 2011.

Table A1.1: Bangladesh—Number of Schools, Students, and Teachers by Category, 2011

Type of School	No. of Schools	Teachers			Students		
		Total	Female	% Female	Total	Girls	% Girls
Government primary schools	37,672	212,653	124,150	58.4	9,904,254	5,071,252	51.2
RNGP schools	20,061	73,580	25,685	14.9	3,650,624	1,840,368	50.4
Non-RNGP schools	666	2,730	1,853	67.9	105,435	52,262	49.6
Experimental schools	55	280	183	65.4	9,080	4,556	50.2
Community schools	3,169	10,006	7,535	75.3	462,995	233,688	50.5
Kindergarten	4,418	41,129	24,251	59.0	535,127	236,466	44.2

continued on next page

[1] ADB. 2014. *Basic Statistics 2014*. Manila.

[2] Bangladesh Technical Education Board. 2012 *Annual Report 2011–2012*. Agargaon, Dhaka. p.15.

Table A1.1 *continued*

Type of School	No. of Schools	Teachers			Students		
		Total	Female	% Female	Total	Girls	% Girls
Nongovernment schools	361	1,334	935	70.1	42,507	21,344	50.2
Ebtedaye madrasah (equivalent to primary education level in madrasah)	2,305	8,405	1,011	12.0	243,211	126,361	52.0
High *madrasah,* attached *ebtedaye madrasah*	9,120	32,843	3,676	11.2	1,719,228	830,194	48.3
High school, attached primary school	858	11,226	5,193	46.3	285,434	146,642	51.4
Total	78,685	39,5281	194,538	49.2	16,957,894	8,563,133	50.5

RNGP = registered nongovernment primary.

Source: Bangladesh Bureau of Educational Information and Statistics. *Bangladesh Education Statistics 2011*. Dhaka.

A. Student Learning Assessment System

The examination and assessment systems now prevailing in schools, technical and vocational education and training (TVET) institutions, and higher education institutes in Bangladesh vary according to the curriculum. This section presents the student learning assessment systems existing at different education levels in the country.

1. School-Level Assessment System

School-based assessment (SBA) was introduced in secondary schools of Bangladesh in 2005. In 2012 evaluation, however, the National Curriculum and Textbook Board (NCTB) found that SBA implementation was not satisfactory. In 2013, a revised curriculum for secondary education was introduced in which a continuous assessment system is prescribed instead of just SBA. SBA is implemented continuously and is meant to be a nationwide practice that includes daily, weekly, fortnightly, and monthly testing of the learning progress of the students at the end of each lesson, topic, or unit course. Its purpose is to provide pupils constant feedback to improve their learning using a limited number of learning, teaching, and assessment (LTA) modalities. While SBA may be continuous, it requires a wide variety of LTA modalities to be effective. While SBA is yet to be introduced in the primary schools, in 2006, a national assessment system was introduced at the primary level. A brief account of these forms of assessment follows.

a. Forms of Assessment at the School Level

At present, SBA has three distinct forms: (i) internal examination including terminal examinations, (ii) continuous class assessment throughout the year, and (iii) public examination. The internal examinations and formative continuous assessments constitute SBA in Bangladesh schools.

Internal examinations. For a long time after Bangladesh became a separate state, the primary and secondary school examination system consisted of two examinations in a school year—midyear and year-end (annual examination)—an approach that was inherited from the earlier colonial regime. The test papers were prepared and the student answer sheets were evaluated by the teachers in the schools. The midyear examination was, to some extent, formative while the year-end examination was terminal. The students were promoted to the next higher class if they obtained minimum necessary marks based on the results of the annual examination. The school year in Bangladesh is from January to December. So, midyear examinations were usually held in June and the annual examination in late November or early December.

Later on, three examinations were introduced in primary and secondary schools following the recommendations of the Bangladesh National Education Commission report of 1988. These were first-term, second-term, and third-term examinations, with the third term being treated as the annual examination. The commission stressed the importance of properly recording the students' marks on these three examinations and regularly sending each student's progress report to the parents.[3] The first and second terms were formative in nature as some feedback was given to the pupils on their learning progress and deficiency, while the third term was of the terminal type. The annual three-examination system is still continuing in the primary schools. However, the Ministry of Education (MOE) recently changed the three-examination system into a two-examination system (half-year and annual) only for secondary schools, and the dates of these two examinations have already been fixed.[4] All schools are following these systems of examinations.

The annual teaching hours (also known as school contact hours) in secondary schools of Bangladesh were considered low at 800 hours in a year.[5] The decision to administer two examinations in a year will increase the total school teaching hours to some extent because there is one less exam to prepare for. At the least, the schools will get more than 2 weeks for classroom teaching and learning because of this decision.[6]

The Directorate of Primary Education (DPE) prepares and distributes a calendar to primary schools every year showing the dates of the three term examinations. At the initiative of the *upazila* (subdistrict) education officer, a lesson plan and syllabus for all subjects are prepared grade-wise and term-wise (1–5) at the beginning of each school year. The pattern of questions and mark distribution of both the essay and objective type is also included in the plan so that the class teachers can prepare question papers for the three term examinations.[7]

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[3] Bangladesh National Education Commission. 1988. *Bangladesh National Education Commission Report 1988*. Dhaka. p. 245.

[4] The Office Order of MOE No. 37.00.0000.071.04.002.02 (Angsha) 134, 12 February 2013.

[5] L. S. Rahman. 2011. *Bangladesh Teachers' Work Load and Autonomy*. Washington, DC: World Bank. pp. 9–10.

[6] For every examination, there are no classes for 2 weeks to allow students to prepare for the exam. Many who can afford the extra expense also go for extra tutoring or coaching from tutors who are also mostly their own teachers in the school.

[7] Three terminal examinations: first term, second term, and third term. The third term is the annual or year-end examination.

Like in primary school, the teachers of secondary schools prepare the question papers for these examinations. The annual examination is very important to the students because the results are used as the basis for promotion to the next higher class.

Continuous assessment. Continuous assessment generally means a system of assessment within the class that runs throughout the year and provides constant feedback to the pupils to improve their learning. The teachers simultaneously get feedback from the assessments that can help improve their teaching strategies. Its objective is formative. SBA is practiced as part of the continuous assessment system.

The SBA system implemented in Bangladesh is not continuous in the truest sense of the term. It is still the traditional type with some modifications. In primary schools, only written examinations are taken during the three terms. A certain percentage of marks (generally 25%) of the first- and second-term examinations are added to the third-term (annual) examination score, and the results determine a student's eligibility for promotion to the next higher class. Students are shown their evaluated answer scripts from the first- and second-term exams so they can take note of mistakes and correct answers. In this sense, it serves as feedback and is formative to some extent. The students' progress reports are prepared with some comments by the class teacher and head teacher, and then sent to the parents.

A similar system is followed by the majority of secondary and primary schools. Some schools, of course, take a class test in all subjects. As many as 3–5 such class tests in each subject are taken within a term. The answer scripts of class tests are evaluated generally on 10 marks. The average of all class test marks and the marks from the first and second terms are added to the annual examination for deciding the student's overall performance grade. Progress reports are sent to the parents. As such, the three term exams of primary schools and the midyear and annual exams of secondary schools cannot be considered continuous, formative, and diagnostic.

As noted above, considering the unsuccessful experience in SBA implementation, a simple continuous assessment approach has been proposed in the assessment framework that accompanies the revised curriculum introduced in secondary schools in 2013. This framework consists of continuous assessment, terminal examinations, and public examinations.

The school will also organize a variety of activities such as assemblies, games and sports, cultural and religious functions, study visits to places of historical and geographical interest, national days, science fairs, math olympiad, student magazine, debates, etc. throughout the school year and assess the affective behavior of the students such as patriotism, leadership, honesty, tolerance, fellow-feeling, etc.[8] The assessment of affective behavior requires special techniques and methods that Bangladesh's schoolteachers do not possess. They require proper training to assess affective behavior of the students.

Public examinations. In Bangladesh, all students take the public examinations, which serve three main purposes. The first is a selection function, which entails controlling access

[8] National Curriculum and Textbook Board. 2012. *National Curriculum Report 2012: Bangla Language*. Dhaka. p. 17.

to secondary schools and higher education institutions. The second is the certification function, which entails finding out and reporting what a student has achieved, whether students have graduated, and what they know and can do. And lastly, the administration (government) often uses examination results for accountability purposes, in particular evaluating the effectiveness of instruction; for motivating students by awarding scholarships; for motivating teachers to perform well; and for reviewing the effectiveness of schools.[9] The government subvention to schools, especially to nongovernment schools, depends, to some extent, on the results of public examinations. Among these is the granting of monthly payment orders.

The Secondary School Certificate (SSC) and Higher Secondary Certificate (HSC) examinations are administered at the end of grades 10 and 12, respectively. These exams have been administered in Bangladesh for a long time, as have similar examinations in Sri Lanka and some other countries. Recently, the Primary School Certificate (PSC) and Junior Secondary Certificate (JSC) examinations were introduced in Bangladesh as public examinations at the end of grades 5 and 8. The PSC examination is conducted by the Directorate of Primary Education while the JSC, SSC, and HSC examinations are conducted by the Board of Intermediate and Secondary Education.

There are eight examination boards in Bangladesh located mainly in divisional headquarters. These boards are autonomous bodies. The Dhaka board is the oldest board in Bangladesh. It coordinates all activities relating to public examinations at the secondary level conducted by the other seven boards. The National Academy for Primary Education is responsible for preparing the PSC examination question papers. Question papers are printed and distributed to *upazila* education officers by DPE[10] under strict security. The result for each student is prepared and published by DPE as a grade point average[11] based on marks scored in each subject. The certificate is given by the *upazila* education officer to the students who pass this examination.

The question papers of JSC and SSC exams are prepared by the education boards. The results are based on student grade point averages. The board awards certificates to the students who pass the examinations.

Nearly 3.1 million students appeared at the JSC and SSC examinations in 2013, and this number is expected to increase every year. Conducting two public examinations at this scale is a huge task and creates pressure on the education boards. It also poses tremendous pressure on the students since they are required to sit for 7–10 subjects in these examinations.

b. National Assessment

National assessment is actually a national sample assessment, while in the public examinations, all students take the exams. In Bangladesh, national assessment is aimed at gathering information to describe the achievement of the education system (such as the

[9] P. Hill. 2010. *Asia and Pacific Secondary Education System Review Series No.1: Examination Systems.* Bangkok: UNESCO. p. 4.

[10] Directorate of Primary Education. 2012. *Primary School Completion Examination Guidelines Book 2012*. Dhaka. p. 3.

[11] Footnote 10, p. 33.

primary level), and not of individual students. This purpose of the national assessment is to inform policy makers and decision makers, to enable them to address issues concerning the academic performance of primary students in the country. It serves as an overall audit of the education system.

Many developed countries (such as Canada, the Netherlands, Norway, Sweden, the United Kingdom, and the United States) and less developed countries (such as Nepal, Pakistan, and Sri Lanka) have been conducting national assessments since 1988. In Bangladesh, the importance of national assessment was first recognized in the first Primary Education Development Program (PEDP I), 1998–2003, and then gained momentum under PEDP II (2003–2008).[12] The National Assessment Cell (NAC) was formed under the Monitoring and Evaluation Division of DPE in 2006 by an office order from the Ministry of Primary and Mass Education (MOPME).[13] The NAC has so far conducted three national assessments of students in grades 3 and 5 in 2006, 2008, and 2012. The last national assessment in the primary level was carried out in 2014. National assessment has not been introduced in secondary education in Bangladesh. However, an assessment of students in grade 8 was carried out in 300 secondary schools in 30 of the 122 *upazilas* under the Secondary Education Quality and Access Enhancement Project (SEQAEP) in 2012 with the financial assistance of the World Bank. It may be mentioned here that the total number of *upazilas* in Bangladesh is 492. In 2013, assessment of students in grades 6 and 8 was conducted in 303 secondary schools under the same project as above. This particular assessment is now known as Learning Assessment of SEQAEP Institutions (LASI 2014). The report of LASI 2014 is not yet published. It is expected that national assessment will be introduced in grades 6 and 8 in 2014.

The student assessment system prevailing in Bangladesh is summarized in Table A1.2 highlighting the purpose, assessment approach, frequency, and tools and techniques used.

The assessment system summarized in Table A1.2 evaluates only cognitive knowledge. Affective domain is hardly assessed in the schools. Assessing performance of affective domain and interpretation of results require special knowledge, tools, and techniques that are unfamiliar to the majority of schoolteachers.

c. Curriculum and Assessment System

The Spirit of Liberation War of 1971 of Bangladesh propelled the country to adopt socialism, democracy, secularism, and Bengali nationalism, which constituted the philosophical doctrine of Bengali nationhood. Bengali nationalism is, in fact, a feeling of collective consciousness. The Bengali nation stemmed from the Bangla language movement, cultural heritage, traditions, and historical bond of the people of this region. The Education Policy of 2010 of Bangladesh has been formulated reflecting the abovementioned philosophical doctrine and values. Based on this, the new curriculum objectives, curriculum, and textbooks were developed and implemented nationwide in January 2013. It is believed that the young boys and girls of Bangladesh will be transformed into productive human resources imbibed with the spirit of the philosophical doctrine of Bengali nationhood as a

[12] Directorate of Primary Education. 2007. *National Assessment of Pupils of Grades 3 and 5, 2006.* Final report. PEDP II. Dhaka. pp. 5–7

[13] Ministry of Primary and Mass Education, Bangladesh Secretariat. Office Order, Memo No. Pra Ga Ma/ Development-2/7-38/2005/ 74. 25 May 2006.

Table A1.2: Bangladesh—Summary of Student Assessment System

Level	Purpose	Assessment Modality Approach/Measure	Frequency of Assessment	Tools and Techniques
NATIONAL ASSESSMENTS				
Primary level	Monitoring the progress of learning of pupils of a particular stage of national education system and determining the standard of education Observing and identifying the differences of pupils' learning progress and standards in terms of geographical difference, socioeconomic status, urban–rural, gender, and school management Identifying the positive and negative factors that strengthen or hamper the progress and standard of education Formulating new education policy and undertaking reform program for the development of national education system	Sample survey: Selecting sample from different strata of school out of total population Test tools: Standardized tests with MCQ and short-answer items prepared by NCTB and the National Assessment Cell jointly with the technical assistance of ACER, India Marking of answer scripts: Local schoolteachers or university students hired to mark the answer scripts Test data analysis and preparation of report: ACER, India analyzed test data and prepared assessment report	Generally once every 2 years	Paper–pencil standardized test
PUBLIC EXAMINATIONS				
Primary School Completion Examination	For certification and awarding scholarships	All pupils completing grade 5: MCQ, short answer, and essay type/creative question	In each year	Paper–pencil test
Junior School Certificate Examination	For certification and awarding scholarships	All pupils completing grade 8: MCQ, short answer, and essay type/creative question	In each year	Paper–pencil test
Secondary School Certificate	For certification and selecting students for awarding scholarships	Selected students after completing grade 10: MCQ, short answer, and essay type/creative question with emphasis on creative questions	In each year	Paper–pencil test and practical in science subjects only
Higher Secondary School Certificate	For certification of completion of higher secondary school certificate given at grade 12 Passing the HSC is required to enter higher education	Grade 12 students	In each year	Paper-and-pencil, mostly MCQ with short answer and essay type (creative questions)

continued on next page

Table A1.2 *continued*

Level	Purpose	Assessment Modality Approach/Measure	Frequency of Assessment	Tools and Techniques
SCHOOL-LEVEL ASSESSMENTS				
Primary school	Formative, diagnostic, and terminal for promotion of pupils to next higher grades	All pupils of school; MCQ, short answer, and essay type question with emphasis on creative questions	Thrice in a year	Paper–pencil test
Junior and secondary schools	Formative, diagnostic, and terminal for promotion of students to next higher grades	All students of school; MCQ, short answer, and essay type question with emphasis on creative questions	Twice in a year	Paper–pencil
Secondary school	Formative, diagnostic, and terminal for promotion of students to next higher grades	All pupils; MCQ, short answer, and essay type question with emphasis on creative questions	Twice in a year	Paper–pencil

ACER = Australian Council for Educational Research, MCQ = multiple-choice questions, NCTB = National Curriculum and Textbook Board.

Notes: National assessment at the secondary level is not yet introduced. There is a plan to conduct it in 2014. No separate assessment system is in place at the regional, provincial, and district levels in Bangladesh.

Source: Author.

result of the implementation of curriculum and textbooks in schools. It is logical that the philosophical base of the assessment system would be in line with education policy and philosophy—or in other words, the state policy—of Bangladesh.[14]

d. Governance of Assessment System

The roles and responsibilities of different agencies in the governance of the assessment system are summarized in Table A1.3.

The MOE and MOPME are the main authorities to oversee the functioning of education institutions and policy decisions in all educational matters including public examinations and school-level student assessment. The job descriptions and authorities of officers and personnel of each level have been fixed by the relevant ministries and education directorates.

In the case of public examination, eight education boards are responsible for implementing examination-related decisions under the law.[15] The boards are all autonomous bodies. The boards conduct JSC, SSC, and HSC examinations, while DPE conducts the PSC examination. These are held in hundreds of examination centers throughout the country, with each center having a center committee. These committees conduct the examinations

[14] K. Sarwar. 2010. Philosophical Basis of Educational Policy of Bangladesh—A Lecture in Philosophy. Cox's Bazar Women's College, Cox's Bazar, Bangladesh. p. 2.

[15] Regulation framed under section 39 (2) (XI) of Intermediate and Secondary Education Amendment Ordinance (No. XVII of 1977) regarding holding and conducting of examinations.

Table A1.3: Bangladesh—Governance of Assessment System

Agency	Functions
Ministry of Education	Formulation of assessment policy for secondary level
Ministry of Primary and Mass Education	Formulation of assessment policy for primary level
Directorate of Primary Education (Ministry of Primary and Mass Education)	Implementation of assessment policy for primary level
Directorate of Secondary and Higher Education (Ministry of Education)	Implementation of assessment policy
Education boards	Conduct public examinations, publish results, and award certificates according to the rules framed according to the policy
Schools—head teachers	Conduct school-level student learning assessment in cooperation with teachers and mentor the teachers

Source: Author.

in accordance with the rules and regulations framed by DPE for PSC and by boards in the case of JSC, SSC, and HSC examinations.

The head teachers are responsible for holding terminal and annual examinations and continuous assessment at the school level. The head teachers generally constitute a committee for conducting these examinations. The question papers are prepared and answer scripts are evaluated by the subject teachers of the schools. In primary schools, the *upazila* education officer takes the initiative to prepare the question papers and print them centrally for all the schools of the *upazila*. The answer scripts of the pupils, however, are examined by teachers at the respective schools.

At present, there are no other types of examinations and assessments being conducted in the country nor any managing body or system at the national, regional, or district level other than those described earlier. The sole responsibility of conducting internal examinations of a school lies with the head teacher.

2. Assessment in Technical and Vocational Education and Training

Bangladesh is an overpopulated country, and unemployment is a big problem. A huge number of unemployed youths, skilled and unskilled, are going abroad for jobs. The demand for skilled labor is also increasing domestically in Bangladesh due to the expansion of garment and other industries. To meet the increasing demand for skilled workers, the number of private technical training institutes has been growing fast in Bangladesh.

Currently, as many as 24 approved TVET courses with varied duration ranging from 360 hours to 4 years are offered in 289 government and 6,131 nongovernment institutions with

a total intake capacity of 559,096 trainees.[16] In 2005, the number of private institutions was only 1,860.[17] The National Skills Development Policy 2011 emphasizes the intention to "meet the needs of local and overseas employers, workers and community at large" through TVET programs.[18] The policy seeks to ensure the quality of TVET and accountability of the training institutions, especially the nongovernment institutions.

The assessment systems of all TVET courses vary; hence, only two programs—a 2-year SSC (Vocational) and 4-year Diploma in Engineering (Polytechnics)—are discussed to provide insights into the TVET assessment system prevailing in Bangladesh. Table A1.4 illustrates the TVET assessment scheme in the SSC (Vocational) course.

Table A1.4: Bangladesh—Statistical Tables on Technical and Vocational Education and Training

a. Technical and Vocational Education and Training Assessment Scheme of Student Learning in Secondary School Certificate (Vocational) Course

Subject	Marks		Total Marks
	Grade 9	Grade 10	
Bangla	100	100	200
English	100	100	200
Math	100	100	200
Religion and moral education	50	50	100
Health education	50	50	100
Bangladesh and world	75	75	150
Physics	75	75	150
Chemistry	75	75	150
Computer	50	50	100
Engineering drawing	50	50	100
Self-employment and business entrepreneur		50	50
Trade-1	200	200	400
Trade-2	200	200	400
Internship	50	50	100
Total	1200	1200	2400
Optional	100	100	200
Total			**2,600**

Source: Bangladesh Technical Education Board.

continued on next page

[16] Bangladesh Technical Education Board. 2012. *Annual Report 2011–2012*. Agargaon, Dhaka. p.15.

[17] World Bank. 2007. Learning for Job Opportunities: An Assessment of the Vocational Education and Training in Bangladesh. *Bangladesh Development Series*. No. 19. Washington, DC: The World Bank. p. 12.

[18] Ministry of Education. 2011. *National Skills Development Policy 2011*. Dhaka. p. 13.

Table A1.4 *continued*

b. Course Structure for Diploma in Engineering (Civil Technology), First Semester

Subject Code	Name of Subject	Marks				
		Theory		Practical		
		Continuous Assessment	Final Exam	Continuous Assessment	Final Exam	Total
1011	Engineering drawing	–	–	50	50	100
5711	Bangla	20	80	50	–	150
5712	English-1	20	80	–	–	100
5911	Math-1	30	120	50	–	200
5912	Physics-1	30	120	25	25	200
6711	Basic electricity	120	25	25	25	200
7011	Basic workshop practice	–	–	50	50	100
	Total	**130**	**520**	**250**	**150**	**1050**

– = not available.

Source: Bangladesh Technical Education Board.

a. Assessment in Secondary School Certificate (Vocational)

Principles of Student Learning Assessment in Technical and Vocational Education and Training.

The following principle has been prescribed by the Bangladesh Technical Education Board for assessing TVET students:[19]

- The subjects that do not have a practicum consist of 60% marks for the year-end examination conducted by the board and 40% for continuous assessment conducted by the institution.
- The subjects with a practicum consist of 50% marks for the year-end examination conducted by the board and 50% for continuous assessment conducted by the institution.

Continuous assessment in theory part. The theory part of a subject is assessed by the subject teachers in the institution. The continuous assessment of the theory part of a subject consists of the following:

- midyear test of 50% marks, with the answer scripts shown to the students for feedback;
- class test, quiz, and four assignments (two before and two after the midyear examination) of 40% marks conducted by concerned teacher; and
- attendance, which is given 10% marks.

[19] Bangladesh Technical Education Board. 2013. *SSC (Voc) Syllabus and Assessment Rules 2013*. Agargaon, Dhaka.

Continuous assessment in practical part. The institution determines the portion of marks to be covered for continuous assessment in the practical part. Generally, 10 marks are fixed for a practical job or experiment. These 10 marks are again divided into three parts as follows: (i) 6 marks for doing the job or experiment, (ii) 2 marks for preparation of the report, and (iii) 2 marks for neatness and cleanliness.[20]

The marks of continuous assessment of all subjects are recorded properly and sent to the board for inclusion in the final/overall result.

Final assessment. There are two year-end examinations conducted by the Bangladesh Technical Education Board for the 2-year SSC (Vocational) program. One is held at the end of grade 9 and the other at the end of grade 10. The question papers for each subject are prepared by the board. The board appoints examiners for scoring answer scripts of these examinations. The practical examinations for the subjects with practicum are administered jointly by the class teacher as internal examiner and an external examiner appointed by the board.

b. Assessment in 4-Year Diploma in Engineering (Polytechnics)

There are two semesters in a year totaling eight semesters for this 4-year engineering diploma program. The Bangladesh Technical Education Board frames the course structure for each semester (please see Table A1.6 for course structure for Diploma in Engineering).

Assessment of theory part of subjects. The institution will internally assess 20% of the marks for the theory part of each subject as continuous assessment and 80% of the marks at the end of the semester. Continuous assessment consists of a minimum of two class tests, quizzes, and class attendance. The distributions of marks are as follows: 10% for class tests, 6% for quizzes, and 4% for attendance. After the class tests and quizzes, the examined answer scripts are to be shown to the students within 7 days and the marks list is submitted to the head of the department of the relevant subject.

Final Examination of theory part of subjects. At the end of each semester, the Bangladesh Technical Education Board conducts the examination of all theory subjects according to its rules and regulations. The assessment system of the SSC (Vocational) and 4-year Diploma in Engineering appears to be a sound mechanism. But there is a dearth of information on the actual assessment activities inside the institutions. The assessment system in TVET institutions needs a thorough evaluation.[21]

Assessment of practical part of subjects. For subjects with a practical examination at the end of the semester, the institution gives 50% marks for practical parts of subjects assessed internally as continuous assessment and 50% marks for the practical exam at the end of the semester. For subjects that do not have a practical examination at the end of the semester, the percentage of marks for continuous assessment is 100%.

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[20] For example, if the total marks for continuous assessment is 25 and a student participated in 12 jobs or experiments, then the marks stand at 12 x 10 = 120. If the student gets 60 marks by participating in 10 jobs or experiments, then the number will be (60 x 25)/120 = 12.5.

[21] Recorded from student attendance and marks record books of Dhaka Mahila (Girls) Polytechnic Institution, Dhaka.

3. Assessment in Higher Education

Higher education in Bangladesh begins after the postsecondary stage of education, meaning after completion of 12 years of schooling. It consists of a 3-year pass course followed by a 2-year master's degree for pass graduates, or a 4-year honors course for a bachelor's degree followed by a 1-year master's course for honors graduates. There are five streams for higher education: (i) general education, (ii) science and technology and engineering education, (iii) medical education, (iv) agricultural education, and (v) distance education. In addition, the higher education sector also provides vocational and *madrasah* education.[22] A brief account of the general education stream and its assessment system will be presented.

Higher education from pass to honors and master's degree courses are offered in some selected colleges and universities. There are separate institutions for female students as well. Pass degree courses are available only in colleges. There is a plan to abolish the pass degree course soon. Of the 82 universities, 31 are public and 51 are private. All the universities are autonomous by law (see Table A1.7 for the number of institutions providing higher education in Bangladesh in 2011).

All colleges are affiliated with National University, Bangladesh (BNU) which is, in fact, a certificate-awarding university. Curricula and syllabi including an assessment framework (comprising final and internal) of degree pass, honors, and master's courses are developed by BNU. Thus, all colleges follow a uniform syllabus and assessment procedures for teaching in degree and master's courses. BNU also conducts the examinations and gives award certificates (see Table A1.5 for the number of teachers and students in universities and colleges in Bangladesh).

Table A1.5: Bangladesh— Statistical Tables on Higher Education

a. Number of Institutions Providing Higher Education in Bangladesh, 2011

	Degree (Pass) College		Honors College		Master's College		Total College		University	
Management	Total	Female	Total	Female	Total	Female	Total	Female	Total	Female
Public	113	27	60	17	70	8	256	67	31	–
Private	1,157	196	112	22	35	21	3,210	558	51	–
Total	**1,270**	**223**	**172**	**39**	**105**	**21**	**3,475**	**625**	**82**	**–**

– = not available.

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Source: Bangladesh Bureau of Educational Information and Statistics (BANBEIS). *Bangladesh Education Statistics 2011*. Dhaka.

[22] M. Monem and H. M. Baniamin. 2010. Higher Education in Bangladesh: Status, Issues, and Prospects. *Pakistan Journal of Social Science*. 30 (12, December). p. 294.

Table A1.5 *continued*

b. Number of Teachers and Students in Colleges and Universities

Institution Type	Number of Institutions	Number of Teachers			Enrollment		
		Total	Females	% Female	Total	Females	% Female
Public university	31	9,634	1,784	18.52	297,582	100,024	33.61
Private university	51	62,040	1,889	30.45	257,089	66,253	25.78
Colleges	1,547	59,731	13,251	22.20	2,390,408	1,102,669	23.90

Source: BANBEIS. *Bangladesh Education Statistics 2011*. Dhaka.

c. Grades and Grade Points Awarded in Higher Education

Mark Obtained (%)	Grade	Explanation	Grade Point
80 and above	A+	Excellent	4.00
75–79	A		
70–74	A-		3.75
65–69	B+	Very good	3.30
60–64	B		3.25
55–59	B-		3.00
50–54	C+	Good	2.75
45–49	C		2.50
40–44	D	Passing	2.00
Below 40	F	Failing	0.00
	I	–	Incomplete
	W	–	Withdrawn

– = not available.

Source: Faculty of Science, Dhaka University. 2012. *Course Curriculum and Rules*. p. 14.

a. Government Policy on Higher Education

The higher education section of the National Education Policy 2010 stipulates the following objectives: (i) provide world standard education effectively, create curiosity among the students, and inculcate human values; (ii) create scientific awareness, noncommunal, open-hearted, humane, progressive, and farsighted citizens for giving leadership to every sphere of national life and opening up new frontiers by cultivating knowledge, research, creativity, innovation, and talent; and (iii) create citizens motivated by wisdom, creativity, human values, and love for country.

For achieving the abovementioned aims and objectives, some strategies have been formulated concerning higher education: (i) it is open only for the talented students and

an English course of 100 marks will be compulsory for honors degree students; (ii) teachers and students should take part in research activities jointly; (iii) the curricula and syllabi of higher education programs should meet international standards; (iv) important books and writings on science and technology should be translated into the Bangla language; and (v) the national defense system, comparative religion, peace and conflict, and climate change may constitute part of the subject areas or disciplines of higher education.

The National Education Policy 2010 has identified the aims and objectives of higher education in Bangladesh, as well as the strategies. However, the policy has not been translated into an action plan with time frame. It is hoped that the aims of higher education as envisaged in the policy will be achieved in phases through pragmatic interventions of the government in the years ahead.

b. Assessment System in Higher Education

Students are assessed through class attendance, in-course or tutorial, class test, term paper or home assignment, and final examination in each higher education institution. However, different assessment procedures are followed in various universities and even within a university. Usually, one-third of the total marks constitute in-course assessment such as class attendance and tutorial classes and class tests, and two-thirds are for final examinations. The final result is cumulative. The other type that is followed is an annual final examination at the end of one semester or academic year, or with several in-course or tutorial examinations. In examining the answer scripts, a double examiner system is followed—one examiner from the concerned department and a second one, usually from another university or, in some limited cases, from within the department.[23] The two sets of marks are averaged for assessment of performance.

The assessment systems followed by the Faculty of Science and the Faculty of Social Sciences of the University of Dhaka, as well as of the economics and chemistry subjects of two colleges under the BNU, will be described here as cases in point.

c. Typical Assessment System of Faculty of Science, Dhaka University

The Bachelor of Science (Honors) degree program under the Faculty of Science in Dhaka University is a 4-year program comprising four 12-month academic sessions. Student performance is assessed in the following ways:

(i) for theory courses, the assessment is made by in-course examinations, assignments, performance evaluation in the class, and final examination; and
(ii) for laboratory and/or field courses, the assessment is made by observing overall performance of the student at work, oral exams, assignments, and evaluation of practical reports.

In-course assessment for theory courses. In-course assessment is done through class tests and/or assignments. The number of in-course tests is two for 2- and 5-credit courses and one for a 2-credit course. The duration of in-course tests is 1 class hour. Generally, multiple-choice questions and other short and essay type questions are used in in-course tests.

[23] M. A. Salauddin. 2010. *Quality Issues of Higher Education in Bangladesh*. Department of Public Administration, University of Dhaka.

The answer scripts are shown to the students and the results of in-course assessments are submitted to the chair of the examination committee and the controller of examinations.

Course final examination (theory and practical). The students with 75% or more attendance are eligible to appear at the final examination. The year-end exam (called "Year Final Examination" in Bangladesh) is conducted by the Office of the Controller of Examinations as per rules of the university. The duration of theoretical final examinations is 4 hours for 4-credit courses and 3 hours for 3-credit courses. The duration of the practical course is 4–6 hours irrespective of credit hours.

Grades and grade points. Grades and grade points are awarded based on marks obtained in written, oral, and practical examinations (see Table A1.7 for grades and grade points awarded in higher education).

A student obtaining a grade of D in any course is considered for awarding a pass degree. A grade of D indicates minimally acceptable "passing" and the student is allowed to improve two times with the next batches. The student will have to sit in the examinations with the next batch of students. On the other hand, readmission is necessary for students who want to improve a grade of F.

d. Typical Assessment System of Faculty of Social Sciences in Dhaka University

The Bachelor of Social Science (Honors) degree program in the Faculty of Social Sciences of Dhaka University is a 4-year program comprising eight semesters. The duration of each semester is 6 months. The performance of a student is assessed through the following: (i) midsemester examination; (ii) semester final examination; (iii) term papers or home assignment; (iv) class attendance; and (v) active participation in the discussion, class or tutorial, class or group presentation, or class test.

The marking for class attendance is the same as that of the Bachelor of Science (Honors). The midsemester examination scripts, term papers and home assignments, class attendance, and final semester scripts are evaluated by the course teacher (single examiner). Grades and grade points are awarded based on marks obtained in written and oral examinations, tutorials, assessments, and attendance according to almost the same scheme used in the Bachelor of Science (Honors).

e. Student Assessment System in Colleges

The duration of honors courses in the colleges is 4 years. The course structure for each year and the assessment system is prescribed by BNU. The distribution of marks for assessment of the Bachelor of Social Science in Economics course during the first year is given as an example in the following.

- **Written examination.** BNU conducts a written examination at the end of each year. It also prepares the question papers, appoints examiners to the answer scripts, and publishes the results. In addition to this year-end examination conducted by the BNU, a midyear examination and a pretest, constituting internal examinations, are administered by the college authority. However, the results of these examinations are not counted or added to the result of the final year-end examination.

- **Tutorial.** As many as four tutorial examinations are held, two before and two after the midyear exam. The marks are sent to BNU and counted together with the year-end examination.
- **Viva voce.** Viva voce examination is an oral test and is conducted by the subject teacher. An external examiner appointed by the university may also conduct viva voce examinations.
- **Attendance.** A student with 75% attendance is entitled to sit for the year-end examination. From experience, many students are not serious about regular class attendance. College authorities are also not very strict about student attendance.

The university departments have enough freedom to make any decision about student assessment within the assessment framework prepared by the dean of the faculty. Classroom teachers also assess student performance following the general principles and criteria framed by the dean of the respective faculty, so the university teachers exercise such power, as well as responsibility and impartiality. Pass–fail or awarding good grades to the students appears to be in the hands of the department teachers, but they exercise their power with integrity. On the other hand, the teachers of the colleges do not have any power and freedom to make any decision about student assessment.

Theoretically, the present assessment system, from school level to higher education including TVET, seems to be sound. However, some existing practices pose challenges to fair and reliable assessment results. Among these is the rampant private tuition of teachers at the school level. The teacher may give good credit to students who are taking private teaching from them. Another is the leaking of question papers almost every year during public examinations.

4. Participation in International Assessment

Bangladesh does not participate in any of the Programme for International Student Assessment (PISA) and Trends in International Mathematics and Science Study (TIMSS) assessments. It is even not known whether the country has a plan to participate in these international assessments. The school performance of the students of Bangladesh could be compared with that of other countries if Bangladesh would participate in PISA and TIMSS assessments. MOPME and the MOE need to make the decision concerning participation in international assessments.

B. Utilization of Assessment Results

The types of examinations and assessments conducted in primary, junior secondary, and secondary schools were described in Section A. Some important results of those national assessments and public examinations are presented in this appendix. An attempt has been made here to understand the implications of the results of these national assessments and examinations on improving student learning, curriculum reform, and policy decisions toward systemic change in Bangladesh's education system.

1. Utilization of National Assessment Results

Bangladesh introduced national assessments in primary education for grades 3 and 5 in 2006 under PEDP II. Three such assessments were carried out in 2006, 2008, and 2012. The reports of the first two are available, but the last report has not yet been made public.

The national assessments, in a sense, are an assessment of the curriculum because they yield "information about strengths and weakness of the students in particular content and skill areas and ensure that this information is provided to teachers, schools, and districts in a timely and comprehensible manner so that they may evaluate their instructional programs, improve professional development and target interventions and resources more effectively."[24] However, the national assessment results in Bangladesh are mainly important to the education administrators and planners for taking decisions on necessary changes and reform.

As soon as the national assessment is complete, the report is submitted to MOPME. It is the responsibility of MOPME to study and examine the results, and take proper steps to bring about necessary changes and undertake the reform program. To this end, MOPME may form a committee to study and examine the results of the national assessment and to submit a report with recommendations for interventions for improvement of the primary education system. MOPME will decide what to implement immediately based on resources in hand. However, no noteworthy follow-up actions have been seen to be taken by MOPME following the national assessment report.

The primary school curriculum of Bangladesh is competency based. The national assessments of 2006 and 2008 used standardized tests that were aligned with the primary curriculum. The tests were prepared encompassing a set of 15–20 learning outcomes derived from a total of 50 terminal competencies[25] and class-wise attainable competencies. Two to four items were generally set against each learning outcome for testing the cognitive knowledge and skills of the pupils under those learning outcomes.

Achievement scores of the pupils of the 2008 national assessment were analyzed in terms of important variables including achievement of mastery learning. The percentage of pupils having achieved mastery learning level (80%–100%) in the 2008 national assessment is shown in Table A1.6. These results show very low student performance in terms of mastery learning in general, but specifically worse in mathematics, English, science, and social studies.

An inherent feature of a competency-based curriculum is its linkage with mastery learning. The dismal results of the 2008 national assessment may be attributed to the following: (i) the curriculum may be difficult for the pupils, (ii) the materials used for teaching and learning were not of good quality; (iii) the teachers' teaching ability was inadequate due to low academic qualifications and lack of adequate training; (iv) an inadequate and inappropriate pupil assessment system was adopted in schools; (v) academic and administrative supervision was weak; and (vi) there was a lack of efficient and effective school management and insufficient facilities in the schools. The 2008 national assessment

[24] D. Strater. 2006. *Standards-Based Assessment*. CUR/562. Arizona: University of Phoenix. p. 1.

[25] National Curriculum and Textbook Board. 2003. *National Curriculum for Primary Level*. Dhaka. p. 23.

Table A1.6: Bangladesh—Mastery Scores of Grades 3 and 5 by Strata of Pupils in the 2008 National Assessment

Grade	Subjects	Gender		Location		School Types	
		Boys	Girls	Rural	Urban	Rural	Urban
3	Bangla language	11.33	12.05	11.03	18.42	13.25	8.25
	Math	1.09	0.99	1.00	1.41	1.36	0.29
5	Bangla language	14.04	13.35	12.47	24.90	16.33	7.26
	Math	2.28	2.21	2.14	3.26	2.78	0.94
	English	3.28	3.17	2.99	5.41	4.17	0.92
	Environmental Studies: Science	1.82	1.81	1.74	2.54	1.94	1.51
	Environmental Studies: Social	2.02	2.69	2.20	4.01	3.07	0.70

Source: Bangladesh Directorate of Primary Education. 2007. *National Assessment of Pupils of Grades 3 and 5, 2008*. Primary Education Development Program II, Dhaka. pp. 99–109.

results generated a lot of feedback and clamor for policy decisions toward the improvement of the quality of education.

The recent revision of the curricula of both primary and secondary education was in accordance with provisions of the National Education Policy of 2010. The published copy of the primary curriculum discussed the rationale for the revision. However, the results of the 2008 national assessment have not been reviewed and considered in the curriculum revision process.

National assessment reports carry a wealth of information that can be used in improving the quality of education. However, dissemination of the results is limited, mostly through a few seminars offered by the NAC. Seminars are held in the country's seven divisional headquarters. NAC has also planned to present the condensed results in leaflets in Bangla for wider dissemination, such as at the schools. This, however, is not enough. The National Academy for Primary Education can include the key findings in its in-service training programs for dissemination among the education officers. The findings can also be included in the ongoing subcluster training program of schoolteachers. Even members of the Parliament may be apprised of the national assessment results to inform them about the education quality situation. If the country fails to utilize its results for the improvement of education, the national assessment becomes routine work without impact on quality improvement.

2. Utilization of Public Examination Results

The pass rates in the PSC examination are increasing. In 2009, the pass rate was 89.6%, increasing to 97.2% in 2011. It reached a high of 98.7% in 2013.[26] However, the high pass rates do not indicate that the schools are providing quality education. It is possible that the PSC answer scripts are examined liberally so that almost all of the children pass. The high PSC pass rate is expected to decrease the dropout rate and eventually increase the completion rate of 5 years of schooling. The parents feel encouraged to send their children to school to get a certificate, which may become useful to get a job.

The Junior Secondary Certificate (JSC) examination, held at the end of grade 8, was first administered in 2010. Up to 2012, three JSC examinations were conducted. The pass rate in 2010 was 73.0%, increasing to 83.7% in 2011 and to 87.0% in 2012. Lastly, the results of the five SSC examinations, held at the end of grade 10, show a similar trend. From 67.4% in 2009, it moved up to 82.2% in 2011 and to 89% in 2013. More details of the results of PSC, JSC, and SSC examinations are given in Table A1.7.

Table A1.7: Bangladesh—Public Examinations Results, Various Years

a. Results of Primary School Completion Examination, 2009–2012

Year	No. Appeared		No. of Passers		% Passed	
	Total	Female	Total	Female	Total	Female
2012	2,481,119	1,355,353	2,415,341	1,317,268	97.5	97.2
2011	2,185,747	1,184,990	2,125,868	1,150,340	97.2	97.0
2010	1,940,331	958,026	1,791,651	905,825	92.3	92.1
2009	1,823,465	905,325	1,634,118	823,413	89.6	89.3

Source: Education Management and Information System, Department of Primary Education, Ministry of Mass and Primary Education, Dhaka.

b. Results of Junior School Certificate Examination, 2010–2012

Year	No. Appeared		No. of Passers		% Passed	
	Total	Female	Total	Female	Total	Female
2012	1,841,726	972,936	1,610,750	837,118	87.0	86.0
2011	1,862,866	1,000,331	1,506,783	794,594	83.7`	82.5
2010	1,509,847	802,483	10,020,047	518,825	73.0	70.7

Source: Board of Intermediate and Secondary Education, Dhaka.

continued on next page

[26] Education Management and Information System of Department of Primary Education, Bangladesh Ministry of Mass and Primary Education.

Table A1.7 *continued*

c. Results of Secondary School Certificate Examination, 2009–2013

Year	No. Appeared		No. of Passers		% Passed	
	Total	Female	Total	Female	Total	Female
2013	1,297,034	631,150	1,154,778	560,940	89.0	88.9
2012	1,048,144	529,610	904,756	451,610	86.3	85.3
2011	986,650	495,610	810,666	400,065	82.2	80.7
2010	912,577	453,779	713,560	346,494	78.2	76.4
2009	797,891	393,599	537,878	256,106	67.4	65.1

Source: Board of Intermediate and Secondary Education, Dhaka.

The JSC and SSC examination pass rates have also been increasing since 2010. Ideally, the high and increasing pass rates may be attributed to the efforts of the teachers and schools and the impact of school-level continuous assessment or SBA officially introduced in secondary schools in 2005. However, this is not the case since the contribution of SBA to the results of public examinations, especially for JSC, was not significant. The implementation status of SBA is not satisfactory, according to a 2012 study on the SBA system conducted by the Curriculum Development Unit of the National Curriculum and Textbook Board (NCTB).[27] The high pass rate in the JSC examination is due to the participation of students in private tutoring offered by coaching centers and extra care of the parents. It should also be noted that the SBA approach has been introduced in grades 6–8 only and not yet in grades 9 and 10.

There are some schools that have proven their excellence and gained public recognition due to their continuous outstanding performance in public examinations. The first preference of the parents is to enroll their children in these schools. As such, the results of public examinations have also become the basis for selecting schools among families.

The results of public examinations, especially in the primary level, are quite encouraging. It appears from the results that quality improvement and reform initiatives are hardly a necessity. However, public examinations cannot provide reliable information for bringing changes and reforms for enhancing the quality of education. Although public examinations are aligned with the curriculum, they cannot provide an accurate reflection of the curriculum. The instruments used in public examinations are not standardized. The reliability and validity are not known. The question items are selected arbitrarily by the question-paper setters,[28] and generally encourage producing factual and memorized knowledge. The private tutoring offered by coaching centers plays a very important role for high achievement in the PSC examination. The liberal marking scheme used is also responsible for extremely high pass rates.

[27] National Curriculum and Textbook Board, Curriculum Development Unit. 2012. *A Study on SBA System Report 2012*. Dhaka. p. 2.

[28] Generally, question-paper setters are experienced teachers who prepare the question papers for the public examinations. They are appointed by the board of examination.

3. Utilization of School-Level Assessment Results

a. Primary Schools

The government is preparing to introduce SBA in primary schools by 2014–2015. The implementation of SBA requires a lot of time, energy, labor, adequate training, and above all, a positive attitude toward SBA on the part of the teachers. It is expected that it will take time to see the efficacy of SBA system in schools. The current assessment system practiced in the primary schools consists of recording the results of class tests and terminal examinations in the student examination results book. These are supposed to play an important role in improving student learning and developing effective teaching and learning programs.

In the classroom, students receive their answer scripts to the class test and the first- and second-term examinations, which indicate mistakes and knowledge gaps, along with suggestions from the teacher for improvement. However, teachers rarely take the initiative to conduct extra classes or remedial actions for the low achievers in the examinations.

b. Secondary Schools

SBA was introduced in the secondary schools in 2005 in grades 6–8. After 6 years of SBA implementation in secondary schools, a survey was conducted in 2012 by the Curriculum Development Unit of NCTB to evaluate the progress of SBA implementation. The survey report revealed a dismal picture, with only 7% of the schools fully implementing an SBA system, 83% partially, and 10% of schools not at all.[29]

The overall objective of SBA is to improve learning and teaching based on the results of assessment to ensure progress in student learning. To achieve this, SBA should be continuously administered throughout the year. The use of SBA results is very broad, including provision of feedback to the students. Generally, the assessment is done in each lesson and at the end of every unit (or chapter), in addition to weekly, monthly, quarterly, half-yearly, and annual assessments. The teachers are to use assessment results to diagnose the students' deficiency at every stage and arrange extra classes, if necessary. However, based on the results of the NCTB survey, the teachers are not using the SBA results for improving teaching and learning of the students in schools.

C. Reforms Introduced for Assessment of Student Learning Outcomes

1. Implementation of School-Based Assessment

Many reforms have occurred in the public and school-level examination system in Bangladesh during the last 20 years. The most important one is the introduction of SBA in schools and introduction of objective type questions at schools and public examinations. Some changes have been done just through issuance of government order because of financial considerations. SBA is being implemented under two projects. The SBA for primary schools will be implemented under PEPD III and that of secondary schools under the Secondary Education Sector Development Project (SESDP).

[29] Footnote 27, p. 17.

(i) **Primary education.** A framework for preparing an action plan for implementing school and classroom-based assessment has been included in the PEPD III documents.[30] Accordingly, an action plan has already been prepared following the framework. The activities of schools and classroom-based assessment have been included in the DPE's Annual Operation Plan for 2013–2014.[31] During this period, draft SBA tools and methods will be piloted in at least 5% of *upazilas*. The plan is to introduce classroom-based assessment in the schools of 15% of *upazilas* in 2014–2015, and by the end of PEPD III, schools in about 60% of *upazilas* will be implementing the formative classroom-based assessment (footnote 30). The National Academy for Primary Education is trying to bring about a change in the preparation of question papers in the PSC examination with good quality creative type items through surveys and experimentation.

(ii) **Secondary education.** The initiative for the improvement of the quality of secondary education began in 2000 through a number of projects with the financial and technical support of donor agencies. The Asian Development Bank supported the Teaching Quality Improvement Project and SESDP, and the International Development Association supported the Secondary Education Quality and Access Enhancement Project. As part of this quality improvement initiative, it was decided to introduce SBA in the secondary schools. The MOE issued a circular to the effect that SBA would be implemented from the 2005 school year in grades 6–9 in all the country's secondary schools.[32] It should be noted that SBA would be implemented only in grades 6–9, not in grade 10. It clearly indicates that SBA results will not be a part of the SSC examination. In the same memo, the ministry indicated that a learner's performance would have to be evaluated throughout the whole school year on the following criteria: (i) class attendance and interest in education; (ii) evaluation (class-wise); (iii) assignment (single or group); (iv) behavior, values, and honesty; (v) oral presentation, single and group discussion; (vi) leadership quality; (vii) punctuality; (viii) participation in cultural activities; (ix) achievement in games and sports; and (x) practical work in science. Pursuant to the abovementioned circular on SBA, it was included in the SESDP, a project of the MOE, under Subcomponent 2.3: Strengthening Students Education Assessment at Secondary School Level.[33]

The SBA model used in secondary schools of Bangladesh has three parts: (i) assessment of coursework, (ii) assessment of individual development, and (iii) assessment of pupil's progress in half-yearly and annual examinations. The coursework consists of class tests, classwork and practical work, homework, assignments, oral presentations, and group work.[34] It merits 30 marks. The remaining 70 marks are earmarked for terminal examinations. The results of the terminal examinations (midyear and year-end) would be the combination of the two.

[30] Ministry of Primary and Mass Education. 2011. *Implementation Guide, PEDP 3.* June. Dhaka. p. 58.

[31] Department of Primary Education. 2013. Annual Operation Plan: 2013–14 (PEDP 3 Based on DPP). Draft. 1 July. Mirpur, Dhaka.

[32] Ministry of Education. 2005. Memo No. Shim/Sha: 11/Bibidha-6/SESIP/2005/961, dated 12/7/2005. Dhaka.

[33] Ministry of Education. 2007. *Secondary Education Sector Development Project, 2007–2013.* Dhaka. p. 8.

[34] Footnote 27, p. 9.

(iii) **Training of teachers.** To implement SBA, a teachers' guidebook was prepared and a 2-day training was given to all the head teachers and 62,125 classroom teachers out of a total 223,555 teachers in 2006.[35] This guidebook was developed under the SESDP. The training aimed to build their capacity to implement SBA in schools. In addition to the head teachers and classroom teachers, all the education officers of the Directorate of Secondary and Higher Education (DSHE) involved in supervision and monitoring were also given the 2-day training.[36]

The proportion of teachers trained was only about one-third, and this training was given about 7 years ago. No follow-up or refresher training was conducted during this period. SBA, as a method, a system, and also a philosophy in teaching and learning, should not be taken lightly. It should be given more attention if it is to have a far-reaching effect in Bangladesh's school education system.

Teachers are not generally ready to accept change, especially one that involves extra time, energy, and labor. They would rather stay in traditional thinking and methods in teaching and student assessment. Continuous mentoring, and close and frequent supervision and monitoring, by experts was crucial to develop the skills and competencies of teachers in SBA. But such effort was not enough because the teachers were not sufficiently motivated.

Three major problems have been identified as barriers to implementing SBA in schools: (i) high workload of teachers; (ii) large class sizes; and (iii) noninclusion of SBA results in the results of public examinations (i.e., JSC and SSC examinations).

2. Introduction of Objective Type Questions

Essay and short-answer questions were dominant in the school-level internal and the public examinations in the past. This situation has changed. Now, essay, short-answer, and objective types of questions are included in these examinations. The compulsory combination is now 40% marks for objective and 60% for essay and short-answer questions. The essay and short-answer questions are prepared in such a way that the students can reveal their creativity. As such, these questions are commonly known as creative questions. The answer scripts of objective questions are scored by computer and those of the essay and short-answer questions by schoolteachers who receive special training as examiners.

D. Challenges and Opportunities in Assessment of Student Learning

This section discusses the identified major issues relating to assessment of student learning outcomes (ASLO), as well as the interventions and reforms undertaken to address them.

[35] Bangladesh Bureau of Educational Information and Statistics. 2011. *Bangladesh Education Statistics 2011*. Dhaka. p. 39.

[36] Footnote 27, p. 16.

1. Challenges

a. Absence of Established Student Assessment Policy

There is no established policy document for student assessment for the school system. There is, however, a section in the National Education Policy 2010 dealing with examination and evaluation indicating that the assessment for grades 1 and 2 will be continuous assessment only and that for grades 3 and above, there will be quarterly, biannual, and annual examinations.[37] In higher education, the policy has given importance to continuous assessment including homework and midterm examinations.

From time to time, the government issues notifications regarding the conduct of student assessment. In addition, an assessment guideline is also included in the curriculum report for the teachers to follow. However, without a separate well-articulated policy framework on student assessment or implementable standard guidelines for the institutions or schools, the quality of internal and external assessments is sure to vary widely and most possibly compromised.

b. Limited Government Funding Support to Student Assessment

The schools and other institutions charge examination fees from the students. This fee is the only source of funds for meeting the cost of internal assessment and examination. However, the fees are not enough. Hence, the government should make a provision for a grant or facilitate financial arrangements for the schools for meeting the cost for assessment, especially to support poor children and children in remote schools. At present, the national assessment is being funded by the World Bank, while public examinations are funded from examination fees collected from students.

c. Weak Governance and Institutional Arrangements in Assessment

(i) **Lack of a lead institution for national educational testing and evaluation.** Bangladesh does not have a permanently designated institution to deliver supportive academic testing and assessment services to the students, teachers, university departments, and ministry. Aside from examination and assessment, such an institution should also lead research, evaluation, and assessment on the effectiveness of education to provide information and aid in the formulation of education policies. Since 2006, Bangladesh has relied on foreign experts to conduct the national assessments in primary education. Four such assessments has been administered by 2013. The DSHE has also introduced a quasi-national assessment in secondary education under the Secondary Education Quality and Access Enhancement Project. The Australian Council for Educational Research (ACER) is providing technical assistance to both the Directorate of Primary Education (DPE) and Directorate of Secondary and Higher Education (DSH) for national assessment. ACER assists DPE and DSHE in developing tests, analyzing test scores, and preparing the assessment report. With reliance on foreign consultants, Bangladesh can hardly develop the capacity to manage its own assessment system. The question is how long Bangladesh will depend on foreign experts for conducting national assessments. To reduce dependency on foreign experts in this particular area of education, the government should set up a permanent supportive institution in the country to provide technical assistance in academic testing and services to all stakeholders.

[37] Ministry of Education. 2010. *Bangladesh Education Policy 2010*. Dhaka. p. 52.

Moreover, the implementation of SBA could have been more successful if there had been a specialized agency on educational testing and evaluation in the country, which can assist in monitoring and supervision and provide support services to the institutions and schools. Such an agency can also advise the ministry in conducting and using the results of national assessments. With the decision to introduce SBA in primary schools in 2014, such an agency could be even more crucial for effective implementation, especially in advising or assisting the training institutions and teachers.

ASLO is a special type of technical work. It requires professionals with knowledge and skills from various subjects such as learning psychology, statistics, and testing and evaluation; a background in the discipline of education; and good experience in teaching school subjects. Many neighboring countries have this kind of specialized institution. The National Council of Education, Research and Training of India; the National Education Research and Evaluation Centre of Colombo University; the National Institute of Educational Testing Service in Thailand; and the National Testing and Research Center of the Philippines are a few examples of institutions staffed with professionals in educational testing and evaluation who are capable of analyzing test data using both classical and item response theory tools. They lead the conduct of research, evaluation, and assessment of student learning in primary and secondary education independently and provide information to decision makers for formulation of education policies and plans.

(ii) **Lack of capability for research within the National Curriculum and Textbook Board.** NCTB is responsible for preparing curriculum for both primary and secondary education. NCTB has been doing that. However, curriculum development is a continuous process. It is the duty of NCTB to undertake small and large research projects on different aspects of curriculum, textbooks, and curriculum implementation, and to conduct research throughout the year. The curriculum and textbooks may be revised as necessary according to the findings of this research. Despite chronic resource constraints, the specialists are doing some research, though the quality is not very high.

There is a widespread allegation that many of the positions of NCTB are occupied by people who are not capable of doing research in curriculum assessment. They are working there on deputation from government colleges and other institutions. When they are promoted to the next higher position, they go back to their parent organizations. This deputation business is a stumbling block for the capacity development of the faculty members of NCTB.

(iii) **Inability of the education boards to safeguard the credibility of examinations.** Education boards are responsible for conducting public examinations, and they are very careful to make public examinations flawless, undisputed, and credible. Yet the education boards sometimes face criticism due to the leakage of question papers, rampant malpractice of students, and teachers acting as proctors during examinations, etc., which not only tarnish the image of the education boards, but also the credibility of the examinations.

There are, in fact, five vulnerable points in the public examination process: question paper preparation, moderation of question papers, printing of question papers, distribution of question papers to the examination centers, and safekeeping of the question papers in the government treasury or in the strong vault of a bank. Lack of integrity of person(s) involved in any one of these five points may destroy the entire examination.

Another big issue is how to reduce pressure on examination boards and students. Nearly 50 years ago, there was only one education board in the country and the number of examinees was 70,000–80,000. With the passage of time, the number of examinees increased tremendously. To cope with that, the number of education boards was increased to eight. In 2014, the number of examinees in SSC and JSC examinations combined was more than 3.1 million. The examination boards have reduced the pressure by automating 70% of examination-related work. As a result, the boards now take only 2 months to publish the JSC and SSC results after the examination.

At the end of grade 10, students need to sit for a written SSC examination on 8–10 subjects covering the whole syllabus. Again, this written examination is taken within 4–6 weeks. The situation of the PSC and JSC examinations is similar to that of the SSC examination. Examination on several subjects, if taken in a short period of time, definitely lays enormous pressure on a student's mind and body.

d. Teachers' Lack of Access to Curriculum Reports and Assessment Guidelines

The main interest of student assessment is to determine how much curricular content and competencies the student has mastered. Student assessment is basically aligned with curriculum intent. The relationship between curriculum and student assessment (presented in Figure 1 in Chapter 2 of the main report) shows that assessment enhances student learning. At the same time, assessment results provide information for curriculum specialists and education planners and decision makers in cases where adjustments or enhancement in the curriculum are needed.[38] These two complement each other. Hence, assessment is a crucial part of the curriculum.

A brief recommended assessment process for student learning that includes continuous and terminal examinations for all subjects in primary grades (1–5) and secondary grades (6–10) was included in the old curricula, which were implemented until 2012. The teachers were supposed to follow these suggestions for student assessment—such as when and how to take a class test, give homework and classwork, and hold a terminal examination. Guidelines for preparing tests and different types of questions were also provided.[39] However, the distribution of the curriculum reports that contained these guidelines was limited. Those schools that did receive the curriculum reports kept them on the shelves in the head teacher's room, limiting teachers' access to these important guidelines. The textbooks, in general, and the end-of-chapter exercises of the textbooks, in particular, became the main references for the teachers in preparing test questions for assessment and examinations.

[38] D. Strater. 2006. *Standards-Based Assessment*. Arizona: University of Phoenix. p. 4.

[39] National Curriculum and Textbook Board. National Curriculum for Primary Stage of Education (2002–2003). Dhaka. p. 136.

e. Difficulty in Assessing Affective Development of Students

The curriculum also encourages the organization of various activities such as assemblies, games and sports, cultural and religious functions, study visits to places of historical and geographical interest, science fairs, math olympiad, debates, publishing school magazines, and celebration of national days. These are venues to develop, as well as observe and assess, the affective behaviors of the students, such as patriotism, leadership, honesty, tolerance, and fellow-feeling.[40] The inculcation of these values is very important to shape the personality of the students.

However, assessment of students' class attendance has not been taken into consideration in the new curriculum. The TVET institutions and the University of Dhaka place importance on student attendance, for which marking schemes were developed and strictly followed. A similar scheme for assessment of student attendance should be introduced in schools.

The assessment of affective behavior by teachers requires special techniques and methods. The schoolteachers of Bangladesh are not capable of assessing those traits scientifically without proper training.

NCTB has a plan to provide curriculum orientation training to all teachers for effective implementation of the new curriculum. This type of training was also given during the introduction of the old curriculum. Such orientation is important and useful for the teachers. However, more important is the teachers' positive attitude toward performing their professional duties and responsibilities in relation to the new curriculum. It should be noted that the majority of schoolteachers are engaged in private tutoring, and neglect of their school duties and responsibilities is rampant. The impact of curriculum revisions or reforms and improved guidelines for assessment processes may not materialize if teachers are not motivated.

f. Existence of Factors that Hamper Successful School-Based Assessment Implementation

(i) **Limited choices of student assessment modalities.** The government has decided to shift the school-level student assessment system from traditional methods[41] to SBA where teachers are supposed to use a variety of techniques to motivate students and develop and assess student competencies. Such techniques are called "learning, teaching, and assessment" (LTA) modalities. Out of the many LTA modalities, only six have been recommended by NCTB to be used in Bangladesh schools under SBA introduced in 2006: (i) class tests, (ii) classwork and practical work, (iii) homework, (iv) assignments, (v) verbal presentations, and (vi) group activities. These modalities were referred to as "course work" in the teachers' guide prepared by NCTB. The number of modalities may be increased later when the teachers become more experienced with the system and the students see its benefit in terms of their learning performance. The educational stakeholders will also appreciate the value of SBA. [42]

[40] National Curriculum and Textbook Board. 2012. *National Curriculum Report 2012: Bangla Language. Dhaka.* p. 17.

[41] Traditional means the midyear and year-end examination system that was in practice in secondary schools for a long time.

[42] National Curriculum and Textbook Board. 2006. *Teachers Guide: School-Based Assessment for Grades 6 to 9*. Dhaka. p. 3.

Meanwhile, however, confining teachers to only six LTA modalities limits their choice and creativity in assessing students. For example, assessment of affective objectives, such as personality development, cooperation, respect for others, noncommunal attitude, and fellow feeling, may require different modalities beyond the prescribed set. The more the number of modalities used, the better will be the assessment.

(ii) **Insufficient school-based assessment guide for teachers.** For SBA implementation, the teachers' guide was prepared by NCTB and was used in the orientation training in 2006. However, this guide is more of an administrative handbook than a training guide. It tells mostly how to record students' SBA results in the results book. Issues such as preparing curriculum-based standard achievement tests, taking and marking tests (answer scripts), interpreting students' marks, providing feedback to the students for improvement, and selecting and using appropriate LTA modalities were not included.

The guide mentions assessment of students' school behavior such as abiding by rules and regulations, respect for others, cooperation, leadership, diligence, and also some personal and social values. Some tables have been provided in the guide to record those behaviors, but instructions for observing and assessing them are not provided. Generally, rating scales, checklists, and observation schedules are used for assessing those behaviors. How to prepare and use these instruments and explain student performance should have been included in the guidebook.

(iii) **Unfulfilled supervision and monitoring functions.** The head teachers of schools, secondary education officers from *upazila*s, and high-level officers under the Directorate of Secondary and Higher Education (DSHE) were also given a 2-day training in 2006[43] under the SESDP using the same guide used in teachers' training. The purpose of this training was to make them capable of supervising and monitoring the implementation of SBA and providing necessary administrative support. This 2-day training may be adequate for the education officers, but not for the head teachers. Unlike the education officer, the head teacher is a manager of a school and, at the same time, an academic supervisor who should be always available to the teachers. As such, the training for the head teachers must focus on building capacity to guide and support the teachers through more in-depth knowledge, including developing understanding of the pros and cons of SBA. SBA implementation would have been more successful if the head teachers were capable of guiding the teachers properly and the education officers performed more intensive monitoring in the schools.

(iv) **Large class sizes and teacher–student ratio.** For implementation of SBA, a teacher is required to prepare tests and question papers, administer the tests, assign classwork and homework, evaluate them in time for providing feedback to the students, and record the performance (marks) properly. This is in addition to administering weekly, monthly, and terminal examinations. The teachers often

[43] Footnote 27, p. 16.

experience difficulty, especially with large class sizes. The results of the Classroom Assessment Practices survey revealed that 78.1% of urban and suburban schools in Dhaka have an average class size of more than 40 students. The teacher–student ratio is 1:43 in primary schools and 1:34 in secondary schools; the average number of teachers is 5.0 in primary schools and 11.7 in secondary schools.[44] The large average class size is considered a main barrier to the implementation of SBA. This situation is more acute in nongovernment secondary schools, especially in and around cities.

2. Opportunities to Improve Assessment of Student Learning Outcomes

a. Strong Experience in Public–Private Partnership

The concept of public–private partnership (PPP) is not new in Bangladesh. The introduction of a 1-year preschool class for children 5 years old and above in government primary schools was first witnessed as a PPP effort in 1997.[45] Under an informal agreement between the Government of Bangladesh and the Bangladesh Rural Advancement Committee (BRAC), BRAC opened and operated 1-year preschool classes in all government primary schools, and these classes are now part of all primary schools. The government has also implemented a good number of training programs for teachers and a research project partnership with the Institute of Education and Research, University of Dhaka. With a record of collaboration with the private sector in education, the government may explore the possibility of using a PPP for assessment. Leading universities in Bangladesh can provide research support and technical advice to concerned government agencies in the absence of a special government institution for learning assessment, education evaluation, and research.

Bangladesh introduced national assessments in primary education in grades 3 and 5 in 2006. National assessment was started in 2015 at the secondary level in the country. The DSHE conducted two quasi-national assessments in secondary education in 2012 and 2013.[46] In preparing tests, analyzing test scores, and preparing reports for national assessments, technical assistance is being provided by experts from ACER. In Bangladesh, local professionals are not yet capable of handling national assessments due to the shortage of expertise in this particular area.

Therefore, DPE and DSHE should take immediate action to work under a PPP arrangement with appropriate institutions in the area of ASLO and for the staff capacity development in monitoring and evaluation. The prospective areas of collaboration may be development of learning assessment tests, a training manual for teachers, a handbook on preparing learning achievement tests, scales for measuring affective behavior of students, classical and modern techniques (i.e., item response theory) of test-score analysis, and report writing and providing training to schoolteachers.

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[44] Footnote 35, p. 20.

[45] Dorpan. 2012. *Bangladesh Rural Advancement Committee (BRAC) Primary School Management Guide.* Dhaka. p. 1.

[46] DSHE conducted student assessment in only 309 secondary schools in 31 sample *upazilas* selected out of 122 *upazilas* of the Secondary Education Quality and Access Enhancement Project. There are 492 *upazilas* in Bangladesh.

b. Availability of Information and Communication Technology for Use in Education

Catering to the education needs of about 17 million primary and 751,000 secondary school children and to the continuous professional development of about 619,000 teachers through traditional means requires a huge amount of resources—time, human, and financial. However, with the right technology, it can be done more efficiently and probably more cost-effectively. The average number of teachers per school is 23.0 in government schools and 11.9 in nongovernment schools. The teacher–student ratio is 30.3:1 in government schools and 35.6:1 in nongovernment schools.

Most of the secondary schools (government and nongovernment) have been provided with computers and other accessories by the government. Many primary schools where electricity is available have also received computers from the government. It is expected that, within a short time, the rest of the primary schools will have computers. It is necessary to supply at least five computers to each school and to provide computer operation training to the teachers.

c. Standards-Based versus Standardized Testing

The schoolteachers of Bangladesh are well aware of the principles and practices of designing question papers and objective tests, and they have been using those tests to measure students' knowledge and skills and determine their academic progress over time. However, the teachers have limited knowledge and skills in preparing and using different kinds of test tools (especially means standardized and criterion-referenced tests across different subjects) due to the lack of adequate training and experience in testing and evaluation. Standards-based testing, standardized testing, and criterion-referenced testing are among the most important ones. In this subsection, the discussion on the test tools will remain confined to standards-based versus standardized testing.

(i) **Standardized testing.** Many educated parents and students aspiring to study abroad, especially in the United States, are familiar with standardized tests such as IQ, CAT 5, ILTS, GRE, SAT, etc. A standardized test is one in which a student's performance is measured in comparison with that of everyone else who took the test. The validity and reliability of standardized tests are established statistically.

Bangladesh is using standardized tests only in conducting national assessments in primary education. The NAC, in cooperation with NCTB, is preparing the standardized tests and conducting national assessments in grades 3 and 5 with the technical assistance of ACER, India. ACER also analyzes data and prepares assessment reports.

(ii) **Standards-based testing.** Standards-based testing compares student performance against a set of standards, rather than with other students as in norm-referenced testing. It encourages linking assessment to curriculum.[47] The criteria and information are taken directly from the content that a student has been taught or expected to learn. Standards-based testing is particularly helpful when a school district or state education body defines learning standards that each student and school need to achieve. The test can then measure not only student learning achievement but also teacher effectiveness.

[47] D. Strater. 2006.*Standards-Based Assessment*. CUR/562. Arizona: University of Phoenix.

Standards-based testing is suitable for schools for developing their own assessment system and accordingly improving school performance. The present primary and secondary curricula of Bangladesh are competency based. The content of curricula for all subjects has been selected based on learning outcomes derived from subject-wise terminal and grade-wise attainable competencies, and the content of each subject has been aligned with learning outcomes derived from attainable competencies as shown in the curriculum report. The primary schoolteachers have been working with this curriculum since 2003. Keeping the learning outcomes in view, the teachers can easily prepare standards-based tests in all subjects and use them for student assessment. Hence, it may not be a problem for primary schoolteachers to design and use standards-based tests for SBA. It only needs initiatives from the schools and government.

The present secondary school curriculum (introduced in the 2013 school year) is the first competency-based curriculum for secondary schools in Bangladesh. It may take some time for the teachers to become familiar with and use the curriculum. NCTB has a plan to train all secondary schoolteachers in Bangladesh to enable them to use the curriculum in the classroom, and also to design and use standards-based tests for assessing student learning outcomes.

3. Strengths, Weaknesses, Opportunities, and Threats Analysis

The results of a strengths, weaknesses, opportunities, and threats (SWOT) analysis of SBA and continuous assessment, public exams, and national assessments are given in Table A1.8.

Table A1.8: Bangladesh—Strengths, Weaknesses, Opportunities, and Threats Analysis Matrix

	School-Based Assessment/ Continuous Assessment	Public Exams	National Assessment
STRENGTHS of the assessment system in Bangladesh	Strengthen formative role of assessment as teachers are informed of what competencies need to be focused on	Useful for certification and widely accepted by the public (parents and teachers)	Provide a general overview of student performance in the school system
WEAKNESSES of the assessment system in Bangladesh	Difficult to practice in schools unless the teachers are well-trained and motivated	Perceived to be an unreliable and nonvalid measure of achievement; question paper leakage and malpractice in public exams	Not readily accepted as an indicator of student performance in the school system

continued on next page

Table A1.8 *continued*

	School-Based Assessment/ Continuous Assessment	Public Exams	National Assessment
OPPORTUNITIES[a]	Has the potential to improve student learning continuously	Requires a permanent body to conduct public exams	Provides information that is not captured and reflected in the school-based assessment and public exams
THREATS[b]	Overemphasis on assessment rather than teaching and instruction	Teachers tend to overemphasize examination performance rather than teaching children to learn skills and competencies	May discredit results of the public examinations

[a] Including promising good practices that can be scaled up or institutionalized.

[b] Expected barriers to taking advantage of the opportunities and implementing reforms.

Source: Author.

E. Recommendations and Future Directions for Innovations in Assessment

All students in Bangladesh are required to take public examinations given at grade 5 for primary, grade 8 for lower secondary, grade 10 for secondary, and grade 12 for higher secondary. All these public examinations are given once a year by the eight examination boards in Bangladesh. These boards are autonomous bodies and coordinate all activities related to public examinations. The National Academy for Primary Education is responsible for preparing questions for grade 5 (PSC) examinations.

At present, one national assessment is being administered by Bangladesh that started in 1998 through PEDP I. The NAC was formed under the Monitoring and Evaluation Division of the Directorate of Primary Education to oversee the national assessments given to students in grades 3 and 5. National assessment is still to be introduced at the secondary level.

SBA completes the assessment system. The main objectives of SBA in Bangladesh are for formative and diagnostic assessment and to determine promotion of pupils to the next higher grade. SBA is practiced at both the primary and secondary levels, and has three distinct forms: (i) internal examination including terminal examinations, (ii) continuous class assessments throughout the year, and (iii) internal examinations wherein two examinations are given in a school year—at midyear and at year-end.

Reforms on ASLO introduced in Bangladesh include (i) implementation of SBA, (ii) introduction of objective type questions in public examinations, and (iii) introduction of creative questioning in all public examinations. On the other hand, ASLO in the country has some challenges: (i) absence of an established student assessment policy, (ii) limited

government funding support, (iii) weak governance and institutional arrangements in assessment, (iv) lack of access of teachers to curriculum reports and assessment guidelines, (v) difficulty in assessing affective development of students, and (vi) existence of other factors that hamper SBA implementation.

The recommendations in this section were prepared with inputs from several stakeholders including the controller and the deputy controller of examinations, and the Board of Intermediate and Secondary Education. University professors and TVET experts who have experience in practicing and using continuous student assessment in their departments and polytechnic institutes were also interviewed. The views and opinions of deputy directors, district education officers, *upazila* education officers, and school head teachers who are involved in the implementation and supervision of SBA and continuous student assessment system in secondary schools were also sought. The recommendations presented in this annex are based on the evaluation of issues confronting ASLO in Bangladesh.

1. Formulate a National Policy on Student Assessment and Funding

A separate policy for student learning assessment should be formulated and implemented by the government for primary, secondary, and higher education institutions, including a detailed framework for internal assessment emphasizing continuous assessment. The present Education Policy 2010 has not dealt with student learning assessment adequately through a framework. Such a policy should include a provision for funding allocation, especially at the school level. Policy without funding is meaningless. For instance, to implement SBA or continuous assessment, a huge quantity of supplies, including paper and printing ink, is necessary for preparing and printing tests and answer scripts, among others. This will obviously escalate school expenses.

In addition, the current annual budget allocation for research is meager compared with the actual need. This fund is allocated to NCTB. Curriculum research studies gather data from schools, teachers, students, teacher educators, school supervisors, and educational specialists, among others. This requires researchers to travel a lot, which should be funded adequately. Publication, printing, and dissemination of research products such as education policy, education development plans and projects, curriculum reports, textbooks, teachers' guides, public examination results, and national assessment reports also require sufficient funding.

2. Improve Governance and Institutional Arrangements

a. Establish a National Institute of Educational Testing, Evaluation, and Research

In Bangladesh, a national institution for testing, evaluation, and research is expected to provide support services for academic testing, evaluation, and capacity development of schoolteachers, TVET institutions, university departments, and concerned ministries and education directorates. A national institution will also conduct research by itself or in collaboration with other institutions in curriculum and student learning assessment to produce reliable data and information to aid the formulation of education policies. It is high time to have such an institution in the country and it should be staffed with professionals and experts.

Although a national agency on testing and evaluation may not directly oversee SBA—as that should be the responsibility of the *upazila*, district, and divisional education offices—it

can assist teacher training institutions in designing courses and training manuals on SBA and continuous assessment. As an apex professional institution, a national agency should monitor the progress of SBA and continuous assessment on a sample basis, maybe at least twice yearly, and its evaluation is expected to be impartial.

The MOE and MOPME can jointly learn by visiting countries with similar institutions, such as Australia, Malaysia, and the Philippines. The experience and information obtained during such visits can help in the preparation of the objectives, functions, staffing and responsibilities, recruitment policy, etc. for the proposed institution.

b. Strengthen the National Curriculum and Textbook Board

To make the NCTB a real professional institution for curriculum development and research, the MOE should first stop the deputation system of staffing to NCTB, particularly in its Curriculum Unit. The deputation system is the main barrier to developing NCTB as a special professional institution. Vacant posts should be filled by recruiting highly qualified persons with teaching experience at the school level. A professional development system should also be in place for newly recruited specialists. For example, they could be sent to some renowned institution abroad for advanced training in curriculum development and research.

c. Enhance the Capability and Credibility of the Education Boards

One of the key roles of the ADB-funded Secondary Education Sector Investment Program in Bangladesh is to support the education boards overseeing the public examinations in the country, particularly for secondary education.

The Bangladesh Examination Development Unit is supporting all examination boards in terms of question-setting processes and procedures, ensuring that they will offer high-quality questions in the public examinations. Coming up with psychometrically sound assessment tools for the public examinations requires not only expanding capacity of the examination boards, but also ensuring that there is succession for staff to handle more rigorous testing procedures.

3. Align Teaching Strategies and Assessment with the Curriculum

Generally, the school curriculum is revised every 10–15 years. Before the last revision in 2012, the primary curriculum was revised in 2003 and the secondary curriculum in 1995. The next revision will be in 10–15 years.

The whole curriculum is spelled out in the curriculum reports. These reports provide the teaching objectives in each subject as well as the guidelines on the learning outcomes. The learning outcomes are very important to the teachers as they are the bases of everyday lessons and identification of the appropriate teaching methods and assessment techniques to be used. Hence, an adequate number of copies of the new curriculum report should be sent to each primary and secondary school so that all teachers can have ready access to them.

4. Build the Capacity of Teachers

For secondary education, the current emphasis for teacher training is building the capacity of all teachers on SBA and continuous assessment as soon as possible. The duration

of training must be increased to at least 5 days in contrast to the 2-day training initially conducted.

As for preservice education and training for secondary education teachers, the BNU should take steps to revise the preservice curriculum of teacher training colleges to include SBA. The 14 government and 104 private colleges that offer preservice teacher training are under BNU. On the other hand, the curriculum of primary teacher training has already been revised to include SBA. Therefore, teachers coming from primary education training institutes will have a good orientation in SBA or continuous assessment. By that time, NCTB either will have completed or will be nearing completion of the preparation of the SBA training guide, tools, and methods for training current primary school teachers.

The guide prepared in 2006 at the time of introduction of SBA mentions assessment of affective behaviors such as abiding by school rules, respect for others, cooperation, leadership, diligence, and some personal and social values. While the guide provides some tables to record those behaviors, it does not discuss how to assess them.

Some motivational and incentive schemes should also be developed and implemented. An example is a national award system with recognition and cash prizes for both teachers and schools for successfully implementing SBA. Participation in study visit programs to some neighboring countries may also form part of the incentive system. Such visits facilitate cross-fertilization of ideas and knowledge sharing among teachers.

To make the SBA training effective, a 1-week training program for trainers and trainee-teachers should accompany the guide. A small group of training experts, including an SBA specialist, may be appointed or hired to prepare a good, effective training guide.

The teachers' guide should cover issues such as preparation of curriculum, standards-based achievements, and teacher-made tests; taking and marking tests (answer scripts), interpreting students' marks, and providing feedback to students for improvement; and selection and use of appropriate LTA modalities. It should also include a process for assessing affective behaviors and how to prepare and use rating scales, checklists, observation schedules, etc. Training content may also include what SBA is and why it is important.

The NCTB can now launch an initiative to set up a computerized question bank for all subjects, grades, and chapters or units. Preparing questions covering objective, short answer, and essay types (creative questions) is a big task and needs the involvement of many subject specialists. The validity and reliability of each question must be tested by following statistical and item response theory (IRT) analysis. Foreign experts with IRT analysis skills can be appointed to this important undertaking. This would give the NCTB specialists a good chance to work with a foreign IRT expert and learn the techniques of IRT analysis as a by-product. Once a question bank is established, the teachers may use these questions safely for at least 10 years in SBA programs. A CD containing the NCTB question bank can be prepared and distributed to schools. The subject teachers may prepare tests and question papers simply from the CD. This initiative is expected to reduce a good amount of time and tension of teachers for preparing tests for SBA.

5. Improve Assessment and Examination Procedures

a. National Assessment

Conducting a national assessment is a costly and massive task in terms of time, energy, and resources, so a national assessment report is a valuable document for DPE and MOPME. Many important findings are drawn and recommendations formulated based on the national assessment reports.

To use the results of national assessments, MOPME may constitute a small committee to examine the assessment results and submit a report targeting interventions to be undertaken with a view to bringing about necessary changes in the system and undertaking specific reform programs for the improvement of primary education. The ministry will decide what to implement immediately and what to defer based on its available resources. However, the ministry is not known to have taken any follow-up action to utilize the results of the national assessment.

The national assessment is being conducted at the primary level with financial support from PEDP III. It should be transferred to the government's revenue budget because funding may stop when PEDP III is over. Moreover, a national assessment should be conducted every 2 years to monitor trends in the primary education system.

b. School-Based Assessment

Implementation of SBA requires a lot of extra time, energy, patience, labor, and above all, a positive mind-set on the part of teachers. A government circular and a 2-day one-off training using a substandard guidebook cannot be considered enough for SBA implementation. The following are recommendations for making the SBA implementation program effective and successful:

(i) **Improve supervision and monitoring of SBA implementation.** The head teachers and education officers, from *upazilas* to the highest level under the Directorate of Secondary and Higher Education (DSHE), should be given a good briefing[48] to make them capable of supervising and monitoring the implementation of SBA and providing necessary administrative support. The roles of the head teacher and the education officer, however, are not the same in the context of SBA. Each head teacher should be groomed as a school-level supervisor, a resource person who can provide constant guidance and professional support to teachers. This training should be in-depth and exhaustive, including all the pros and cons of SBA.

(ii) **Address the issue of class size and teacher–student ratio.** The existing large class sizes and teacher–student ratios are not in favor of implementation of SBA or continuous learning assessment in both primary and secondary schools. The ministry should take adequate measures to increase the number of teachers so that the class size averages around 30–35.

(iii) **Harness the benefits of appropriate cost-effective technology.** The implementation of SBA or continuous assessment in schools involves training teachers, preparing a teacher training manual, and recording assessment results.

[48] Footnote 27, p. 16.

Accomplishing the above tasks by traditional means would require a huge amount of resources, including time, money, and teacher involvement. But since the use of educational technology can greatly reduce these requirements, the following strategies can be adopted for implementing SBA:

(i) **Implement an effective teacher training approach.** To train a large number of primary and secondary teachers, the strategies of face-to-face, technology-based training, or a combination of both can be used. Face-to-face training requires a large amount of time and human resources, while technology-based training can minimize these expenditures. Technology-based training may consist of distance training mode using self-learning materials or computer-based training. The advantages and disadvantages of each type of training are known to all. The information and communication technology (ICT) and educational training experts can be used to conduct a cost–benefit analysis and recommend which approach to use. The MOE and MOPME will have to make that decision.

(ii) **Provide effective and adequate training manuals.** The government will decide first what type of training strategy it wants to follow for training teachers for SBA. A group of local assessment specialists, under the leadership of a foreign consultant who is professionally capable and has experience in SBA or continuous student assessment, should then be commissioned by the MOE and MOPME to prepare the training manual for schoolteachers. An ICT expert or an expert in distance education has to be included in the group depending on the chosen approach.

(iii) **Implement an efficient scheme for recording of assessment results.** For recording assessment results, all the primary and secondary schools should be supplied with computers (two for primary schools, five for secondary schools), and all teachers should be provided computer operation training.

c. Public Examinations

To reduce leakage of question papers, malpractice in the examination halls, and the pressure of public examinations on students and examination boards, the education boards should consider adopting the following suggestions:

(i) **Address the issues of question paper leakage.** Five vulnerable points, all related to question papers—their preparation, moderation, printing, distribution to the examination centers, and safekeeping—are associated with public examinations.

For the preparation of question papers and their moderation, a question bank can be established in examination boards. Shortly before the examinations, the responsible person from the board will derive randomly from the computerized question bank a requisite number of questions of each category. The highest security measures, with the help of law enforcement agencies, should be employed to avoid leakage of question papers during printing and distribution. Question papers should be kept in the government treasury or in the vault of a bank near the examination center for safekeeping. Question papers may be distributed directly to the examination rooms just before the beginning of the examination with the aid of ICT. To this end, the examination board should form a committee with national and international ICT experts to formulate a mechanism to this effect.

(ii) **Eliminate malpractice in examination halls.** Using video cameras in the examination halls may curb cheating and other malpractice during examinations. In Beijing, video cameras have been installed in all the classes to deter and detect violation of examination rules,[49] but this is an expense that may not be affordable to Bangladesh. However, the education boards can consider the use of video cameras in the future.

(iii) **Reduce examination pressures.** Public examinations exert tremendous pressure on both the examination boards and the students. The number of examinees is increasing every year. In 2014 alone, the number of examinees in SSC and JSC combined was more than 3.1 million. To reduce the pressure, the number of examination boards should be increased from the current 8 to 15, roughly one board for every five districts (currently a total of 64). Another way to ease the pressure is to automate 70% of examination-related work.

At the end of a 2-year course of study (end of grade 10), the students need to sit for the written SSC examination on 8–10 subjects covering the entire curriculum. This written examination is taken within 2–6 weeks' time. The situation of the PSC and JSC examinations is similar to that of SSC. Taking examinations on several subjects in a short period of time lays enormous pressure on students. To reduce some of this pressure, SBA should be strengthened and its results should be combined with the outcome of public examinations in secondary education.

a. Utilize Information and Communication Technology in Assessment

(i) **Training of teachers**. As many as 395,000 primary teachers and 224,000 secondary teachers will need to receive SBA orientation training. This may be of two types: face-to-face training or educational technology-based training. Face-to-face interaction may be minimal or even unnecessary in technology-based training. Technology-based training may consist of distance training using self-learning materials or computer-based training. The ICT and educational training expert will conduct a cost–benefit analysis and make recommendations on which type of training to use.

(ii) **Preparation of a training manual**. The DPE or DSHE will decide first what type of training it wants to follow for teacher training on SBA. A group of local assessment specialists may then, under the leadership of a foreign consultant who is professionally capable and has experience in SBA or continuous student assessment, be commissioned to prepare the teacher training manual. An ICT expert or an expert in distance education has to be included in the group if the decision goes toward computer-based or self-learning materials for distance training.

(iii) **Keeping records of student assessment results.** The school generally keeps students' examination marks and other performance records in a results book. It is not difficult to keep records of student performance for two or three examinations in a results book. But in SBA or continuous assessment, different kinds of tests are taken, and assessments are more frequent. It is more efficient and convenient to keep records of test scores and performance in various modalities in a computer than in a results book.

[49] P. Hill. 2010. *Asia and Pacific Secondary Education System Review Series No.1: Examination Systems.* Bangkok: UNESCO. p. 9.

b. Establish Public–Private Partnership to Support Assessment

There is a scope for PPP support in assessment, particularly in conducting national assessment, developing a student learning assessment guide, and teacher training. For instance, when Bangladesh introduced national assessment in grades 3 and 5 in 2006, experts from ACER in India were employed to help prepare tests, analyze test scores, and prepare reports. In Bangladesh, local professionals are not yet capable of handling the national assessment due to the shortage of experts in this particular area; thus, the following recommendations should be considered:

(i) DPE and DSHE should use the expertise of the faculty members of the Institute of Education Development of BRAC University, the Institute of Education and Research of the University of Dhaka, and English in Action (United Kingdom) for preparing test tools in national assessment of primary education.
(ii) DPE needs to recruit more than 1,000 test administrators locally for the administration of national assessment at the school level. Generally, local education officers are used for this purpose, and secondary school teachers have also been used, but questions have been posed regarding their impartiality. BRAC's cooperation can be sought safely in this regard. BRAC employees are working in every corner of Bangladesh.
(iii) The Institute of Education Development of BRAC University, the Institute of Education and Research of Dhaka University, and/or English in Action have many capable research experts and education specialists. DPE and DSHE can undertake research projects on many problems in primary and secondary education through partnership arrangements with these institutions.

4. Conceptual Framework for Assessment of Student Learning Outcomes

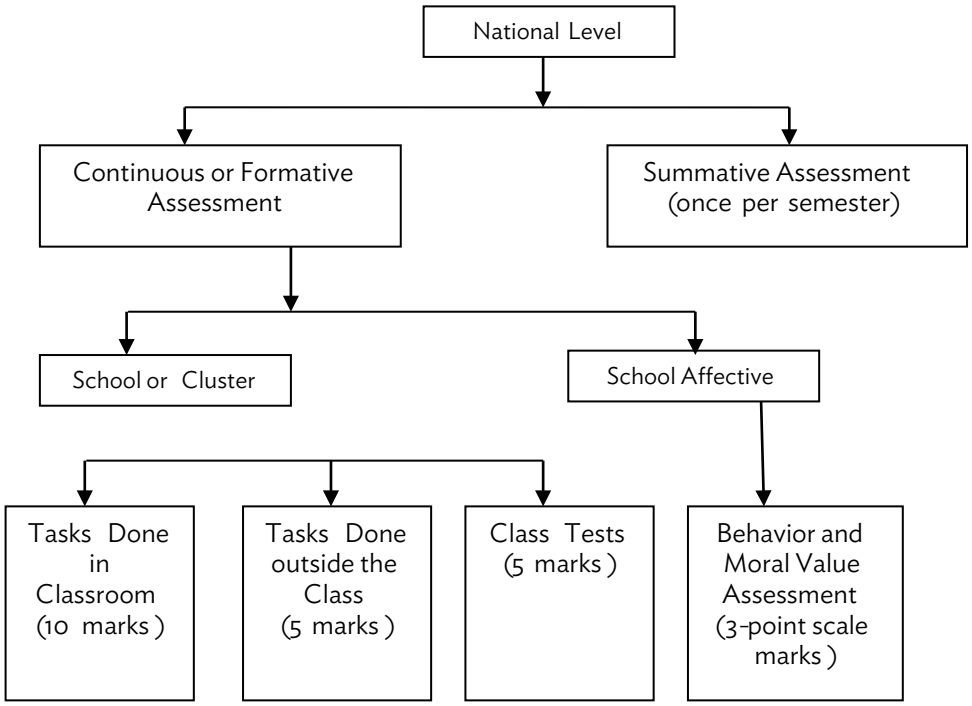
The government has now introduced continuous assessment in the secondary schools in lieu of SBA with only three coursework, namely classwork, homework, and class test. In fact, a guideline for continuous student learning assessment for all subjects has been prescribed in the new secondary school curriculum introduced in 2013. Keeping this guideline in view, a conceptual framework has been put up for continuous student learning assessment (Figure A1). Only time will tell if and how it is implemented in schools.

An assessment system following this framework may soon be phased in to secondary schools. In the first phase, it will probably be conducted in grades 6–8, and in the second phase, in grades 9 and 10. This system seems to be somewhat easy to carry out and also seems to be teacher-friendly. However, classroom teachers should be first made aware of the processes and believe in the modified assessment system. This can be done through training, which should also include the effective use of a manual or guidelines to carry out the assessment under this framework.

It would be wise to follow the same framework for implementing continuous assessment in primary schools, with some modification, if necessary, to suit the needs of the primary curriculum and children.

In view of school realities such as class size, teacher–student ratio, limited resources, and socioeconomic status of teachers, this student assessment framework is simple and pragmatic enough. It can later be improved gradually to evolve into a system that will be on a par with the assessment systems of Hong Kong, China; Malaysia; and Sri Lanka.

Figure A1: Bangladesh—Conceptual Framework of Student Learning Assessment



Source: Author.

References

Ahmed, K. S. 2011. *Economical Development of Bangladesh. Problems and Solutions*. Helsinki: Arkada University of Applied Science.

Asiatic Society of Bangladesh. 2003. *Bangla Pedia, National Encyclopedia of Bangladesh.* http://thebanglapedia.com.

Directorate of Primary Education. 2011. *Third Primary Education Development Program (PEDP 3)*. Program Document. June. Dhaka.

Faculty of Science, University of Dhaka. 2012. *Course Curriculum and Rules: BSc (Honors) and MSc Program.* Dhaka.

Faculty of Social Science, University of Dhaka. 2012. *Course Curriculum and Rules: BSS (Honors) and MSS Program*. Dhaka.

Greany, V., and T. Kellaghan. *1996. Monitoring the Outcomes of Education Systems.* Washington, DC: The World Bank.

———. 2008. *Assessing National Achievement Level in Education.* Vol. 1. Washington, DC: The World Bank.

Institute of Education and Research, University of Punjab. 2003. *Assessment of Learning Achievement: Manual for Lead Trainers.* Lahore, Pakistan.

International Labour Organization. 2009. *Facts on Youth Unemployment, Bangladesh*. Geneva.

Ministry of Finance. 2012. *Bangladesh Economic Review 2011.* Dhaka.

———. 2013. *Bangladesh Economic Review 2012.* Dhaka.

Menem, M., and H. M. Binyamin. 2010. Higher Education in Bangladesh: Status, Issues and Prospect. *Journal of Social Science*. 30 (12, December). Pakistan.

National Curriculum and Textbook Board (NCTB). 1995. *Curriculum Report of Secondary Education.* Dhaka.

———. 2003. *Curriculum Report of Primary Education*. Dhaka.

———. 2006. *Teachers' Guide: School-Based Assessment for Grades 6 to 9.* Dhaka.

———, Curriculum Development Unit. 2012a. *National Curriculum 2012*. Dhaka.

———. 2012b. *A Study on SBA System Report 2012.* Dhaka.

Nurulla, S., and J. P. Naik.1943. *History of Education in India*. Bombay: Macmillan.

Oriondo, L., and E. M. Dallo-Antonio. 1984. *Evaluating Educational Outcomes.* Manila: Rex Book Store.

Rahman, M. L., and A. K. Sandhu. 2012. *Bangladesh Education Quality Background Study. Education Sector Review*. Final report. Washington, DC: The World Bank.

Rahmann, E., and M. H. Rahman. 2008. *Mapping of Non-formal Education Activities in Bangladesh*. Bureau of Non-Formal Education, Ministry of Primary and Mass Education, Bangladesh.

Roy, D. 2009. *Labour and Household Income and Expenditure Survey*. Geneva: International Labour Organization.

APPENDIX 2: STUDENT ASSESSMENT AND EXAMINATION IN NEPAL

Nepal's population of about 27 million includes several South Asian ethnic groups. The country's average annual population growth rate from 2008 to 2013 was 1.3%. About 90% of the population is Hindu. Nepali is the official language, but English is also spoken because of the growing presence of tourists and expatriates who are working with international nongovernment organizations (NGOs).

Economically, Nepal is one of the poorest and least developed countries in the world. About one-fourth of its population lives below the poverty line. Nepal is predominantly an agricultural country. Industrial activity is limited to the processing and export of agricultural products. In 2013, the gross domestic product (GDP) of Nepal was about $700, with a GDP growth rate of 3.6%. The contribution of agriculture to the annual GDP was 1.3%, with industry at 1.6% and services at 6.0%.

While the government has taken some steps to make Nepal's economy more attractive to foreign investment, Nepal's remoteness, lack of technology, its landlocked status, and its susceptibility to natural disasters constrain prospects for future development.

A. Assessment System in Nepalese Education

Formative and summative assessments are emphasized in the education policies as well as in curriculum and teacher training in the Nepalese education system. However, weightage and importance seem to be inclined toward summative assessment. A continuous assessment system (CAS) has been gradually implemented since 2010. The National Assessment of Student Achievement (NASA) has been developed and administered from 2010. This section presents a review and analysis of the national educational assessment system in Nepal with respect to (i) policy framework; (ii) curriculum and assessment system; (iii) governance and organizational structure; (iv) types, modes, and frequency of assessments; and (v) uses and purposes of assessment.[1]

[1] Various terms related to assessment are used in education documents in Nepal. The usual meaning of those terms as used is described in this footnote for clarity:

Terminal: The terminal examination is conducted at the end of a certain level of education. In most cases, students must meet specific requirements and procedures to continue to the next level of education.

Certification: The certification examination is the summative one at the end of a grade to certify level of achievement at that grade. Passing is compulsory to be advanced to the next grade or level (if liberal promotion is not applied in that grade).

External: External assessments are conducted by a board or examination committee outside the school.

Internal: Internal assessments are conducted by a school or subject teacher.

National examination: The national examination is administered to a sample of students to evaluate the effectiveness of the system and inform decision makers.

1. National Assessment Policy Framework

The Nepalese education system is governed by the Education Act, 1971 and Education Rules, 2002.[2] Along with the Education Act and Regulations, the National Curriculum Framework for School Education in Nepal[3] and the School Sector Reform Plan 2009–2015[4] are the guiding documents in assessment as well. Assessment policy is discussed here based on these documents.

a. Philosophical Bases of Assessment

The objective of the National Curriculum Framework (NCF) is for student assessment and evaluation to be integrated into the learning processes of students aimed at achieving competencies specified in the curriculum. The assessment will be school based and teachers will be made more accountable for the learning outcomes of students. The NCF encourages formative and summative assessments. The formative assessments emphasize scrutinizing the qualitative aspects of students' specified behavior, skills, and attitudes, while summative assessments lay emphasis on academic achievement, specifically on grade promotion. A liberal promotion policy is suggested from grades 1–7 on the basis of CAS. The CAS is currently used for grades 1–3. Except for grade 8, all examinations up to grade 9 are school based. In line with the NCF, the School Sector Reform Plan (SSRP) emphasized assessment principles that include competency standards, the CAS, liberal promotion, remedial support to students performing below the minimum standard, and national standards set and monitored for certain grades and subjects. Overall, the main principles that guide assessment practices in Nepalese school education are the following:

(i) assessment to improve student learning,
(ii) assessment of competency,

Nationwide examination: Public examination conducted at the same time as the national level; its purpose is to certify a student's learning; also known as certification examination.

School-based assessment: Assessment conducted at the school level by the teachers; its main purpose is to improve students' learning.

Summative: A year-end examination or a periodic examination in which the scores are added to the year-end or final examination.

Internal: Internal assessments are conducted by a school or subject teacher; also considered as classroom assessment or even school-based assessment.

National assessment: The national examination is administered to a sample of students to evaluate the effectiveness of the system and inform decision makers.

Public examination: Public examination conducted at the same time as the national level; its purpose is to certify a student's learning; also known as certification examination.

School-based assessment: Assessment conducted at the school level by the teachers; its main purpose is to improve students' learning.

Summative: A year-end examination or a periodic examination in which the scores are added to the year-end or final examination.

CAS: In CAS, a record is maintained by the teacher as 3 ticks for *very good*, 2 ticks for *good*, and 1 tick for *average or moderate*—on five indicators (classwork or class participation, project work, change in behavior, creative works, and attendance). Based on the number of tick marks obtained, the student's achievement level is determined in a percentage and graded as A, B, or C. The main purpose of CAS or school-based assessment is to find out a student's strengths and weaknesses, analyze the outcomes, and then make or update an instructional plan.

[2] Nepal Law Commission. 2002. Education Act, 1971 and Education Rules, 2002 AD. *Nepal Gazette.* 30 May. Kathmandu.

[3] Curriculum Development Center. 2005. *Primary Education Curriculum—Grades 1–3.* Sanothimi.

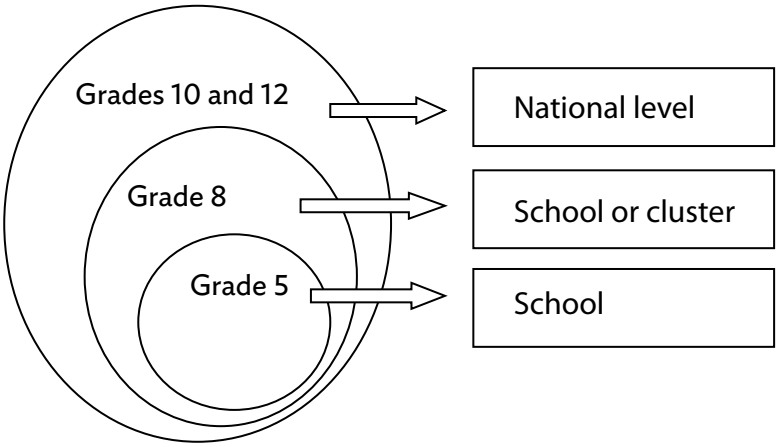
[4] Ministry of Education. 2009. *School Sector Reform Plan 2009–2015.* Kathmandu.

(iii) prioritization of school-based assessment (SBA),
(iv) teacher accountability for student achievement,
(v) support to all students so they can learn and achieve at least the minimum standard of learning,
(vi) certification of learning achievement, and
(vii) monitoring of achievement based on national standards.

b. Legal Bases of Assessment

For terminal examinations, the Education Act provides for three examinations at the school level as shown in Figure A2.1.

Figure A2.1: Nepal—Existing Provision of Terminal Examinations at the School Level



Source: Nepal Law Commission. 2002. *Education* Act, 1971 and Education Rules, 2002 AD. *Nepal Gazette*. 30 May. Kathmandu.

The following are the main provisions of the Education Act for terminal examinations at the different levels of school education:

Primary Education Certificate Examination (at grade 5): Schools shall conduct the Primary Education Certificate Examinations.

Lower Secondary Education Certificate Examination (at grade 8):

- The district education officer in each district shall form a five-member board of examination.
- District-wide examination will be administered at the end of the lower secondary level.

- Schools that have maintained the minimum standard of education prescribed by the Ministry of Education (MOE) may conduct their own examinations, individually or in clusters.

Secondary Education Certificate Examination (at grade 10):

- Each district will have a secondary education certificate examination coordination committee to be chaired by the chief district officer.
- The Secondary Education Certificate Examination Board at the national level is chaired by the secretary of the MOE. Its members are composed of the joint secretary of the MOE; director general of the Department of Education; one nominated director from MOE; controller of examinations of the Higher Secondary Education Board (HSEB); director general of the Curriculum Development Center (CDC); controller of examinations of Tribhuvan University; one person nominated among academicians; and controller of examinations, Office of Examination, Ministry - member-secretary.

Higher Secondary Education Certificate Examination (at grade 12):

- The HSEB is responsible for management, curriculum, and examination for grades 11 and 12 governed by its own act, rules, and regulations.

Figure A2.2 shows the changes in terminal examinations based on the NCF and SSRP recommendations. The NCF suggested more external examinations at different levels of educational administration.

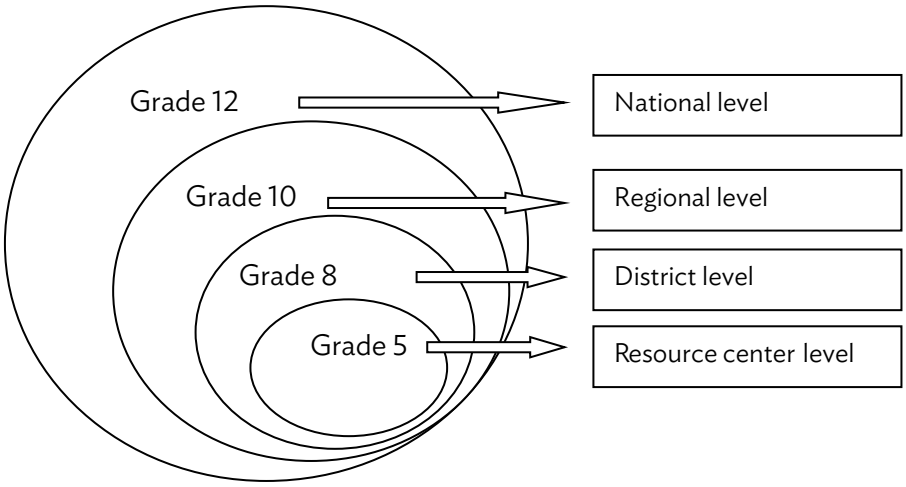
Because the NCF and SSRP are gradually being implemented and changes are occurring in rules and regulations, structure, and educational practices, current practices and provisions might be changed in the near future. The SSRP intends to restructure the current school system by forming a coherent and integrated school structure with grades 1–12 to increase the relevance of school education. The plan has also endorsed the need to integrate and harmonize existing fragmentation at the higher secondary level by establishing coordination between and among different education providers such as the HSEB, the Council for Technical Education and Vocational Training, and universities.

The NCF has stated that "national standards for school education will be formulated. District and school level benchmarks compatible with the national ones will also be devised and these local bodies will be made responsible to carry out curricular activities." To monitor achievement in the national standards for school education, the NCF has provided the following guiding principles for student assessment:

Mode of Assessment:

(i) A district-level examination will be administered at the end of basic education level (grade 8), a regional examination at the end of grade 10, and a national examination at the end of secondary (grade 12).
(ii) Formative and summative assessment systems will be used.

Figure A2.2: Nepal—Terminal Examinations Suggested in the National Curriculum Framework



Sources: Curriculum Development Center. 2007a. *National Curriculum Framework for School Education in Nepal*. Kathmandu; Curriculum Development Center. 2007b. *Secondary Education Curriculum, Volume 1 (Compulsory Subjects)*. Sanothimi; and Nepal Ministry of Education. 2009. *School Sector Reform Plan 2009–2015*. Kathmandu.

(iii) Internal evaluation of students will be school based.
(iv) A liberal promotion system will gradually be implemented in grades 1–7 by ensuring that students meet the minimum standards. Low-performing students will be provided with remedial support. There will also be a final examination at the resource center level[5] at the end of grade 5 to maintain the quality of education.
(v) Students will be assessed through internal (SBA and CAS) and external (district-level and national exams) methods.
(vi) Summative assessments will be used for certification of student achievement and grade promotion, which is based on either district-level or national examinations with some considerations of internal assessments such as CAS.
(vii) A standardized testing policy will be adopted to determine the minimum standards for each of the subjects prescribed at different levels.

Assessment Tools and Approaches:

(i) Assessment tools such as classwork, project work, community work, unit tests, achievement tests, observation, and formative and innovative work such as projects will be applied.

[5] A resource center clusters about 20–30 schools.

(ii) Assessment will use formal as well as informal testing devices at all levels and grades such as CAS or district-level exams.
(iii) Emphasis will be given to continuous assessment of expected learning outcomes, behavioral changes, attitudes, competency, skills, and application of feedback for teaching and learning activities.

Criteria of Evaluation:

(i) The pass mark of both internal and external examinations at all levels and grades will be 40%.
(ii) The weightage of external examinations will be 40% for grade 5, 60% for grade 8, 75% for grade 10, and 80% for grade 12. For vocational subjects that demand extensive practical activities, a provision of additional practical tests can be made in addition to the 25% internal assessment.
(iii) The weights of internal evaluation will be 60% for grades 1–5, 40% for grades 6–8, 25% for grades 9–10, and 20% for grades 11–12.

Certification:

(i) The existing formal assessment system has not been seen as appropriate for the all-around development of students. To address this aspect, a letter grading assessment system seems necessary. To establish this system, appropriate decisions must be made after deliberate study and discussion.
(ii) The mandatory provision to pass in all subjects of the existing School Leaving Certificate (SLC) examination system will be revised, and a provision will be made to award an SLC to students passing five core subjects.

Institutional Responsibility:

Schools, resource centers, district education offices, the regional education directorates, and the Office of Controller of Examinations (OCE) will be responsible for administering the respective levels of examination.

Although the NCF has tried to pave the way for more progressive assessment practices, there is some vagueness in the guidelines. While the NCF emphasizes CAS and a liberal promotion system, it has also made provisions for weightage of marks for internal and external evaluation and 40% pass marks at all levels and grades. If 40% is required to pass, then liberal promotion may be difficult to implement. Also, CAS is supposed to relate to learning outcomes, rather than scoring the learning outcomes in terms of marks. Such a lack of conceptual clarity ultimately mars practice and can create difficulties or misunderstandings during implementation. This might explain the different practices in the schools; for example, some schools apply liberal promotion and others retain weak or frequently absent students. There is lack of uniformity in the use of CAS as well, but efforts are being made to strengthen CAS and liberal promotion practices in the schools. CAS is in use up to grade 3, and it will be applied up to grade 7 gradually. For examinations at grade 8 and higher, students are required to obtain required minimum marks to pass.

2. Curriculum and Assessment System

Curriculum and assessment are invariably interrelated in the Nepalese education system from primary to higher education. Assessment is regarded as a component of curriculum. Curriculum explicitly formulates general and specific objectives. Specific objectives are formulated for each unit. Assessment is designed to measure the level of achievement in a specified content area (subject) in the curriculum. Thus, assessment is curriculum based.

The CDC formulates guidelines for the assessment of student achievement up to grade 9 based on the curriculum. The SLC examination, the terminal exam for secondary education, is also anchored on the curriculum and certifies students' achievement at the end of the secondary level (grade 10 at present). OCE is responsible for SLC exams. The HSEB also follows assessment guidelines provided in its curriculum. The curriculum provides guidelines for the assessment and the table of test specifications (also known as the specification grid) that provides the scope of assessment in terms of content and skills. General guidelines to be followed in the development of the table of test specification by all schools (public and private) cover the following areas:

- weightage for the content area as per the period or hours assigned in the curriculum,
- taxonomy of items or questions based on specific objectives of the content area, and
- format of the items or questions that seem to be appropriate for the content area to be assessed.

In practice, however, development of test items, particularly at the school level, is based on textbook content. Teachers tend to ask questions on what they have taught from the textbook. Such practices have given rise to issues such as the following:

- Textbook content, rather than curriculum, dictates classroom teaching, learning, and assessment.
- If any learning area is not covered in the textbook, there is a higher chance of its being missed in the classroom as well as in the assessment.
- As rote memorization and drill are dominant teaching and learning practices, there are fewer higher-level cognitive items in the test.
- In some cases, the level of skills indicated in the table of specifications are not appropriately classified or identified. For example, some items were classified as measures of higher-order thinking skills, but in reality only measure lower-order thinking skills.

a. School-Based Assessment

In Nepal, SBA is practiced in schools in terms of teacher-made tests, teacher's assessment during lesson delivery, teacher's periodic assessments using various tools to evaluate learning, CAS, etc. Assessment by teachers at the classroom and school levels

is emphasized in the in-service teacher training,[6] preservice teacher education at the university level, and school-level curriculum.[7]

b. Rationale and Modes of School-Based Assessment

Because the backwash effect of external formal examination that provides marks and labels students as "pass" or "fail" is still prevalent, there is a need to put more emphasis on formative assessments and SBA. The rationale for SBA can be derived from documents such as the NCF and SSRP as well as curriculum and training materials. Specifically, the following aspects are emphasized: (i) improving student learning, (ii) continuous and comprehensive assessment, (iii) summative assessment for grade promotion, (iv) teacher accountability, and (v) quality control. These aspects are described below.

Improving learning of students. The SSRP emphasized that competency standards, as set by the CDC, should form the basis for student assessment and evaluation in each grade and level. No students would be retained in grades 1–7 even if they do not meet the defined requirements and standards. The SSRP stated that students performing below the standard must be given remedial support to reach the minimum standard. On the other hand, the NCF stated that remedial support should be based on the diagnosis of individual student performance or learning difficulties and an instructional plan to promote learning and increase student achievement. The Primary Education Curriculum, Grades 1–3[8] is more specific in linking assessment for improving student learning:

- Students' learning level will be determined through a formative evaluation system at the primary level. The main aim of formative evaluation is to improve students' learning level. From this, teachers would be able to provide more learning opportunities based on a student's learning achievements.
- Student portfolios will be maintained from grade 1 to grade 3. The portfolio will be updated according to the student's classwork, project work, behavioral change, attendance, etc. Schools should inform parents about the subject matter taught and students' progress, which will also be recorded in the portfolios. Classwork will be emphasized rather than homework at this level.
- The main aim of CAS is to decide whether to promote students in a school year by observing changes in their performance. Students with excessive absences or those lagging in terms of learning achievements can be promoted as per the decision of the teacher, parents, and head teacher on the condition that they will be provided with more remedial learning opportunities.
- Students will be graded from A to C based on their progress in grades 1–3.
- Appropriate evaluation systems will be used for all students, including those with special needs.

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[6] National Centre for Educational Development. 2000. *Instructional Process and Evaluation Training Manual.* Sanothimi; National Centre for Educational Development. 2000. *Primary Teacher Training Curriculum—A Basic Training Curriculum for Primary School Teachers.* Sanothimi; National Centre for Educational Development. 2000. *Primary Teacher Training Curriculum—Pre-service.* Sanothimi; National Centre for Educational Development. 2005. *Professional Studies—Second Phase Primary Teacher Training.* Sanothimi; National Centre for Educational Development. 2010. *Comprehensive Research on Contribution of Teacher Training to Primary Education Development in Nepal.* Final Report. Sanothimi.

[7] Curriculum Development Center. 2005. *Primary Education Curriculum—Grades 1–3.* Sanothimi; Curriculum Development Center. 2007b. *Secondary Education Curriculum, Volume 1 (Compulsory Subjects).* Sanothimi; Curriculum Development Center. 2012. *Basic Education Curriculum—Grades 6–8, 2010.* Sanothimi.

[8] Curriculum Development Center. 2005. *Primary Education Curriculum—Grades 1–3.* Sanothimi.

- Quality (standards) of education will be measured by evaluating students' achievement based on the level-wise objectives after 5 years of implementation of this curriculum.

Among the above guidelines, CAS, portfolios, and grading have been implemented in grades 1–3 by the CDC. Curriculum-based student achievement has been started for grades 3, 5, and 8 by the Education Review Office (ERO). Using assessment results to improve student learning, proper maintenance of student portfolios, and adoption of an appropriate evaluation system to capture varied learning needs are still to be brought into wider practice.

The NCF and SSRP have also emphasized information and communication technology (ICT) for the improvement of teaching and learning. The MOE has developed the ICT in Education Master Plan 2013–2017.[9] The master plan envisions extensive use of ICT for providing quality education for all. There are four components in the ICT in Education Master Plan: (i) development of infrastructure, including connectivity; (ii) development of human resources; (iii) development of digital learning materials; and (iv) enhancement of the education system. The master plan has given emphasis to public–private partnerships for strengthening infrastructure development and training. ICT is one of the pedagogical and assessment areas to be strengthened to improve the quality of Nepalese education.

Continuous and comprehensive assessment. The CDC has been implementing CAS at grades 1–3. However, a passing mark has not been determined for grades 1–3 and student learning achievement is recorded through continuous assessment by teachers at the school level. As discussed earlier, the NCF and SSRP provisioned a liberal promotion policy, which is to be gradually implemented from grade 1 to grade 7 while ensuring that students meet the minimum learning competencies through remedial support when necessary.

The NCF has made provisions for internal and external assessments. Internal assessment is meant to be conducted by the school or subject teacher whereas external assessment is by board or examination committee outside the school. Weightage suggested by the NCF for internal and external assessments is shown in Table A2.1.

Table A2.1: Nepal—Weightage for Internal and External Assessments

Level	Grades	Internal (%)	External (%)
Primary	1–5	60	40
Lower secondary	6–8	40	60
Secondary	9–10	25	75
Higher secondary	11–12	20	80

Source: Curriculum Development Center. 2007. *National Curriculum Framework for School Education in Nepal.* Kathmandu.

[9] Ministry of Education. 2013. *Information and Communication Technology (ICT) in Education Master Plan 2013–2017.* Kathmandu.

Table A2.1 presents the NCF-suggested weightage for internal evaluation of 60% for grades 1–5, 40% for grades 6–8, 25% for grades 9–10, and 20% for grades 11–12. The suggested passing mark of 40% is for both internal and external examinations at all levels and grades. Based on this suggestion of the NCF, the CDC has made a provision of 50% weightage for the annual examination and 50% for CAS at grades 4 and 5.[10] Grades 4 and 5 students are required to pass with at least 40% mark in a written examination. If a student has performed at a satisfactory level in the CAS but has failed in a summative evaluation, the parents, the subject or grade teacher, and the head teacher will decide together whether or not to promote the student.

Summative assessment for grade promotion. Though CAS and liberal promotion are emphasized by the NCF and SSRP, summative evaluation is also given importance by providing for the following:

- Summative evaluation is conducted at the end of each class or school year (SSRP).
- It is ensured that each student achieves at least 50% in each subject (instead of the existing 32%) in order to get promoted to the next grade (SSRP).
- In case of external examinations, the weightage will be 40% for grade 5, 60% for grade 8, 75% for grade 10, and 80% for grade 12; with regard to vocational subjects that demand extensive practical activities, a provision of additional practical tests can be made in addition to the 25% internal assessment (NCF).

Teacher accountability. The NCF and SSRP have made subject teachers accountable for the progress of students in each subject. Assessing student learning continuously and providing remedial sessions as required is emphasized. This is not found to have been practiced in most of the classrooms yet.

Quality control. There are provisions for CAS and liberal promotion, and their major aim is to improve student learning. The NCF has also suggested provision of a final examination at the resource center level at the end of grade 5, intended to maintain the quality of education by providing suggestions for system improvements.

a. National Standards for School-Based Assessment

The NCF, SSRP, and level-wise curriculum of the CDC provide guidelines for the CAS, portfolio, and liberal promotion practices. The CDC has developed guidelines (2010)[11] and a training manual (1999)[12] for the implementation of CAS that set uniform national standards for its use. The guideline is to tick one of the columns in the CAS record form—3 ticks for *very good*, 2 ticks for *good*, and 1 tick for *average or moderate*—on five indicators (classwork or class participation, project work, change in behavior, creative works, and attendance). Based on the number of tick marks obtained, the student's achievement level will be determined in a percentage and graded as A, B, or C. The grading procedure in the CAS is clear. The main purpose of CAS or SBA is to find out the student's strengths and weaknesses, analyze the outcomes, and then make or update an instructional plan. However, this practice is found mostly lacking or weak in Nepal.

[10] Curriculum Development Center. 2008. *Primary Education Curriculum—Grades 4–5, 2008.* Sanothimi.

[11] Curriculum Development Center . 2010. *Continuous Student Assessment Implementation Manual.* Sanothimi.

[12] Curriculum Development Center. 1999. *Continuous Student Assessment Teacher Training Manual.* Sanothimi.

b. Modalities of School-Based Assessment

The modalities for SBA are the CAS, portfolios,[13] and liberal promotion[14] for up to grade 3. Teachers are trained to use the CAS in their classes. In grades 4 and 5, both CAS and a written annual examination are used. Students are required to pass the written examination for grade promotion. In other grades, formative assessments are used during educational activities to improve student learning, but it is the year-end test that decides grade promotion of the student.

For the CAS, the NCF suggested assessment tools such as classwork, project work, community work, unit tests, achievement tests, observation, and formative and innovative work such as projects. Moreover, emphasis needs to be given to the CAS to assess the expected learning outcomes, behavioral change, attitudes, competency, skill, and the application of feedback for teaching and learning activities. The curriculum states that student portfolios are to be updated according to the student's classwork, project work, behavioral change, attendance, etc. However, periodic tests and paper-and-pencil tests are often still being used to determine the level of achievement in the CAS and portfolios. This shows that the concept of CAS and portfolios has not been properly implemented.

c. Moderation Practices in School-Based Assessment

The NCF, SSRP, and CDC curriculum emphasize formative assessment in the schools and classrooms. Formative assessment is supposed to provide relevant information for diagnosing students' learning difficulties and thereby help improve student learning. The CDC developed the *School-Based Assessment Support Material* in 2006 and *School-Based Assessment Support Booklet* in 2009. However, the guidelines and training do not include information on how to diagnose learning needs and make the required instructional plan. Apart from short-term teacher training on CAS and SBA, periodic sharing, technical backstopping, and intraschool sharing is lacking. Sharing effective practices, challenges and issues, and lessons learned among the teachers would be helpful to improve SBA. This shows a lack of moderation practice in SBA at present in Nepal.

d. Integration of Results into the National Examinations

In the SLC and Higher Secondary Education Certificate examinations, practical marks are given in selected subjects by the subject teachers in the school. These marks are registered in the practical column in the marks sheet of the student. The CDC (2012) has developed a report card format in which scores for periodic assessment and the CAS are reported in separate forms for the students. Otherwise, SBAs and terminal examinations at grades 5 and 8 are not integrated into the SLC or higher secondary examinations.

3. Governance and Organizational Structure

Government institutions responsible for the assessment of learner achievement at different grades and levels, and/or programs are presented in Table A2.2.

Although representatives of relevant organizations and institutions would be on the examination committee or board of these organizations, only a few meetings of these

[13] Record with student's sample works maintained individually.

[14] Promoting student to next grade based on CAS and there would be no final summative examination for promotion.

Table A2.2: Nepal—Bodies Responsible for Assessment

Institution/ Board/ Committee	Responsibilities	Relationship with Other Bodies
School	• Continuous assessment system and liberal promotion at grades 1–3 • Formative and internal assessments • School-based assessment for grades 4, 6, 7, and 9	• District and resource center support and supervision • Report data to resource center, DEOs, and the DOE Central Office
School cluster or resource center examination committee	• Develop test, administer, score, and provide reports for grade 5 • In some of the school clusters and resource centers, tests are developed for other grades as well	• School cluster or resource center examination committee manages assessments for the schools in the group; district and resource center provide support • Report data to resource center, DEOs, and DOE Central Office
District Examination Committee	Develop test, administer, score, and provide reports for grade 8	• Report data to DEOs and DOE Central Office
Office of Controller of Examinations—national level at grade 10 at present	• Develop test, administer, score, and provide reports for grade 10 (Regional-level examination at grade 10 was suggested in the National Curriculum Framework and SSRP but not yet implemented.)	• Report data to DEOs and DOE Central Office • Examination report published by the Office of Controller of Examinations
Higher Secondary Education Board	• Develop test, administer, score, and provide reports for grades 11 and 12 (Suggested as school leaving examination at grade 12, which would be at the national level. A national examination board would be formed, which would then develop test, administer, score, and provide reports for this purpose, as suggested in SSRP.)	• At present, Higher Secondary Education Board is an independent board that conducts and publishes year-end examinations at grades 11 and 12.
Council for Technical Education and Vocational Training	• Develop test, administer, score, and provide reports related to TVET programs (National examination board would be responsible for TVET as well when it is established.)	• TVET programs and skill tests conducted and reported by the Council for Technical Education and Vocational Training
Education Review Office	• Conduct national tests to provide feedback for policy formulation • Conducts NASA at grades 3, 5, and 8 (Though currently under the Ministry of Education, ERO is proposed to be an independent body.)	• Objectives of the ERO are to (i) assess the overall educational structure and functional system for improvements in access to education, equity, and quality, and present an annual report to the Ministry of Education; and (ii) assess whether policy and programs are implemented according to the existing act and regulations, and present a report for improvement. • One of the units in ERO is responsible for NASA. ERO planned to conduct NASA at grade 8 in 2011, 2013, and 2015, and at grades 3 and 5 in 2014 and 2015.

continued on next page

Table A2.2 *continued*

Institution/ Board/ Committee	Responsibilities	Relationship with Other Bodies
Nonformal Education Center	Nonformal education and out-of-school programs	• Children who participate in the out-of-school program take final examination of school; those who pass the examination become eligible to join regular school.
Higher education institutions	Mostly annual examination and in some, semester system	• Get promoted to higher level of education

DEO = district education office, DOE = Department of Education, ERO = Education Review Office, NASA = National Assessment of Student Achievement, SSRP = School Sector Reform Plan, TVET = technical and vocational education and training.

Sources:

Curriculum Development Center. 2006. *School-Based Assessment Support Material.* Sanothimi.

Curriculum Development Center. 2007. *National Curriculum Framework for School Education in Nepal.* Sanothimi.

Curriculum Development Center. 2009. *School-Based Assessment Support Booklet.* Sanothimi.

Curriculum Development Center. 2010. *Continuous Student Assessment Implementation Manual.* Sanothimi.

Curriculum Development Center. 2012. *Basic Education Curriculum, Grades 6–8, 2010.*Sanothimi.

Ministry of Education. 2009. *School Sector Reform Plan 2009–2015.* Kathmandu.

Nepal Law Commission. 2006. Higher Secondary Education Act, 1989 with Amendment Act, 2006. Kathmandu. www.lawcommission.gov.np

Nepal Law Commission. 2010. Education Act, 1971 with Amendment Act, 2010. Kathmandu. www.lawcommission.gov.np

bodies are called, which are more of a formality. There is lack of proper linkage and working or sharing relationship among them. Therefore, the SSRP has suggested the following:

- A national examination board will be constituted as a coordinating apex body, responsible for regulating and carrying out all public examinations and certification and accreditation functions for grades 8, 10, and 12, including TVET certification.
- Public examinations will be held at the national, regional, and district levels. National examinations for Higher Secondary Certificate will be conducted at the end of grade 12 and will be administered by the national examination board. Regional examinations will be conducted at the end of grade 10 and will be administered by the regional education directorate under the national examination board. District-level examinations will be conducted at the end of grade 8, and will be administered by the district education office under the national examination board guidelines.

OCE, HSEB, and the Council for Technical Education and Vocational Training (CTEVT) are important institutions responsible for the national assessment for school education. OCE is the only institution undertaking tasks exclusively related to examination. HSEB and CTEVT are responsible for curriculum, management, and examinations for their respective level and area as reflected in their vision, mission, and goals and objectives (see section F).

The SSRP has provided for national assessments to be conducted periodically for grades 3, 5, and 8. These assessments are expected to help set norms and standards for quality education in terms of students' learning achievement. ERO is responsible for conducting the NASA.

The OCE, HSEB, CTEVT, and ERO, which are responsible for the national examinations, are legal entities under the MOE. The OCE undertakes functions relating to operation of secondary education under the direction of the Board of Examination. The higher secondary level (presently grades 11 and 12) is the responsibility of the HSEB. [15] CTEVT, constituted in 1989, is a national autonomous apex body for technical and vocational education and training mainly involved in policy formulation, quality control, preparation of competency-based curriculum, developing skill standards of various occupations and testing the skills of the people, and conducting research studies and training needs assessment.

Assessment responsibilities under HSEB and CTEVT are accorded to the examination units within their structure. The OCE is mandated entirely for the SLC examination, while other responsibilities such as curriculum and teacher preparation are undertaken by other institutions. The OCE has various units that undertake different tasks related to the examination.

4. Types, Modes, and Frequency of Assessments

The different types of tests conducted at different levels of education using various tools with different purposes are summarized in Table A2.3.

Existing assessment practices value external examinations, which are based on paper-and-pencil tests. Certification is the main purpose of the external examinations, which are conducted at grades 8, 10, and 12. Diagnostic and formative use of assessment needs to be given more attention at the school level.

5. Uses and Purposes of Assessment

Assessments are in use at various levels (classroom, school, resource center, district, and national) for different purposes, using various modalities. The uses and purposes of assessments in Nepal can be summarized as follows:

a. Certification of Achievement

Assessments at all levels intend to certify the level of student achievement. Students are certified in terms of grades A, B, or C in grades 1–3 by analyzing CAS outcomes. In upper grades, assessments are also used for ranking students within class, for giving distinctions, and for grouping according to divisions or categories of achievement. For example, based on raw scores, students are grouped into first division, second division, third division, and fail categories. However, the pass/fail cutoff score is arbitrary, with no rationale or supporting descriptors for categorizing level of achievement in place.

Almost all examinations in the Nepalese education system are dominated by cognitive aspects, and assessments are based on the curriculum. In the CAS in grades 1–3, there are

[15] Nepal Law Commission. 2006. *Higher Secondary Education Act, 1989* with *Amendment Act, 2006*. Kathmandu.

Table A2.3: Nepal—Types, Modes, Frequency, and Tools of Assessment

Level	Purpose	Modes	Frequency	Tools and Techniques
National	Summative evaluation, certification	Grade 12 (higher secondary education), grade 10 (School Leaving Certificate, technical and vocational education and training)	Toward the end of the year or program	Paper-and-pencil and practical in selected subjects
District	Summative evaluation, certification	Grade 8 (basic level)	Toward the end of the year	Paper-and-pencil
School	Formative and summative	Classwork, homework, periodic tests, continuous assessment system, portfolios, periodic tests	Daily and at intervals of varied duration—week, month, trimester, year, etc.	Oral, written, observation, classroom participation, paper-and-pencil

Sources:

Curriculum Development Center. 2006. *School-Based Assessment Support Material.* Sanothimi.

Curriculum Development Center. 2007. *National Curriculum Framework for School Education in Nepal.* Kathmandu.

Curriculum Development Center. 2009. *School-Based Assessment Support Booklet.* Sanothimi.

Curriculum Development Center. 2010. *Continuous Student Assessment Implementation Manual.* Sanothimi.

Curriculum Development Center. 2012. *Basic Education Curriculum, Grades 6–8, 2010.* Sanothimi.

Ministry of Education. 2009. *School Sector Reform Plan 2009–2015.* Kathmandu.

Nepal Law Commission. 2006. Higher Secondary Education Act, 1989 with Amendment Act, 2006. Kathmandu.

Nepal Law Commission. 2010. Education Act, 1971 with Amendment Act, 2010. Kathmandu.

some noncognitive aspects that are considered in the assessment, such as participation in class and creative works. But in general, noncognitive aspects receive less emphasis in the curriculum as well as in the assessment.

b. Grade Promotion

The CDC's curriculum requires CAS and liberal promotion in grades 1–3 and in other grades and levels. One of the purposes of the assessment is to decide whether or not students should be promoted to the next grade.

The CDC guideline is not to retain any student in grades 1–3. As such, retention data indicate that even students labeled as *failed* are being promoted.

c. Teaching and Learning Improvement

The continuous assessment system, classwork, homework, and other assessments are supposed to be used as formative assessments to improve student achievement.

Classwork and homework can provide feedback to the students when teachers check and correct them, but this is not a regular practice among teachers. Moreover, analyzing students' work, identifying their strengths and weaknesses, diagnosing mistakes, and planning further instructional activities are largely not in practice. Student portfolios, which are supposed to include sample works as indicators of the student's learning progression, are, in practice, mostly collections of periodic tests and marked answer sheets.

d. Predictive Use

Public examinations such as the SLC and HSEB are used as predictors for success in higher studies. Obtained marks and divisions or categories (along with entrance examinations in some institutions) are used for screening and selection for higher studies.

Such practice has made SLC, HSEB, and other such examinations high stakes, and doing better in such examinations is important for students.

e. Communication

For official or formal jobs, a minimum level of education, and sometimes acquired experience as well, are considered. Information such as subject-area performance, pass/fail in composite, and division/rank/percentage in composite is provided in the examination certificate.

Although the marks and divisions are indicated in the examination certificates and/or mark sheets, they do not clearly describe the capabilities or specific competencies of the students. The use of such descriptors is not in practice in the Nepalese education system.

f. Participation in International Assessment

Nepal has not yet participated in any of the international or regional assessments. Released or published test items from international tests such as Trends in International Mathematics and Science Study (TIMSS) have been used in a few research studies or tests, such as by New ERA in the Survey for Nepal Community Managed Schools Impact Evaluation undertaken for the World Bank (New ERA 2008 and 2010). The NASA study attempted to make an international comparison using those linking items.

B. Assessment Results and Utilization

This section presents various studies on student learning, use of the assessment results for educational improvement, and measures for advancement of the assessment system in Nepal.

1. Student Performance

Student performance has been evaluated in several research studies and national examinations. The major purposes of these learning assessments were twofold. One, evaluate the effectiveness of projects and programs such as the Primary Education Development Project and Basic and Primary Education Program. Two, inform policy and decision making through national assessments such as those given by the Educational and Development Service Centre (EDSC) and ERO; or determine the status of learning achievement through research studies such as the Research Centre for Educational

Innovation and Development (CERID) study. These studies reported learning achievement of the students to be low, mainly on the basis of mean scores. The pass rate in examinations administrated externally, such as the SLC exam, has also been low. Learning achievement studies undertaken by multiple agencies found mean percentage achievement in different grades and subjects as given in Table A2.4.

Usually, mean percentage scores from studies (such as those given in Table A2.4) are used to assess and compare learning achievement. However, there are certain technical issues while making comparisons on learning achievement: (i) content domain covered in the test—were the content areas the same or different? (ii) equivalency of test—can equivalency be ensured so that comparison is justifiable? (iii) fluctuation of scores—what are the reasons for fluctuation of scores in the same grade and subject, such as grade 5 mathematics? (iv) focus of test—was it to compare with achievement of others in the group or with an external standard? Due to lack of such information about the tests, comparison gives very limited information. The 2011 NASA attempted to link with the EDSC 2008 test, but it was technically complicated and the initiative was abandoned.[16] Raw scores without other relevant information makes the test of limited use, and comparisons, if made, would be false.

The Department of Education publishes reports, such as flash reports, on the status of internal efficiency, as well as consolidated reports based on the school-level information. The consolidated report covering 2009–2011[17] shows that the primary and lower secondary promotion rates have been gradually increasing and the repetition rate decreasing (Figures A2.3 and A2.4). This is a sign of improvement. Figure A2.3 shows two distinct deficiencies: (i) at the primary level, promotion is lowest and repetition highest at grade 1, partly because of continuing enrollment of underage children; and (ii) while CAS and liberal promotion policy are implemented in grades 1–3 at the national level, there were still students repeating grades—21.3% at grade 1, 8.3% at grade 2, and 7.4% at grade 3 in 2011.

The most important examination result is the SLC administered after grade 10. The 2013 result (41.6%) had been the lowest pass percentage since 2007, when it was 58.6%. It was highest in 2009 (68.5%) and, since then, it has been in decline (Figure A2.5).

The Department of Education report indicates a gradual improvement in student achievement as more students are promoted. Theoretically, improvement in student achievement should be due to improvement in learning, which should have been due to improvement in classroom teaching and learning. On the other hand, SLC results indicate that classroom teaching and learning is deteriorating, and a consequence is declining pass percentage. This is a serious disparity that should be discussed and a correct inference needs to be drawn. Another issue is what happens to the students who fail. Students who fail in one or two subjects in the first attempt can appear in the complementary examination, which has a high pass rate—60.0% in the 2013 SLC complementary examination. Those who fail the SLC examination will have to reappear for the next SLC examination. Those who fail the SLC examination can also pursue a Technical School

[16] Education Review Office. 2013. *Where Are We Now? Results of Student Achievement in Mathematics, Nepali, and Social Studies in the Year 2011.* Sanothimi.

[17] Government of Nepal, Ministry of Education, Department of Education. 2012. *School Level Educational Statistics of Nepal Consolidated Report 2011*. Sanothimi.

Table A2.4: Nepal—Mean Percentage of Student Achievement in Different Studies (%)

Study Year	Grade	Mathematics	Nepali	Social Studies	Science	English
BPEP–1998	5	26.58	52.41	35.87	NA	NA
PEDP–1998	5	33.68	40.57	39.52	NA	NA
BPEP–1997	4	28.00	47.00	42.00	NA	NA
EDSC–1997	3	43.81	45.65	50.37	NA	NA
EDSC–1999	5	27.25	51.46	41.79	NA	NA
EDSC–2001	3	47.00	44.50	63.60	NA	NA
CERSOD–2001	5	30.08	45.31	34.45	NA	NA
EDSC–2003	5	33.33	55.80	61.13	NA	NA
EDSC–2008	8	NA	NA	53.40	NA	NA
Full Bright–2008	5	47.64	45.08	65.35	45.56	39.68
CERID–1999	6	44.44	56.38	NA	39.59	43.60
CERID–1999	8	28.87	75.31	NA	29.62	34.29
NASA–2011	8	43.0	49.0	49.0	NA	NA

BPEP = Basic and Primary Education Project/Program, CERID = Research Centre for Educational Innovation and Development, CERSOD = Center for Educational Research and Social Development, EDSC = Educational and Development Service Centre, NASA = National Assessment of Student Achievement, PEDP = Primary Education Development Project.

Sources:

Basic and Primary Education Project/Program, Ministry of Education. 1997. *The Effect of New Curriculum on the Achievement of Grade 4 Students.* Kathmandu.

Basic and Primary Education Project/Program, Ministry of Education. 1998. *The Effect of New Curriculum on the Achievement of Grade 5 Student.* Kathmandu.

Research Centre for Educational Innovation and Development. 1999. *Assessment of Learning Achievement of Lower Secondary Children: Grades 6 and 8*. Kathmandu: CERID in Association with Ministry of Education and Sports.

Center for Educational Research and Social Development (CERSOD), Department of Education. 2001. *District Level Assessment, 2001.* Kathmandu.

Educational and Development Service Centre. 1997. *National Assessment of Grade 3 Students*. Kathmandu.

Educational and Development Service Centre. 1999. *National Assessment of Grade 5 Students.* Kathmandu.

Educational and Development Service Centre. 2001. *National Assessment of Grade 3 Students.* Kathmandu.

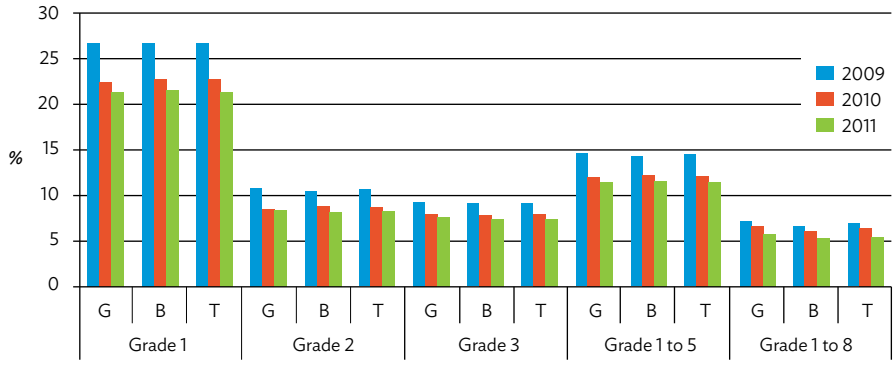
Educational and Development Service Centre. 2003. *National Assessment of Grade 5 Students.* Kathmandu.

Educational and Development Service Centre. 2008. *National Assessment of Grade 8 Students.* Kathmandu.

Education Review Office. 2013. *Where Are We Now? Results of Student Achievement in Mathematics, Nepali and Social Studies in the Year 2011.* Sanothimi.

Full Bright Consultancy. 2008. *A Final Report on National Assessment of Grade-V Students.* Kathmandu.

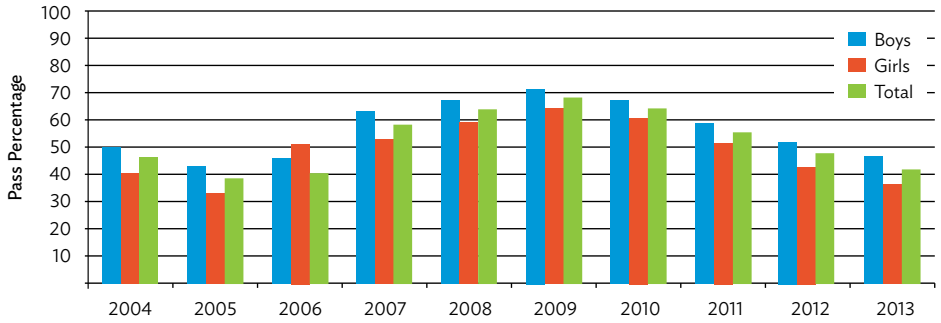
Figure A2.3: Nepal—Repetition Status at Primary and Lower Secondary Levels, 2009–2012



G = girls, B = boys, T = total.

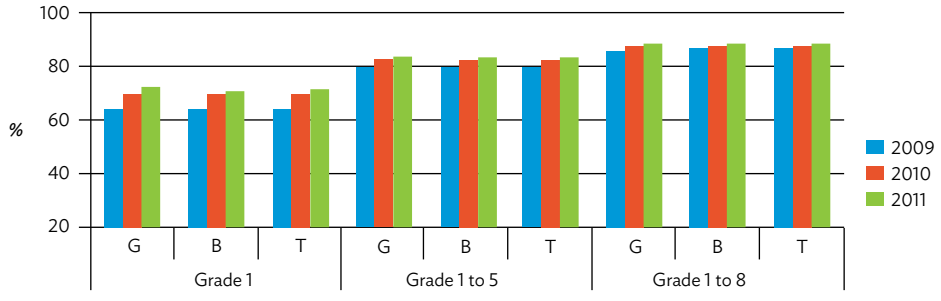
Source: Department of Education, Government of Nepal 2012. *School Level Educational Statistics of Nepal Consolidated Report 2011.* Sanothimi.

Figure A2.4: Nepal—Promotion Status at Primary and Lower Secondary Levels, 2009–2011



Sources: Office of Controller or Examinations. 2013. *Schooling Leaving Certificate Examination Statistics.* Sanothimi; 2013 data provided by Higher Secondary Education Board.

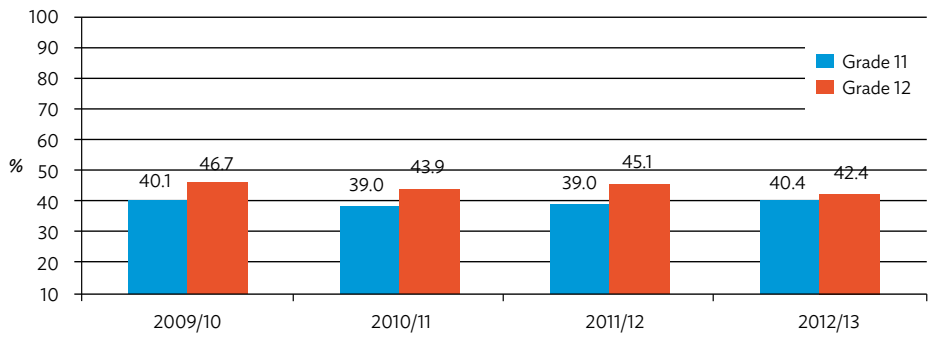
Figure A2.5: Nepal—Pass Percentage in School Leaving Certificate Examination, 2004–2013



G = girls, B = boys, T = total.

Source: Department of Education, Government of Nepal 2012. *School Level Educational Statistics of Nepal Consolidated Report 2011.* Sanothimi.

Figure A2.6: Nepal—Pass Percentage in Higher Secondary Education Board Examinations



Source: Higher Secondary Education Board.

Leaving Certificate or just quit further education. There is no regular mechanism to trace individual students.

A low pass percentage is also evident in the HSEB examination. The pass percentage at grades 11 and 12 has been consistently below 50% in the last 4 years (Figure A2.6).

2. Suggested Measures for Improving Student Learning Achievement

Studies on student learning assessment consistently reported low performance of students. For instance, the EDSC concluded that "the national achievement level of grade 3 students is insufficient" in Nepali, mathematics, and social studies.[18] EDSC, in a 1999 national assessment of grade 5 students, reported "though average score in Nepali is over 50%, learning achievement in Mathematics and Social Studies is not satisfactory."[19] Other studies such as CERID (1999), CERSOD (2001), and Full Bright Consultancy (2008) also reported learning achievement of students to be unsatisfactory. For the 2011 NASA, ERO also reported unsatisfactory achievement levels (below 50%) of grade 8 students in mathematics, social studies, and Nepali language (footnote 16). Some of the important areas for improvement as suggested in these studies are as follows:

(i) "Improve classroom delivery" is one of the main suggestions in the student assessment studies for improving student learning achievement. Though there is no specific suggestion in these studies on how to improve classroom delivery, Full Bright Consultancy viewed it necessary to look into why, despite much effort, there has not been the expected change in the educational delivery system.[20]

(ii) Improve teacher training—training designs and modules should focus more on pedagogy and emphasize enhancement of student learning beyond merely imparting content knowledge, as well as monitor teacher in their classroom delivery to ensure the application of acquired skills in the classroom.

[18] Educational and Development Service Centre. 1997. *National Assessment of Grade 3 Students*. Kathmandu.

[19] Educational and Development Service Centre. 1999. *National Assessment of Grade 5 Students*. Kathmandu.

[20] Full Bright Consultancy. 2008. *A Final Report on National Assessment of Grade-V Students*. Kathmandu.

The Education Sector Advisory Team (ESAT) also highlighted the importance of aligning teacher professional development with assessment and examinations.[21]

(iii) Development and provision of teaching kits that include items such as curriculum, teacher's guide, textbooks, sample instructional materials, self-training materials, model tests, etc.

(iv) Monitoring and supervision is another area emphasized. Raising the quality of education requires regular monitoring of teacher performance and providing timely feedback. All related institutions and authorities should provide assistance, encourage teachers in their profession, and make them accountable to their profession. Resource center functioning should be revisited and strengthened to provide technical backstopping to the teacher and school.

(v) Establish accountability mechanisms at the personal, institutional, and system levels.

(vi) Introduction of CAS with a comprehensive testing plan based on the desired learning outcomes. Remedial measures should be adopted to improve learning among weak students based on the assessment outcomes.

(vii) EDSC and Full Bright Consultancy suggest raising the cut-off bar from 30% to 50%. Their argument is that students at 30% could not possess the required basic level of competency. In their studies, the minimum required competencies were found at the 50% level. Another of their arguments is that the higher the expectation, the greater the achievement among students, and this can contribute to the students' acquisition of skills and abilities as envisaged by the curriculum.

(viii) Raising the minimum educational qualification requirement of the teachers from existing SLC (grade 10) to higher secondary level (grade 12).

There have been several studies on the SLC examination, and a few on the HSEB and school-based assessments. A comprehensive study was undertaken related to the SLC examination in 2006; a number of the study's recommendations have been implemented. The ESAT study on student performance on the SLC covered a historical account of the SLC examination system, disparities in school performance in the SLC examination, equity analysis of the SLC examination, public perception of the SLC exam, analysis of the technical quality of test materials used in SLC, process mapping of SLC operations, institutional study of OCE, financial analysis, determinants of student performance in the SLC exams, evidence from survey, case study of effective and ineffective schools, public examination systems in the South Asian Association for Regional Cooperation (SAARC) region, and tracer study of school leavers.[22] Major recommendations of the study and recent developments (in italics) are summarized below:

(i) Develop national expertise in testing, assessment, and examination. *In-house training and study visit in other countries undertaken now*.

(ii) Limit test papers in SLC to grade 10 curriculum only instead of grades 9 and 10. *Now SLC is on grade 10 curriculum only.*

(iii) Limit the number of subjects to be tested in SLC. *It is still eight subjects and composite pass.*

[21] Education Sector Advisory Team. 2006. *Study on Student Performance in School Leaving Certificate.* Kathmandu.

[22] Education Sector Advisory Team. 2006. *Study on Student Performance in School Leaving Certificate.* Kathmandu.

(iv) Explore the possibility of testing and certification in additional subjects for the students desiring to excel. *Such differentiation is not yet in practice.*
(v) Introduce school-based examinations. *Although limited in amount, there are initiatives at the CDC for school-based assessment.*
(vi) Align teacher professional development with assessments and examinations. *Teacher training on CAS developed.*
(vii) Ensure sufficient remediation for struggling students. *Important aspect, but strategy to translate into practice not articulated and implemented.*
(viii) Take actions to minimize the negative consequences or backwash effects of SLC. *Easy to say, but actions are very limited. It might require many changes in several aspects to materialize.*
(ix) Organize an item-writing workshop; use a panel of specialists; establish an item bank; use double entry of marks; use a marking scheme. *Currently OCE is doing so. But technical quality needs to be improved; for example, items need to be pretested and calibrated before banking, the marking scheme needs to be tested with a sample of answer sheets and finalized for use, and item writers need to be properly trained.*
(x) Abolish send-up examination that might bar grade 10 students to appear in SLC. *Send-up examination is abolished, and students at grade 10 are allowed to appear in SLC.*
(xi) Introduce letter grading and single subject certification and abolish the practice of declaring students as pass/fail. *Decision makers are having difficulty understanding the concept. It will require establishing a stronger conceptual foundation to implement letter grading and single subject certification.*
(xii) Reevaluate the system of giving grace marks. *Still in practice without any justification for grace marks.*
(xiii) Establish a strong system of analyzing test results and feed this information back into the school system; prepare and publish a report card of each school. *This practice is not in public examinations such as the SLC, higher secondary education, and TVET. This has been started by ERO. For the SLC, each school's pass percentage is published.*
(xiv) Identify low-performing schools and require them to prepare a time-bound reform plan; make district accountable for performance. *It is the teacher who is made accountable by the existing Education Act, not others.*
(xv) Develop a regulatory framework to regulate the ever-expanding phenomenon of shadow schooling in the form of private tuition. *It has rather increased and there is no regulatory system yet.*

The EDSC conducted the National Assessment of Grade 10 Students, a 2011 study on the SLC examination and which analyzed student performance in terms of sex, ethnicity, and geographical setting. The study conducted a subject-wise analysis to interpret student achievements based on the students' background and characteristics, and identified the contributing factors that promote better learning and those that serve as barriers. The study employed achievement tests in Nepali, English, mathematics, social studies, and science based on the specification grid and curriculum for grade 10 students, as well as questionnaires and a school survey form involving several factors that could affect student achievement.

The study drew two major conclusions. First, there had been an improvement in the variations of the student performance under different categories—development regions, ecological belts, rural or urban location, gender, and ethnicity. The study also cautioned that students might be overdependent on tutoring, which could lead to a focus on rote learning. Second, some factors such as adequacy of furniture and having a dedicated school building were found to contribute to learning achievement. The SLC exam is the most high-stakes examination in Nepal, and students will do whatever is possible to get through it. Unless the SLC exam is made learner friendly, it could be a hindrance to cognitive learning.

The NASA reported various findings based on the assessment at grade 8. NASA further elaborated on the quality of learning of the students and reported that students were not good in higher-level cognitive skills (footnote 16).

According to the study, the achievement level of the students had been found to decrease gradually along the continuum from knowledge, comprehension, application, and finally to higher-level cognitive ability. In social studies, a similar, but not entirely identical, pattern emerged, with the following results: knowledge level, 52%; comprehension level, 66%; application level, 40%; and higher ability level, 34%.

Students were found to have poorer analytical ability, application ability, logical ability, generalization ability, justifying ability, and the ability to transfer learning from one context to another. This situation could be addressed if the bodies involved in educational policy making, planning, curriculum development and revision, and teacher development and management, and those carrying out teaching and learning activities and evaluation drew special attention to it.

3. Utilization of Results of Student Performance

Study reports related to student assessment describe both strengths and shortcomings, and provide recommendations for improvement. There are also government initiatives such as curriculum revision and improvement, materials provision, school physical facilities development, teacher professional development, and monitoring and supervision. However, it is mostly difficult to link such initiatives to a recommendation in a particular study. It is also often argued that various studies usually come up with similar suggestions and the government considers these recommendations together for the improvement initiatives.

For improvement in the education system, it is imperative that study findings and suggestions are reflected upon and properly utilized. Studies have repeatedly revealed poor student achievement levels. In its 2008 study, Full Bright Consultancy cautioned that this might raise questions as to what extent the government has taken measures recommended by the studies. There are no indications as such of significant improvement in student achievement over the years.

This does not mean that the government has not taken the initiative to improve the quality of education. There has been continuous government effort to improve curriculum, teacher training, school facilities, the assessment system, etc. The concern is the degree to which study findings and suggestions are reflected upon while developing educational programs and reform. The government does not usually mention study reports as the basis for the

initiatives taken, making linkage difficult. It appears that results and recommendations from studies are not effectively factored in during the development of programs and projects. Successive similar studies come up with the same results and recommendations because the issues remain unresolved.

In the case of SLC examination reform, the recommendations from a 2006 study by the Education Sector Advisory Team were considered and implemented by OCE. Some of the resulting major changes were abolishment of send-up examinations,[23] limiting SLC test papers to the grade 10 curriculum, and development of test items through workshops or teams. Other important recommendations, which included letter grading, single subject certification, SBA, and feedback mechanisms based on assessment results, are not yet implemented.

The most used format in assessment of student achievement is disaggregated analyses in terms of development region, ecological belt, district, school, gender, public versus private, and rural versus urban. Description has also been undertaken in terms of performance category covered by the test (i.e., Category 1: Students achieving up to 30%; Category 4: Students achieving 76% and above). Analysis also has been done to identify factors that contribute to student achievement, which can provide conceptual groundwork for suggesting measures for enhancing student learning. If such suggested measures would be implemented, a gradual improvement should be evident. For example, analysis of assessment results of the performance category used in the test would have been helpful in developing a performance-based assessment system.

An arbitrary pass mark (30%) has been in practice in Nepalese education system without any rationale. In 1997, the EDSC attempted to establish performance category in a band of scores. It has become a ritual to analyze assessment results in terms of performance category—item-wise listing with respect to score band.[24] But technical analysis of achievement through a band of scores stagnated at this point and there was no further development. The following are specific areas for improving this analytical framework:

(i) score bands developed into grades,
(ii) refinement of performance category into grade descriptors,
(iii) lower-level grade descriptors refined and minimum competency or mastery level developed,
(iv) based on minimum level competency or mastery level developed into standards-based curriculum, or
(v) assessment.

ICT is another area that the MOE has prioritized for the improvement of quality of education.[25] There is also emphasis on collaboration with nongovernment and private institutions. ICT can be used in the assessment, but technical support should be provided for this.

[23] A send-up examination is a requalifying test.

[24] Educational and Development Service Centre. 1997. *National Assessment of Grade 3 Students*. Kathmandu.

[25] Ministry of Education. 2013. *Information and Communication Technology (ICT) in Education Master Plan 2013–2017*. Kathmandu.

Rigorous and thoughtful endeavors are also important for conceptual development and bringing concepts into practice. In the above case, such an attempt would have not only refined the achievement test, but also generated much-needed discussion and reform in the areas of curriculum, classroom delivery, and teacher preparation.

C. Issues and Reforms in Assessment of Student Learning Outcomes

Universal, free, compulsory education with emphasis on quality has been envisioned in most of the education commissions in Nepal. Visioning is the first step to development. The Nepal National Educational Planning Commission of 1956, the first education commission in Nepal, envisioned the first goal for universal primary education.[26] Nepal's ninth plan (1998) and Education for All (2003) had set a target of universal primary education by 2015, a commitment toward its Millennium Development Goals.[27] Along with access and equity, quality and efficiency are also equally emphasized. The Secondary Education Support Program (2002),[28] Teacher Education Project (NCED 2002), and now the SSRP have been implemented to achieve these goals. However, learning achievement of the students was found to be low in different studies of the national sample as well as the SLC and higher secondary educationexaminations.

A key indicator of quality education is learning achievement. To monitor the quality of education and various aspects of achievement, the SSRP has suggested the establishment of ERO, under which there would be a unit to conduct the NASA periodically for students in grades 3, 5, and 8 in mathematics, Nepali, and social studies (footnote 16). Although the SLC and higher secondary education exams are administered as nationwide examinations, their main objective is to certify learning achievement of the students enrolled. On the other hand, the national assessment analyzes various aspects of learning to suggest further improvement in the education system.

Apart from these examinations, studies on student learning achievement were carried out periodically. This section covers issues and reform initiatives pertaining to assessment of student learning achievement and endeavors in reforming the education system in general and assessment practices in particular in Nepal.

Student learning is the central focus of the education system and one of the major aspects for measuring quality of education. Levels of learning achievement reportedly have been consistently low, which has been one of the major issues in Nepalese education.

There have been a number of reform initiatives to improve classroom teaching and learning and student achievement. Improving school physical facilities and provision of curricular and instructional materials, teacher's guides, teacher training, etc. have been given priority. Despite such efforts, the quality of classroom teaching and learning has not improved much

[26] Nepal National Educational Planning Commission. 1956. *Education in Nepal.* Kathmandu: Bureau of Publications.

[27] Ministry of Education and Sports. 2003. *Education for All 2004–2009 Core Document.* Kathmandu

[28] Ministry of Education and Sports. 2002. *Secondary Education Support Programme.* Kathmandu.

or improvement has been slow, as reported by several studies.[29] Full Bright Consultancy also concluded that appropriate pedagogical practices for learning have not been adopted in primary education.[30] A positive sign has been shown by the National Centre for Educational Development, in classroom teaching and learning improvement. There are significant numbers of teachers performing above average in their platform skills (82.0%), selection of content (64.6%) delivery of lessons (69.7%), concluding the lessons (64.3%), and using transfer strategies (60.3%).[31] Such improvements need to be maintained and further improved throughout the country.

The low quality of learning is reflected in poor student achievement during assessment of learning outcomes. For example, the EDSC national assessment of grade 5 students found students weak in creative expression in Nepali language; they had not learned the basics of mathematics; and they were weak in important areas in social studies (e.g., national tradition, international understanding, peace and cooperation, geographical study, and preservation of national heritage).[32] ERO found students to be poor in analytical skills, application, logical ability, generalization, justifying ability, and the ability to apply learning from one context to another (footnote 16).

The Nepalese education system has been focusing on the cognitive aspect of learning as provided in the curriculum. The need to cover higher-level cognitive skills in teaching and testing has been emphasized in in-service and preservice training. A specification grid has been provided separately or within the curriculum. Although the specification grid requires a specific number of higher-level test items, the actual number of these items is lower in the tests. Moreover, some of the test items labeled as higher level are actually lower level. Teachers' reported practices also show that most are only assessing lower-order thinking skills and hardly attempting to assess higher-order thinking skills such as analyzing, evaluating, and creating. This is one of the major areas that needs improvement.

Skills assessment is very limited in the formal school situation. In selected subjects, skills are tested through practical tests—some by external evaluators and some by subject teachers at the school. In the case of CTEVT, a practical test is conducted externally to assess the level of practical skills. CTEVT also provides opportunities for skills testing in more than 265 occupations through testing centers in different parts of the country. "Life skills" such as interpersonal communication, cooperation, and refusal skills has been in curricular focus at the school level. However, there is lack of proper orientation on how these generic life skills are to be delivered in the classroom and the means to assess them.

There are limited provisions for assessing learning achievement of students with special needs (such as materials in braille for the visually impaired). At the time of the test, there are provisions for additional time and amanuenses depending on the type of disability. OCE has this provision: if it seems that any student who is vision or hearing impaired, or

[29] Ministry of Education and Sports. 1999. *Basic and Primary Education Program (1992–1998): A Synthesis of Experiences.* Kathmandu.

[30] Full Bright Consultancy. 2008. *A Final Report on National Assessment of Grade-V Students.* Kathmandu.

[31] NCED. 2010. *Comprehensive Research on Contribution of Teacher Training to Primary Education Development in Nepal.* Final report. Sanothimi.

[32] Educational and Development Service Centre. 1999. *National Assessment of Grade 5 Students.* Kathmandu.

developmentally or physically challenged, is unable to complete an examination within the specified time, an additional time of 1 hour maximum may be provided.[33]

1. Test Development and Administration

The Secondary Education Development Project (SEDP), which encompassed three phases (1994–1997, 1997–1999, 1999–2001), has contributed considerably to the development of secondary education.[34] SEDP initiated the preparation of a table of specifications and development of a test based on it.[35] Now, the CDC develops a table of specifications and includes it within the curriculum objectives. The table of specifications, which is developed based on curriculum, includes content area, format of items, level of items, weightage, and sample items.

A pool of item writers is formed from teachers and experts. Item writers are trained before they commence writing. OCE has started using a workshop approach where 3–4 teachers or experts work in teams and develop items from the assigned unit. Item writers are provided with the curriculum, textbook, table of specifications, old or model questions, and other essential materials. Developed items are moderated, finalized, and stored. Moderation is mainly to ensure adherence to the table of specifications and quality of test items.

Thus, developed items are not pretested, tested, analyzed, and revised as necessary. Perceptions and judgments of the item writers and moderators determine the quality of test items. Due to lack of item testing, analysis, and revision during item development, the technical quality of the final tests is difficult to determine. Questions are also raised about the quality of the curriculum objectives themselves, in which case the quality of the specifications also would be questionable.

Test items in the public examinations and school-based assessments use a variety of formats, both subjective and objective. However, studies showed that there are incorrect practices in item writing such as incorrect formatting (e.g., has one-to-one matching items in the matching type), unclear instructions, verbatim quotes from textbooks, and repetition of test items from textbook exercises.[36]

Test item writing has been covered extensively in the teacher preparation and training courses. The Faculty of Education offers a course related to test and measurement, and the National Centre for Educational Development has similar separate course in its training. These initiatives were intended to ensure that teachers would use a variety of test formats, but technical quality has not improved as expected. Writing test items properly is essential for the teachers as well as the test developers outside the school such as those for the resource center, district-level, and national examinations.

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[33] Nepal Law Commission. 2010. Education Act, 1971 with Amendment Act, 2010. Kathmandu.

[34] Metcon Consultants. 2000. *Secondary Education Development Project Evaluation.* Final Report. Kathmandu.

[35] Office of Controller of Examinations. 2000. *Specification Grids for Secondary Level Compulsory Subjects*. Sanothimi.

[36] J. Wilmut. 2001. *Assessment and Examination.* Component report. UK: Cambridge Education Consultants and Nepal: Metcon Consultants; Research Centre for Educational Innovation and Development. 2004. *Effective Classroom Teaching Learning (Phase III): School-Based Assessment.* Kathmandu; Education Sector Advisory Team (ESAT). 2006. *Study on Student Performance in School Leaving Certificate.* Kathmandu.

Public examinations such as the SLC and the Higher Secondary Education Certificate are administered at the same time nationwide. OCE has provided specific guidelines for the development and administration of examinations, such as *Secondary Level Practical Examination Teacher Support Material 2005*, *Superintendent Guideline Booklet, 2011*, and *Secondary Education Certification Examination Conduction and Management Manual, 2011*. Basically, the public examination schedule includes the following activities:

(i) registration of students;
(ii) updating of item writers' roster and test development training as required;
(iii) test or item writing, moderation, and banking;
(iv) creating a final test paper from randomly selected items in the item bank or random selection of a test if a complete set is kept in the bank;
(v) printing and packaging the test at a secure printing center;
(vi) selecting the examination center;
(vii) transporting the tests to the district headquarters by OCE personnel and then to examination centers with the help of police security;
(viii) selection of invigilators; and
(ix) administration of test—home center not allowed as far as possible and security provided by the district police.

Despite strict security measures, leakage does happen and tests can surface in public; fortunately, this is rare and the number of cases is decreasing. However, cheating is still rampant. Invigilators have been found helping students cheat: some were caught in the 2013 SLC examination and action was taken against them.[37] This affects the credibility and validity of the public examinations.

Regarding management of school-level examinations integrated examination board, a national examination board, led by professionals, has been proposed. This integration is necessary, and needs a lot of support and efforts to materialize.

2. Test Result Generation and Utilization

Immediately after the examination is over, the tasks of answer sheet marking, mark entry, and result generation start. After test administration, the following activities are undertaken at OCE:

(i) collect answer sheets;
(ii) distribute answer sheet packets to the marking centers through the district education office;
(iii) collect coding, marking, decoding, and marks slips;
(iv) verify marks entry (double entry);
(v) publish results;
(vi) conduct supplementary examination for candidates who failed up to two subjects;
(vii) publish supplementary examination result;
(viii) entertain appeal for re-total; and
(ix) release or distribute certification.

[37] *News in Republica*. 2013. 16 March.

Answer sheet scoring is done in the marking centers. OCE permits a maximum of 1,000 answer sheets to be marked by one examiner. Coding and decoding, marking and scrutiny, posting, and recheck of marks are done within the marking centers to maintain security and minimize errors. Answer sheet collection and transportation are handled by relevant officials; post or couriers are not used for this purpose.

Raw scores of the students in each subject are made as two separate entries by different data entry staff. Entry of the marks is checked for accuracy and cross-checked in case of double entry. In OCE, there is a provision for checking of outliers; for example, if a student has passed seven subjects with over 60% marks, but failed in one subject, then it will be checked for mistakes in entry. If there has been no mistake, then the case must be sent to the controller for a decision. In CTEVT, only single entry is done.

Reporting of the test result is done on the subject-wise obtained raw score. OCE and HSEB examinations require a composite pass. Further analysis of test scores and interpretation is not done.

Computer-assisted tests or computer systems for scoring are not in use in OCE or HSEB. OCE had used a scanning system for the application form in its recent trial examination.[38] In this trial examination, reliability and validity were calculated. As only the composite score for each subject was entered into the computer, not individual items, reliability calculation was limited to KR-21, and validity was done in terms of expert validation by mapping against the specification grid. However, reliability and validity are not checked in regular national-level examinations. Computer software seems not to have been developed for more rigorous analysis, but only to generate subject-wise raw scores in the marks sheet.

As soon as results for the SLC or HSEB are formally announced, students can find out their pass/fail or division status through SMS. They can even get their marks from the website, and use these marks sheets for provisional admission to higher secondary institutions or colleges. The original marks sheets are sent to the district education office or regional centers by OCE. District education office or regional centers then send the results to the schools for distribution to the students. Possibilities to expedite this process need to be explored.

3. Quality of Testing and Transparency

SLC and HSEB examination data are not analyzed to establish test validity and reliability. In small-scale studies, item analysis, validity, and reliability used to be analyzed post-examination, not preexamination. As stated earlier in this report, there were various shortcomings and limitations in the post-examination analysis. ERO has undertaken item analysis and pretesting to test validity and reliability, which other public assessment institutions should also practice.

OCE uses different sets of test papers in the six compulsory subjects for five different regions in Nepal for SLC students who appear at the same time for the same examination. These sets of test papers are supposed to be parallel or equivalent, and OCE claims that these test papers as parallel as well. Again, the claims for the equivalency of test papers are

[38] Office of Controller of Examinations. 2013. *Piloting of Achievement Test Based on Objective Test Items as per the Existing Curriculum of Six Core Subjects of Grade 10.* Sanothimi.

based on perception and judgment, not established through item analysis. There is also the issue of comparability of test scores from year to year—differences might be due to the level of difficulty of the test.

Items are developed as a set in the form of test paper or group of items by units or chapters and kept in the bank for later use. As stated earlier in this section, developed items are not calibrated, analyzed, or revised for the final form in OCE and HSEB. A process for item calibration, analysis, and revision has been adopted by ERO in the NASA (footnote 16). In the NASA, a large number of items are prepared, pretested, and after item analysis banked for later use. Moreover, ERO has also adopted item response modeling in test development, item analysis, and result interpretation. This can be a lesson for others.

The NASA and other public examinations are limited to students who are enrolled in school. Because children and youths not in school are not covered in the test, the proportion of out-of-school children and youth and their learning levels have not been determined. However, Department of Education annual data provide net enrollment, gross enrollment, level transition rate, dropout rate, and such other information.

Promotion rate or pass percentage of students at different grades or levels are reported by the Department of Education in its publications such as flash reports, status reports, and consolidated reports; by OCE in its annual publication, *School Leaving Certificate Examination Statistics*; and by the MOE in its publications, *Nepal Education in Figures: At-a-Glance*.[39] The level of disaggregation of promotion data varies in these documents (gender, region, school, etc.); otherwise, reporting is limited mainly to promotion status. SLC and HSEB examination results are not analyzed with a view to support classroom teaching and learning or curriculum improvement.

Examinees have a right to question the scoring of their answer sheet. This right is guaranteed through appeal. In Nepalese education, currently only re-totaling is done, and reevaluation of an answer sheet is not entertained. Provision of reevaluation would increase transparency and would also be valuable in improving the technical aspects of the test.

4. Good Practices and Opportunities

Some of the good practices and further improvements required in the present practices are shown in Table A2.5.

Weaknesses in the present assessment system that need to be improved include the following:

(i) Comparability—sets of test papers; year-to-year and subject-to-subject variations need to be explained and comparability maintained (item response theory can be helpful).
(ii) Result analysis—analysis of test results needs to be done with the view to provide suggestions to improve curriculum as well as teaching and learning practices.

[39] Ministry of Education. 2012. *Nepal Education in Figures: At-a-Glance 2012.* Kathmandu; Ministry of Education. 2013. *Nepal Education in Figures: At-a-Glance 2013.* Kathmandu.

Table A2.5: Nepal—Good Practices and Opportunities for Improvement in Assessment of Student Learning Outcomes

Initiated	Further Improvements Required
Emphasis on school-based assessment and continuous assessment system (assessment of learning)	Linking with students' learning support
Test development based on specification grid (mainly external)	Teacher and school also base test development on curriculum and grid
Attempt to include higher-level items (mainly external exam)	Classroom questions, school, and resource center level tests also need to pay attention to this. External exams can also be improved. Noncognitive skills also to be assessed.
Attempts to increase transparency (re-totaling, examining answer sheet)	Reevaluation should be entertained on the appeal of the examinee
Item banking (sets or items by units)	Items to be calibrated, analyzed, and revised and then final form kept in the bank Access to the teacher and school for the sample items
Test administration—established procedure	More rigorous efforts and procedures to address problem of cheating
Test result publication—minimized time, multiple sources for publication	Error minimization Test result analysis, reporting, and utilization

Source: Author.

(iii) Noncognitive skills—need to be emphasized in the curriculum as well as properly assessed.
(iv) Certification practices—move from arbitrary 101 scale marking to single subject certification and letter grading.

The endeavors to improve the assessment system in Nepalese education should also reflect upon the possible barriers. The main probable barriers are as follows:

(i) Delays in passing of amended Education Act has delayed some of the initiatives and created confusion.
(ii) An examination-oriented education system and public aspirations negate some of the quality improvement endeavors such as the continuous assessment system. Without a pass/fail, it is not perceived as an assessment.
(iii) Frequent transfer of staff and loss of institutional memory is problematic. For example, technical units were established by different projects in OCE and HSEB, but these do not exist now.
(iv) Although the technical aspects of test development and marking are used, steps (such as in scrutiny, marking scheme, etc.) are not followed properly.
(v) Conceptual clarity is lacking in a number of aspects (such as grace mark, cut-off score, composite pass, pass/fail practice, etc.).
(vi) "Assessment *of* learning" is still the dominant concept.

These barriers need to be addressed properly to improve the quality of education in general and of assessment practices in particular.

There are also a number of opportunities to improve assessment practices and the education system as a whole, such as the following:

(i) Recent reform initiatives such as teacher professional development training, the continuous assessment system, Child Friendly School National Framework, and the Information and Communication Technology Master Plan have emphasized improvement of quality of education.
(ii) Along with other aspects of education, the National Curriculum Framework and the SSRP have provided guidelines on curriculum and assessment. Some of them have already been implemented.
(iii) Quality of education and quality of student learning have been major concerns by the public, the media, and the government. Major aspects of this discussion are fairness and quality of examination.
(iv) Work is under way to establish a national examination board.

D. Recommendations and Future Directions for Innovation in Assessment

Formative and summative assessments are emphasized in Nepal's education policies as well as in its curriculum and teacher training. Assessment of student learning outcomes (ASLO) in the country is governed by the Education Act of 1971 and Education Rules in 2002 as well as the School Sector Reform Plan 2009–2015.

Overall, the main principles that guide assessment in Nepalese school education are (i) assessment to improve student learning, (ii) assessment of competency, (iii) prioritization of SBA, (iv) teacher accountability for student achievement, (v) support to all students so they can learn and achieve at least the minimum standard of learning, (vi) certification of learning achievement, and (vii) monitoring of achievement based on national standards.

Public examinations are managed in various levels and are also supervised by various institutions from the center to local level. The Primary Education Certificate Examination is given by schools to grade 5 students to certify completion of primary school. The District Education Office administers the Lower Secondary Education Certification Examination for grade 8 students. The Secondary Education Certificate, a school leaving certificate at grade 10, is a nationally administered examination supervised primarily by OCE of the MOE. The Higher Secondary Education Certificate Examination for grades 11 and 12 students, which is also a nationally administered examination, is supervised by the HSEB. However, in the proposed reforms in the SSRP, the current school system will be restructured to form a coherent and integrated school structure for grades 1–12. Hence, governance of the examination systems will likewise be restructured but will remain anchored firmly on the National Curriculum Framework, in the absence of a student assessment policy framework.

For national assessments, ERO is another important agency formed under the MOE. A newly established office, ERO is tasked with conducting national assessments to provide

feedback for policy formulation. Also, the office will undertake periodic NASA for grades 3, 5, and 8.

SBAs practiced in Nepal include teacher-made tests, the teacher's assessment during lesson delivery, and the teacher's periodic assessment using various assessment tools to evaluate learning, including CAS.

Recommendations and future directions for innovative ASLO include (i) improving learning achievement by developing and implementing policies on quality education, quality of learning, and SBA; (ii) enhancing test development and administration by developing and implementing policies regarding an integrated examination board, improvement of test development practices, and a policy on expanded assessment practice; (iii) developing better test generation and utilization by installing policies on certification, assuring integrity in assessment, and utilization of assessment results; and (iv) introducing policy on transparency in the assessment system.

1. Learning Achievement

Policy should be clear on quality of education, quality of learning, SBA, and required supports. The specific recommendations are as follows:

a. Policy on Quality of Education

Emphatically state in the policy that the main indicator of quality education is learning experience of students.

(i) **Program support.** To fulfill this policy, "quality education" must first be defined and indicators of quality education and measurement tools need to be developed. Second, related support mechanisms—such as teacher training for teaching and learning improvement, and reliable and valid assessment tools to measure different aspects of learning including noncognitive skills—need to be provided.

(ii) **Technical support**. Provide support to (i) the National Centre for Educational Development for teacher training package development or revision of existing ones, and (ii) the CDC on assessment tool development and orientation.

b. Policy on Quality of Learning

Clearly state that student learning includes higher-level objectives, practical skills, life skills, and noncognitive skills useful for the 21st century world.

(i) **Program support.** Though a higher level of learning objectives has been emphasized in the specification grid of the curriculum, test items are found to be mostly at the lower levels. Life skills and noncognitive aspects are not systematically assessed, recorded, and reported. Program support is required to train teachers and test developers on writing higher-level learning objectives and test items, and to develop tools and formats to assess life skills, noncognitive skills, and practical skills related to the theoretical part in the course. Practical training in subjects such as science, mathematics, health, environment, vocational subjects, etc. is weak due to insufficient school infrastructure and budget as well as lack of proper skills of the teachers. Such training support needs to be provided.

Formative and summative assessments are emphasized in the educational documents, teacher preparation courses, and curriculum. But formative assessment to improve student learning is less in practice. There are some conceptual developments on assessment *for* learning, but none yet on assessment *as* learning. There is dominance of the concept of assessment *of* learning. Forthcoming conceptual development needs to be received, internalized, and readily accommodated in the teacher training courses, university courses, and educational documents.

(ii) **Technical support.** The CDC develops curriculum and guidelines on assessment. It needs to be supported in the curriculum revision process and assessment practices to incorporate higher-level learning in the curriculum and assessment. Similarly, the National Centre for Educational Development and the faculties of education or school of education of different universities also need to be supported in improving teacher training and incorporating recent developments in the area of assessment practices.

c. Policy on School-Based Assessments

SBAs will be standardized and reported along with external and/or summative examination.

(i) **Program support**. In the public examinations, weightage of SBA is considered only in the practical tests. Vocational courses are offered at the secondary level as optional subjects, and CTEVT provides an array of courses at different levels. At the secondary level, 25% weightage out of 100% is for practical in English language (listening and speaking), science, health, population, and environment subjects; while it is 50% weightage out of 100% in computer science. Specifically, institutional schools are found registering full marks to their students in the practical, while some of the students might fail in the theoretical part of the same subject. In some cases, the validity of these marks is questionable. Therefore, programs need to support teacher training, develop a manual on how to standardize SBAs to be fair and relevant, and promote the usefulness of SBA. SBA should be developed to assess a wider range of curricular objectives, especially those that cannot be measured easily through a paper-and-pencil test. Another important aspect of SBA should be to reduce undue examination pressure. For this, conceptual and practice-level discussions need to be carried out as well to reduce parental pressure on their children to score high marks in the examination.

(ii) **Technical support.** Assistance is needed to develop or revise a manual on SBA, and to develop a booklet and guidelines for advocacy.

2. Test Development and Administration

Various measures are required to improve test development and administration such as integrating school-level examinations, improving test development practices, and expanding assessment practices using ICT. The recommendations are as follows:

a. Policy on Integrated Examination Board

The SSRP proposal for a national examination board needs to be given legal status and implemented.

(i) **Program support.** The OCE, HSEB, and CTEVT integration requires a number of administrative works such as acts and regulations for a national examination board, administrative structure and personnel placement, functional units, human resource development, integration and additional resources, establishing teams, and making the national examination board an independent body led by experts.
(ii) **Technical support.** Technical support is needed in the areas of management of the national examination board, development and strengthening of divisions and units, and human resource development.

b. Improvement of Test Development Practices
Policies are in place, but implementation and technical quality are weak.

(i) **Program support**. SEDP, OCE, and HSEB have taken measures to improve assessment practices such as use of marking centers; specification grids; marking schemes; moderation and scrutiny processes; and training for item writers, markers, and moderators. Furthermore, OCE now holds item writing and training workshops with samples of actual mistakes in previous exams. HSEB uses both marking schemes and model answers for marking of answer sheets.

There are intentions to identify and improve shortcomings, but this is not systematically done. First, there is lack of post reflection and rigorous analysis of examination in a holistic way. Second, assessment and examination improvement initiatives—identifying shortcomings, planning for improvement, assessing results of improvement activities, etc.—are not undertaken in a formative way. In recent years, the technical aspects of public examinations have been improving.
A number of fundamental aspects are still to be improved, such as the technical quality of specification grids, test item format, and the test item development process. Test item moderation should be based on item analysis, not solely on expert judgment. The marking scheme developed is only a draft, and should be correlated with a sample of answer sheets. It should be revised as needed and finalized before use, and should consider students' typical responses as well. Scrutiny is an essential part of reliable and uniform marking. It is undertaken during the initial stage of marking to familiarize markers with the marking procedures and to set a uniform standard by sample checking of marked answer sheets. Scrutiny should be done during marking rather than after marked answer sheets are submitted. Also, item banks should contain only technically pretested and calibrated items. Finally, if two or more sets of test papers are to be used, it is essential to establish their equivalency.

(ii) **Technical support.** Manual development and training on specification grids, test item writing, moderation, scoring, scrutiny, pretested and calibrated item banking, item response modeling for test comparison, etc. are needed.

c. Policy on Expanded Assessment Practice
Policy should open avenues for expanded assessment practices such as participation in regional and international tests and use of ICT in assessment.

(i) **Program support.** Feasibility studies on the use of international tests and ICT for assessment need to be undertaken, and an action plan needs to be developed and implemented.
(ii) **Technical support**. Studies and support should be provided by experts.

3. Test Result Generation and Utilization

There is ample scope to improve test result generating practices and their utilization by improving certification practices, increasing integrity in assessment, and policy provision on utilization of assessment results. Hence, the recommendations provided are as follows:

a. Policy on Certification

The public examination board will use letter grading and issue single subject certificates.

(i) **Program support.** Although SEDP and other projects worked to implement single subject certification and a letter grading system, these were not successfully implemented. The main reasons were lack of conceptual understanding and difficulty in doing away with the embedded practices of a using a single composite percentage, composite pass, and the pass/fail system. Decision makers, implementers, and relevant stakeholders need to be oriented toward a more technically correct conceptual construct, in reporting learning achievement in more meaningful ways such as letter grading with descriptors, grade point average, single subject certification, etc.

With single subject certification and letter grading, the concept of differentiation or different abilities of students should also be linked to the assessment practices. Special education, inclusive education, scholarships, etc. have been provisioned to increase access to education of differently abled children. Assessments to suit these children are not much in focus. They are also required to study the same curriculum and sit for the same examinations. In the SLC examination, amanuenses and extra time are provided as per the disability of the examinee. Importantly, it was discussed whether more relevant contextual and life skills should be provided for children who are differently abled. These children also need to be appropriately supported, adapting teaching and learning process to compensate for the students mental or physical impairment and optimize their learning.

Assessments are designed based on curriculum or even textbooks, and norms are not used in public examinations. The NASA has taken the initiative to establish grade norms. It is also necessary to clarify the intention of the curriculum and the minimum learning outcomes need to be defined. At the same time, more capable students should have an opportunity to excel and learn at their own pace. Suggestions such as limiting the number of subjects to be passed and providing an opportunity to appear in more subjects for the interested students in the SLC need to be considered in the line of differentiation.[40]

[40] Education Sector Advisory Team (ESAT). 2006. *Study on Student Performance in School Leaving Certificate.* Kathmandu.

(ii) **Technical support.** Development of a manual and training on single subject certification, letter grading, descriptors, etc., are needed. There is also a need to organize national-level interactions, first, to clarify the purpose of the assessment—norm-referenced, criterion-referenced, curriculum-based, or combination; and second, to set learning standards or minimum learning outcome.

b. Policy on Assuring Integrity in Assessment

Provisions are there, but stricter legal and administrative provisions are required for public examination.

(i) **Program support.** The pressure to do well in the public examination at any cost can lead to cheating, and irregularities such as invigilators helping examinees, influencing answer sheet markers, and other forms of corruption. Disturbances and noise around the examination center are common even though there are provisions for security in the examination center. Threats to the examination center superintendent and invigilators are also experienced if they are strict in the exam.

Security and strictness in the examination have been increasing. There are legal provisions and penalties for those involved in cheating, making disturbances, or other unscrupulous behavior; invigilators involved in irregularities; markers or moderators lax in their task; or officials involved in corruption. Legal advice is available in the MOE when needed. Students are not allowed to take examinations at their home centers to minimize cheating and other problems.

Along with continuation of these improvements, measures to increase fair practices need to be strengthened, such as proper scrutiny, closed-caption television in examination halls, gradual introduction of computer-assisted assessments, etc.

(ii) **Technical support**. Provide orientation and training to the staff, and introduce computer-assisted assessments on a pilot basis.

c. Policy on Utilization of Assessment Results

The examination board will publish analytical reports with recommendation for improvement at various levels within 3 months of publication of results.

(i) **Program support.** Analysis of public examinations is limited to making comparisons of pass/fail numbers. These need to be analyzed from the perspective of student learning, curriculum effectiveness, implications for classroom teaching and learning improvement, and paving ways for maximizing students' learning. There is also a need to adopt technologies for the improvement of quality of education, particularly assessment. Similarly, it is essential to link assessment to funding, capacity building, and technical support.

Punitive or supportive approaches can be taken based on the assessment results. All relevant authorities and officials should assume accountability. It is better

to analyze the school's physical and human resources and then correlate it with public examination results so that schools with adverse conditions are provided with more support, and better-off schools, if performing poorly, are advised on how to do better. Particularly in rural areas, if evening study groups are formed in those hamlets with provision of light, extra books, and support of students' studies, it would be a tremendous support.

(ii) **Technical support.** A framework for results analysis and reporting needs to be developed, along with required capacity building.

4. Quality of Test and Transparency: Policy on Transparent Assessment System

Candidates would be allowed to request reevaluation of answer sheets. There would be periodic third-party auditing of the assessment system and results.

(i) **Program support.** In the Nepalese education system, a student's appeal is restricted to retotaling. The test answers are not reevaluated. A recent court decision has made it requisite for OCE that, if a candidate wants to see his or her answer sheet, a copy of it would be provided, but no change whatsoever will be made other than when a mistake in totaling is detected. This should be considered a lack of transparency, and shows that the examination board is hesitant to claim that their examination is fair and accurate. There is a need to formulate rules and regulation to support a transparent assessment system. Similarly, it is also essential to develop a framework of periodic auditing of the assessment system and its outcomes to identify gaps and suggest measures for improvement.

(ii) **Technical support**. Rules and regulations should be formulated for increased transparency and periodic auditing of the assessment system and practices.

5. Requirements for Improving the Assessment System

The following are the requirements for improving the education assessment system in Nepal:

(i) conceptual clarity on reorienting certification, clarification on purpose of assessment, reducing examination pressures, expansion and responding to differentiation, realigning SBA;

(ii) technical support on development of framework (such as integration process to establish a national examination board); guidelines (such as assessment of noncognitive skills, higher-order questions); indicators (such as minimum learning outcomes); manual (such as SBA, test item writing, use of ICT in assessment); and support in teacher training, orientation, and advocacy;

(iii) support from administration and management to establish a national examination board, assure integrity in assessment, and utilize assessment results;

(iv) teacher preparation:
- frontline approach to update teacher preparation courses, use of ICT;
- skill development by following demonstration, practice, and feedback steps;
- establish stronger linkage between assessment and instruction (skills for teachers—diagnosis of learning difficulties, learning styles, differentiation,

individualized need, metacognition, cognitive assessment, interactive assessment, etc.);
- technical backstopping; and
- continued and expanded collaboration with the faculty of education;

(v) participation in regional and international assessments; and
(vi) accountability mechanism—from examination center to classroom.

An action plan should be developed by a task force to be led by the MOE. The following possible actions are suggested:

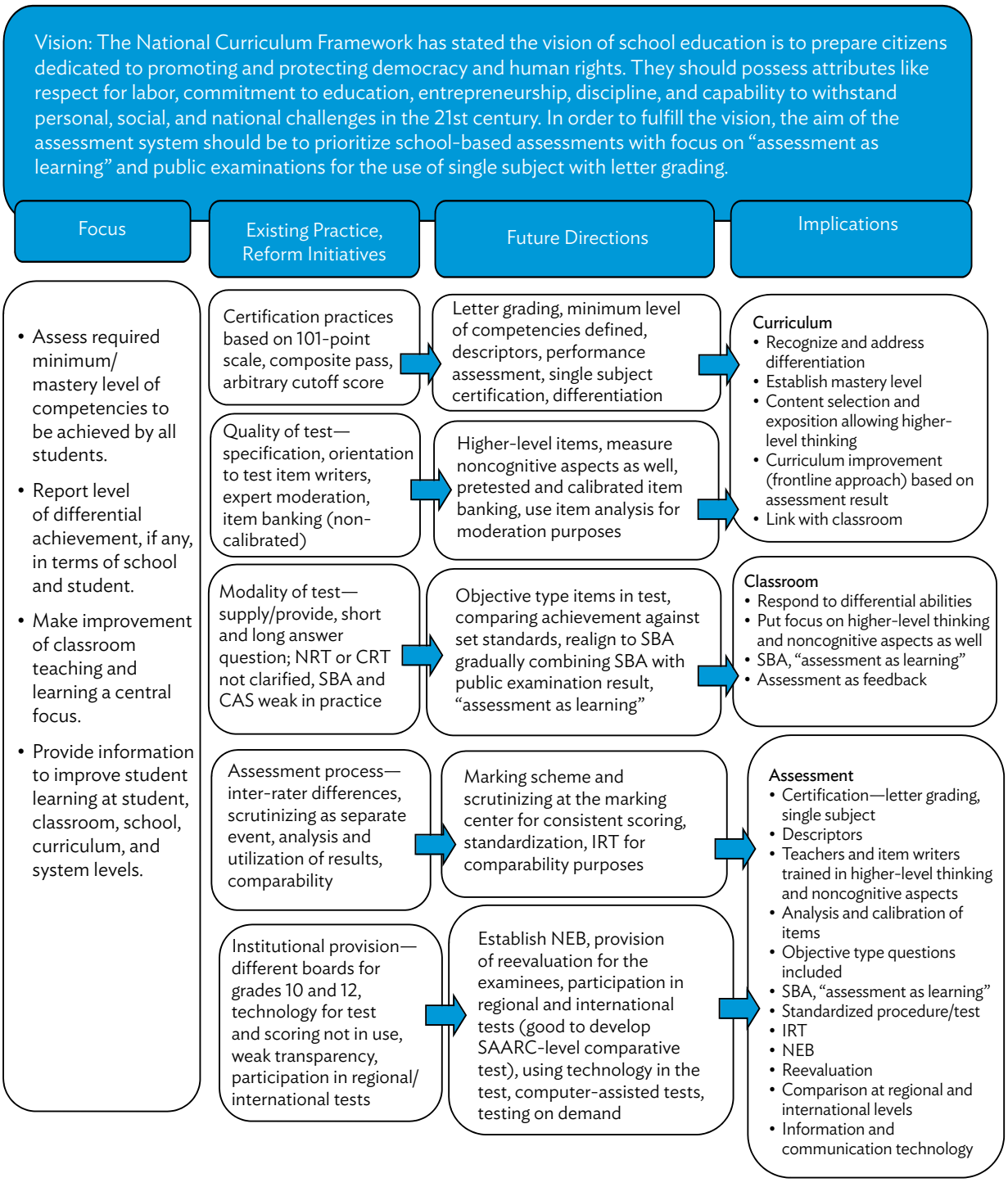
In year 1:
- introductory booklet, workshops, and exposure to clarify fundamental concepts such as letter grading, single subject certification, SBA, expanded purpose of assessment, differentiation, item response theory (IRT), etc;
- initiation of dialogue and groundwork for establishing a national examination board and for certification;
- strengthening works on SBA; and
- basic research studies undertaken, such as classroom practices, assessment practices at the school, review of assessment materials and training, etc.

Within 5 years:
- teacher preparation focused on SBA and expanded purpose of assessment such as "assessment as learning" in preservice and in-service modes;
- fully functional item banks that can share sample items with teachers and schools;
- functioning independent specialist team led by national examination board;
- periodic participation in the regional and international assessments;
- enhanced quality of test and use of IRT in public examinations;
- competency standards set and followed; and
- integration of SBA and external examination.

In about 10 years:
- testing on demand;
- use of IRT in public examination;
- use of assessment results to improve curriculum, teaching, and learning;
- multiple, equivalent public examinations in use with private institutions and/or nonprofit organizations involved; and
- regular participation in regional and international assessments.

A summary of main ideas for innovation and reform initiatives to improve assessment practices in Nepalese education is presented in Figure A2.7.

Figure A2.7: Nepal—Innovations and Reforms in Assessment of Student Learning Outcome



CAS = continuous assessment system, CRT = criterion referenced test, IRT = item response theory, NEB = national examination board, IRT = norm-referenced test, SAARC = south asian association of regional cooperation, SBA = school-based assessment.

References

Ashman, A. F., and R. Conway. 1997. *An Introduction to Cognitive Education Theory and Applications.* London and New York: Routledge.

Central Bureau of Statistics (CBS). 2011a. *National Census 2011–Summary.* Kathmandu.

———. 2011b. *Nepal Living Standards Survey 2010/11 Statistical Report. Volume One.* Kathmandu.

Chand, D. 2000. *Nepal's Tourism Uncensored Facts.* Kathmandu: Pilgrims Publishing.

Educational and Development Service Centre (EDSC). 2011. *A Final Report on National Assessment of Grade 10 Students.* Kathmandu.

Everest Map Publication. 2010. *Everest Atlas Revised Edition 2010*. Kathmandu.

Fullan, M. G. 1991. *The New Meaning of Educational Change.* Great Britain: Cassell.

Gonzales, R. D. L. C. 1999. Assessing Thinking Skills in the Classroom: Types, Techniques, and Taxonomy of Measures of Thinking Skills in Higher Education. *Philippine Journal of Educational Measurement.* 9 (1). pp. 17–26.

Gonzales, R. D. L. C., and M. Callueng. 2014. Classroom Assessment Practices of Filipino Teachers: Measurement and Impact of Professional Development. Essentials on Counseling and Education. *https://www.researchgate.net/publication/268807237_Classroom_Assessment_Practices_of_Filipino_Teachers_Measurement_and_Impact_of_Professional_Development*Gonzales, R. D. L. C., and C. G. Fuggan. 2012. Exploring the Conceptual and Psychometric Properties of the Classroom Assessment. *The International Journal of Educational and Psychological Assessment.* 10 (1). pp. 45–60.

Ministry of Education and Sports (MOES). 2007. *Education for All Mid-Decade Assessment—National Report.* Kathmandu.

———. 2008. *School Sector Reform: Core Document.* Kathmandu.

National Centre for Educational Development. 2010. *Teacher Professional Development Program Implementation Manual.* Sanothimi.

New ERA. 2008. *Baseline and Follow-up Survey for Nepal Community Managed Schools Impact Evaluation.* Kathmandu.

———. 2010. *Baseline and Endline Surveys for Nepal Community Managed Schools Impact Evaluation.* Kathmandu.

Non-Formal Education Center (NFEC). 2007. *Non-Formal Education Policy, 2063/2007 AD.* Sanothimi.

———. 2008. *Non-Formal Education Program Implementation Manual, 2008.* Sanothimi.

Office of Controller of Examinations. 2005. *Secondary Level Practical Examination Teacher Support Material 2005.* Sanothimi.

———. 2011a. *Secondary Education Certification Examination Conduction and Management Manual 2011.* Sanothimi.

———. 2011b. *Superintendent Guideline Booklet 2011.* Sanothimi.

———. 2013. *Conceptual Framework on Integrated Examination System in Nepal*. Sanothimi.

Primary Education Development Project. 1998. *Primary Education Development Project: An Assessment.* Kathmandu.

APPENDIX 3: STUDENT ASSESSMENT AND EXAMINATION IN SRI LANKA

The present population of Sri Lanka is over 20 million people, who are mostly Sinhalese (74%), with significant Tamils (12.6% Sri Lankan Tamils and 5.3% Indian origin Tamils) and about 7.1% Muslim. Most of the population is Buddhist (69%) and a significant share Hindu (15%), Muslim (8%), and Christian (8%). Sinhala and Tamil languages are both official and national languages in Sri Lanka, while English is the link language.

Sri Lanka adopted market-oriented economic policies in the late 1970s; as a result, the country achieved middle-income status in January 2010. The country could have achieved it earlier if not for the civil unrest between the Sinhalese and Tamils, particularly in the Northern Province. In 2013, gross domestic product (GDP) of Sri Lanka was about $2,920, with a GDP growth rate of 7.3%. The contribution of agriculture to annual GDP was 4.7%; industry, 9.9%; and services, 6.4%. In 2012, 6.5% of the population lived below the poverty level.

A. Assessment Systems for Student Learning Outcomes

Assessment, in the education context, refers to the process of gathering and interpreting information from diverse sources in order to develop a deep understanding of what students know, understand, and do as a result of their educational experiences, with a view to promoting learning.[1]

Assessment systems often refer to several sets of assessments measuring different aspects of student learning. It seems appropriate to begin this chapter by looking at how assessment has been classified.

1. Toward a National Assessment Policy Framework

Besides *The Emerging Wonder of Asia: Mahinda Chintana Vision for the Future—The Development Policy Framework of the Government of Sri Lanka*, the policy directions for general education have been provided by the Constitution of the Democratic Socialist Republic of Sri Lanka in its chapter on Directive Principles of State Policy.[2]

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[1] G.L.S. Nanayakkara. 2008. *School-Based Assessment and Facilitation: Handbook*. Secondary Education Modernization Project II. Battaramulla: Ministry of Education.

[2] Ministry of Finance and Planning, Department of National Planning. 2010. *Sri Lanka—The Emerging Wonder of Asia: Mahinda Chinthana Vision for the Future—The Development Policy Framework of the Government of Sri Lanka.* Colombo.

At present, Education Ordinance No. 31 of 1939 is the principal legislative enactment in Sri Lanka. It has brought about a number of important changes in the education policy of the country. Though the Education Ordinance of 1939 with all its amendments up to 1973 provided a legal base for a number of reforms, in the context of today's needs and demands, it is considerably outdated.

Currently, the proposed new national education policy framework and the act for the general education sector formulated by the national committee appointed by the Ministry of Education (MOE) are being discussed at a parliamentary standing committee on education.[3]

The government has just embarked on the new Education Sector Development Program, a results-based investment facility funded by the Asian Development Bank (ADB). One of its major disbursement-linked results indicators is the development of a national school assessment policy framework. To date, a national assessment committee has been appointed under the leadership of the National Education Commission (NEC) chair to develop the framework, which is expected to include clearer policies on national school assessment.[4]

In the absence of a national assessment policy framework, most of the national assessment activities have been operated under regulations, laws, and directives laid down mainly through circulars issued by the secretary of education and the commissioner general of examinations.

2. The Curriculum and Assessment System

Systematic curriculum development in Sri Lanka commenced only in the late 1960s with the establishment of the Curriculum Development Centre of the MOE. Prior to that, curriculum development was handled by the MOE as part of its routine work. Later, with the establishment of the National Institute of Education (NIE) in 1986, curriculum development became the responsibility of the NIE.

a. Curriculum Development

The NEC, which was formed in 1991, is responsible for formulating national goals for education (Box A3.1) and for developing a set of basic competencies that should be attained by all pupils (Box A3.2). In February 1995, the NEC published a document titled *Towards the National Education Policy* that is considered a forerunner to a comprehensive national education policy. A presidential task force, set up in 1997 to implement the policies recommended by the NEC, published another document titled *General Education Reforms—1997*. All these documents from the first report of the NEC up to the document on the 1997 general education reforms have policy implications for the curriculum in Sri Lanka.[5]

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[3] Ministry of Education. 2012. *National Strategic Plan for the General Education Sector—Education Sector Development Framework and Programme (2012–2016)*. Battaramulla.

[4] Asian Development Bank. 2013. *Terms of Reference for Consultants Team (FIRM)—TA8335-SRI: Human Capital Development and Implementation Support.* Manila.

[5] National Institute of Education and Ministry of Education and Higher Education. 2000. *National Curriculum Policy—Sri Lanka.* Maharagama: NIE Press.

Box A3.1: Sri Lanka—National Goals for Education

The national system of education should assist individuals and groups to achieve major national goals that are relevant to the individual and society.

(i) Nation building and the establishment of a Sri Lankan identity through the promotion of national cohesion, national integrity, national unity, harmony, peace, and recognizing cultural diversity in Sri Lanka's plural society within a concept of respect for human dignity.
(ii) Recognizing and conserving the best elements of the nation's heritage while responding to the challenges of a changing world.
(iii) Creating and supporting an environment imbued with the norms of social justice and a democratic way of life that promotes respect for human rights, awareness of duties and obligations, and a deep and abiding concern for one another.
(iv) Promoting the mental and physical well-being of individuals and a sustainable life style based on respect for human values.
(v) Developing creativity, initiative, critical thinking, responsibility, accountability, and other positive elements of a well-integrated and balanced personality.
(vi) Human resource development by educating for productive work that enhances the quality of life of the individual and the nation and contributes to the economic development of Sri Lanka.
(vii) Preparing individuals to adapt to and manage change, and to develop capacity to cope with complex and unforeseen situations in a rapidly changing world.
(viii) Fostering attitudes and skills that will contribute to securing an honorable place in the international community, based on justice, equality, and mutual respect.

Source: National Education Commission. 2003. *Proposals for a National Policy Framework on General Education in Sri Lanka*. Narahenpita.

In the NIE document *National Curriculum Policy—Sri Lanka,* the term "curriculum" has been defined as a structured series of intended learning outcomes including what is called the "hidden curriculum." It further states that, from a more a practical perspective, it may also be defined as a course of study provided in school to include the *aims, objectives, content, teaching strategies, evaluation, and essential learning resources* to facilitate learning and teaching of a given discipline.

The Course Prescription Framework of the National Curriculum Policy has stressed that each course or subject document should indicate the following points relating to assessment: teaching–learning strategies, practical work, project work, field studies, and assignments should form part of the learning methodology; clear description of the assessment procedures for using school-based assessment (SBA); utilization of the facility provided by the SBA for broad learning to assess the learning of key issues; and concepts through summative tests. Learning assessment events should be included in the syllabus. Further, the National Curriculum Policy indicates that curriculum revision should be carried out every 8 years. A lead time of 2 years should be allowed for the preparation of textbooks and other curricular material after finalizing each syllabus (footnote 5).

Box A3.2: Sri Lanka—Basic Competencies to Be Attained by All Pupils

The following basic competencies developed through education will contribute to achieving the national education goals.

1. Competencies in communication, which are based on four subsets:
Literacy: Listen attentively, speak clearly, read for meaning, write accurately and lucidly, and communicate ideas effectively.
Numeracy: Use numbers for things, space, and time; count, calculate, and measure systematically.
Graphics: Make sense of line and form; express and record details, instructions, and ideas with line form and color.
Information technology proficiency: Computer literacy and the use of information and communication technology in learning, in the work environment, and in personal life.

2. Competencies relating to personality development:
Generic skills: Creativity, divergent thinking, initiative, decision making, problem solving, critical and analytical thinking, teamwork, interpersonal relations, discovering, and exploring.
Values: Integrity, tolerance, and respect for human dignity.
Emotional intelligence.

3. Competencies relating to the environment: Included here are skills in using tools and technologies for learning, working, and living.
Social environment: Awareness of the national heritage, sensitivity and skills linked to being members of a plural society, concern for distributive justice, social relationships, personal conduct, general and legal conventions, rights, responsibilities, duties, and obligations.
Biological environment: Awareness, sensitivity, and skills linked to the living world: people and the ecosystem; forests; seas; water; air; and plant, animal, and human life.
Physical environment: Awareness, sensitivity, and skills linked to space, energy, fuels, matter, materials and their links with human living, food, clothing, shelter, health, comfort, respiration, sleep, relaxation, rest, wastes, and excretion.

4. Competencies relating to preparation for world of work: Employment-related skills to maximize students' potential and enhance their capacity to contribute to economic development, to discover their vocational interests and aptitudes, to choose a job that suits their abilities, and to engage in a rewarding and sustainable livelihood.

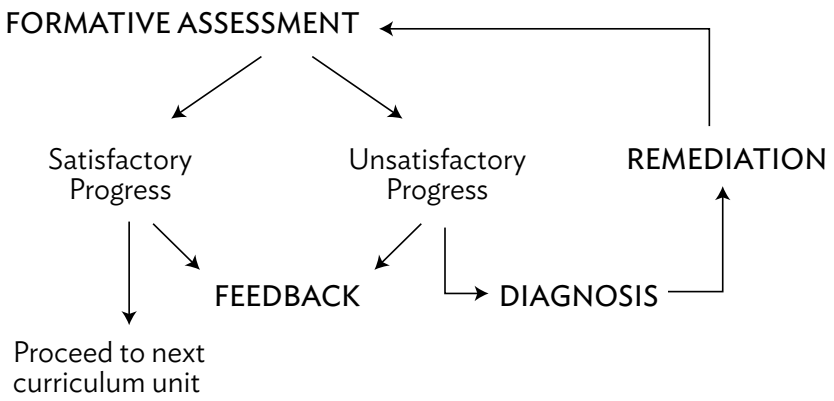
5. Competencies relating to religion and ethics: Assimilating and internalizing values so that individuals may function in a manner consistent with the ethical, moral, and religious modes of conduct in everyday living, selecting that which is most appropriate.

6. Competencies in play and use of leisure: Pleasure, joy, emotions, and such human experience as expressed through aesthetics, literature, play, sports and athletics, leisure pursuits, and other creative modes of living.

7. Competencies relation to "learning to learn": Empowering individuals to learn independently and to be sensitive and successful in responding to and managing change through a transformative process, in a rapidly changing, complex, and interdependent world.

Source: National Education Commission. 2003. *Proposals for a National Policy Framework on General Education in Sri Lanka*. Narahenpita.

Figure A3.1: Sri Lanka—Diagnosis, Remediation, and Feedback



Source: G.L.S. Nanayakkara. 2008. *School-Based Assessment and Facilitation: Handbook.* Secondary Education Modernization Project II. Battaramulla: Ministry of Education.

b. Model for Formative Assessment

Today, the process of assessment and evaluation has become an integral part in implementing the curriculum in the classroom. It is essential in the teaching–learning process to diagnose learning difficulties, weaknesses, and strengths of students; provide feedback to improve learning; and take remedial measures to overcome the identified learning difficulties and weaknesses. These are among the key elements of formative assessment. A model for formative assessment promoted to classroom teachers in Sri Lanka is shown in Figure A3.1. It illustrates the interrelations between diagnosis, feedback, and remediation.

c. School-Based Assessment

SBA is a process carried out in schools by students' own teachers with the prime purpose of improving student learning. In Sri Lanka, an SBA scheme was implemented from grade 1 to grade 13 in 1999, aimed at improving the quality of learning, teaching, and assessment (LTA). SBA is considered superior to one-shot examinations.

Rationale of school-based assessment. In many subjects, some important objectives of the curriculum cannot be assessed through a written test alone or in a short period of time. However, many of these objectives can be readily assessed through SBA. Therefore, SBA is considered as a highly valid form of assessment.

Through SBA, teachers can assess individual pupils more frequently, over a period of several years, using different methods. The SBA grade awarded to a pupil for a given subject is based on the average of such assessments. This average reflects a more reliable indication of the true abilities of the pupil than the results of a one-shot examination.

Thus, it may be stated that the primary rationale of SBA is to enhance the validity and the reliability of assessments. It was envisaged that implementation of SBA would contribute to the improvement of learning, teaching, and evaluation processes in the classroom

Main responsibility of school-based assessment implementation. Under the present setup, the NIE is mainly responsible for the implementation of the SBA scheme in grades 6– 9, with the necessary assistance from the Department of Examinations (DOE). On the other hand, the DOE is mainly responsible for the implementation of the SBA scheme in General Certificate of Education - ordinary level [GCE (O/L)] and General Certificate of Education - advanced level [GCE (A/L)] grades, with necessary assistance from the NIE.

There has been criticism of some issues and implementation shortcomings of current SBA practices. Most importantly, there is need for a common and coherent SBA scheme for junior and senior secondary grades to avoid disjuncture and confusion among students, teachers, and parents.[6]

School-based assessment practices at the primary stage of education. In primary education, pupils are assessed continuously by their own teachers using a combination of both informal methods (e.g., observation, oral questioning, and listening to children) as well as formal methods (e.g., written tests).

In the competency-based primary curriculum, those competencies considered as essential for the further development of learning of a subject and that will help a child to lead life as a useful citizen are called essential learning competencies (ELCs). Subject-wise lists of ELCs for the three key stages were designed very carefully by the curriculum developers. A new assessment feature, "Attainment of Mastery in ELCs at the End of a Key Stage," was designed and implemented under the 1997 education reform. It requires teachers to assess each pupil at each key stage to determine whether the pupil has mastered the prescribed ELCs. Teachers are also expected to provide individual help to those who have not mastered the ELCs, to enable them to attain mastery. Special training programs were conducted to train teachers on how to carry out assessments under the ELC feature.

In addition, the assessment guidelines provided in May 2000 by the Ministry of Education and Higher Education to primary teachers paid special emphasis to the following features:

- Identify children's strengths and weaknesses at entry to grade 1 through a set of "special guided play items and activities."
- Collect samples of pupils' creative work (artifacts) and maintain portfolios.
- Maintain records on pupils' progress, with anecdotal notes.
- Diagnose pupil misconceptions and errors and remedy their underlying causes.
- Provide feedback to pupils based on assessment information gathered.
- Refrain from comparing the achievement levels of individual pupils.

Information gathered by the NIE has revealed that most of these assessment features are being practiced satisfactorily in primary schools.

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[6] National Education Commission. 2003. *Proposals for a National Policy Framework on General Education in Sri Lanka*. Narahenpita.

School-based assessment practices—junior secondary. SBA at the junior secondary level (grades 6–9) was introduced as a pilot project in 1994 and extended island-wide in 1999 by the NIE. A selected group of trainers, including in-service advisors, were given a special training on implementation of SBA by officers of the Evaluation Department of the NIE. To facilitate the implementation of SBA, several resource materials were developed. The NIE monitored the implementation process.

Limited information gathered from a sample of NIE officers, zonal education officers, principals, and teachers revealed that teachers in grades 6–9 currently use mainly short written tests, assignments, projects, and group work for SBA. Usually, teachers are guided by the in-service advisors who visit schools, and the implementation process is monitored by the zonal education offices. Further, the current teacher instructional manuals issued by the NIE have included exemplar assessment tools and instructions on how to carry out student assessment under the "'5E" methodology. However, the majority of informants opined that the level of interest paid to SBA at the junior secondary stage has decreased significantly and the present status cannot be considered as satisfactory. The main underlying causes for this poor status are lack of clear guidance and training provided to teachers and poor monitoring at all levels.

At the NIE, matters relating to SBA are currently looked after by the specific subject teams. With a view to strengthening the SBA implementation in grades 6–9 classes, the NIE subject teams have developed a series of resource materials, including exemplary SBA tools. Training programs for teachers based on the SBA tools are being planned.

School-based assessment practices—senior secondary. The DOE implemented the SBA scheme for GCE (O/L) grades in 2001 and extended it to GCE (A/L) grades in 2003. A series of training programs on SBA implementation was conducted for SBA trainers, zonal education officers, and principals by the DOE. Teachers were trained through the network of SBA trainers. To facilitate the SBA implementation process, the MOE has issued a series of specific circulars on SBA, and the DOE has published and distributed a series of booklets providing instructions to stakeholders.

In 2006, to address critical issues associated with the implementation of the SBA scheme in schools, the DOE launched an intervention called the SBA Facilitation Program, with technical and financial assistance from the Secondary Education Modernization Project II. The aim of this program was to improve the validity, reliability, and credibility of SBA grades awarded by teachers through a continuous process of facilitation by zonal level SBA facilitators. The facilitators were expected to regularly visit schools assigned to them and provide guidance and assistance to teachers and principals to overcome problems encountered in implementing the SBA scheme. The DOE conducted a series of workshops across the country, with the help of a national consultant, to train all the appointed SBA facilitators and zonal deputy directors in charge of assessment. Information collected by the DOE has revealed that the facilitation program functioned satisfactorily in the zones for about the first 2 years, but it is not currently functioning and seems to have reached an abrupt end. Measures to revive the facilitation program deserve special attention of the MOE and DOE.

Modalities of school-based assessment. Under the SBA scheme, teachers are expected to use a variety of efficient techniques to develop competencies in pupils and to assess whether the competencies are being developed. Those techniques that motivate pupil learning, contribute to the development of competencies, and enable establishing whether the competencies have been developed are referred to as learning, teaching, and assessment modalities.

At present, a set of 24 LTA modalities has been recommended for assessing the development of pupil competencies (Box A3.3). Teachers are allowed the freedom to use any other appropriate assessment modalities in addition to those recommended. Teachers have been advised to select and use the most appropriate LTA modalities for the particular assessment task. Information collected from a sample of trained facilitators has revealed that teachers still tend to use only a limited number of modalities (footnote 1).

Box A3.3: Sri Lanka—Learning, Teaching, and Assessment Modalities Recommended by the Ministry of Education

The following modalities have been recommended to assess the development of pupil competencies: assignments; projects (individual and group); surveys; explorations; observational activities; displays and presentations; field visits; short written tests and structured essay tests; open book tests; creative activities; listening tests; practical activities (science, technology, aesthetic); speech; collection of own creations (portfolios); group activities; concept maps; double entry journal; wall papers; quiz programs; question and answer books; debates; panel discussions; instant speeches; and role playing.

Based on a study carried out in 2008 using detailed school-based assessment record sheets of General Certificate of Education – ordinary level classes, it was found that the most frequently used modality was group activities and the least used was double entry. The approximate percentages of assessments for the six most popular modalities are shown below.

Six Most Popular Modalities	Percentage of Assessments
Group activities	14
Assignments	13
Short written tests	13
Practical activities	9
Creative activities	7
Open book	6
Total	**62**

Sources: Ministry of Education. 2008. *School-Based Assessment Scheme—Grades 6–13: Relevant Concepts and Information.* Battaramulla: Department of Examinations Press; Ministry of Education. 2009. *Supporting School-Based Assessment Facilitators: Handbook for Master SBA Trainers*. Secondary Education Modernization Project II SBA Strand Module 4. Colombo.

A study carried out in 2008 using detailed SBA record sheets of GCE (O/L) classes has shown that the most frequently used modality was group activities, and the least used was double entry.[7]

Moderation practices in school-based assessment. Moderation is a set of processes implemented by examination boards, mainly to provide comparability of SBA marks or grades across all schools for each subject assessed internally. Moderation contributes to ensuring the quality of SBA as well as credibility, validity, and public acceptance of examination board certificates. Several methods are available for SBA grade moderation; commonly used methods are group moderation, moderation by inspection, statistical moderation, and multi technique moderation.

(i) **Group moderation.** This should occur both within a school (school-based moderation) and across schools (across-school moderation). It is suggested that schools use a *calibration model* for school-based moderation and a *conferencing model* for a cross-school moderation.
   - According to the *calibration model,* all teachers of a cohort of students—for example, all grade 7 teachers—attend a meeting to engage in a professional dialogue about the grades awarded to student responses to a common assessment or evaluation in their school.
   - According to the *conferencing model,* representative(s) from each school in the group meet and engage in a professional dialogue about the grades awarded to student work in other schools. At this meeting, samples of pupils' work and/or criteria used for awarding marks are exchanged, studied carefully, and discussed. By doing so, a collective judgment on the standards is reached within the group, and then the marks or grades are suitably adjusted, if variance of standards is detected.

(ii) **Moderation by inspection.** This is based on the judgments the moderators make on inspection of pupils' work and/or criteria used for awarding of marks. This is done either during a visit to a school or by receiving the samples of work from schools for subjects involving practical skills.

(iii) **Statistical moderation.** This is carried out in several ways. In one of its forms, SBA marks of a set of pupils from a particular school (or cluster, district, or province) are scaled against the marks scored by these candidates on a "reference test."

(iv) **Multi technique moderation.** This is a combination of the first three moderation methods discussed.

It is evident that the present Sri Lankan SBA scheme lacks a proper moderation mechanism. Incorporating a suitable built-in moderation mechanism to the ongoing SBA scheme seems to be necessary to enhance the credibility and recognition of SBA grades. Reynolds and Nanayakkara have recommended that group moderation be used in grades 6–9 in Sri Lankan schools.[8]

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[7] Ministry of Education. 2009. *Final Report Volume 3.2: Reports on SBA*. Secondary Education Modernization Project II. Colombo.

[8] G.L.S. Nanayakkara. 2008. *School-Based Assessment and Facilitation: Handbook.* Secondary Education Modernization Project II. Battaramulla: Ministry of Education; J. Reynolds and G.L.S. Nanayakkara. 2011. *Monograph—Standards: A Model for Grades 6–9 Subjects in Sri Lankan Schools.* Education for Knowledge Society Project. Battaramulla: Ministry of Education.

Integration of school-based assessment results into the national examinations. In Sri Lanka, mixed views have been expressed by different stakeholders regarding integration of SBA and examination marks. For example, the ADB Secondary Education Modernization Project II completion report has pointed out that integration of the SBA into GCE (O/L) and GCE (A/L) results would not have been desirable at this stage as the SBA needs to be strengthened—especially in terms of consistency in standards and implementation—before it is formally included as a measure of outcome and terminal examination results.[9]

Currently, the SBA grades awarded to students by their schools are reported in the certificates, in a separate column, alongside the examination grades, from 2002 onward for the GCE (O/L), and from 2005 onward for the GCE (A/L).

It is worth noting that the national school assessment policy framework, a recent initiative of the Government of Sri Lanka, is expected to define the possible integration of the internal SBA into the GCE (O/L) and GCE (A/L) examinations.[10] To facilitate this task, the NEC has taken action to review the related research reports that have already been published. Furthermore, a special committee with highly competent members has been appointed to study the subject of integration in depth and make suitable recommendations. NEC sources revealed that, to date, this committee has conducted several meetings and the work is still in progress.

As another move toward integrating examination results and the SBA grades, beginning in 2007, all students who appeared for the GCE (A/L) written examination in aesthetic subjects (music and dance) were allowed to appear for the practical test conducted by external boards of examiners appointed by the Commissioner General of Examinations. (Previously, only candidates who scored more than 35% on the written examination were allowed to sit for the practical test.) In computing the overall grade for the aesthetic subjects, 50% of the total marks are awarded for the practical component, and the rest for the written component. It should be noted that just as for the other subjects, SBA grades are reported in a separate column alongside the overall examination grade for aesthetic subjects too.

A series of strengths, weaknesses, opportunities, and threats (SWOT) analyses on different topics were carried out by the national consultant for the purpose of this study. The SWOT analysis on SBA is shown in Table A3.1. It reveals that one of the main strengths of SBA is that it is highly reliable and valid, and one of the valuable opportunities is its potential to reduce student examination pressure. On the other hand, poor monitoring, both internal and external, is a major weakness, and lack of faith in teacher judgment is a major threat to the current SBA scheme.

Reforming the examination system and the capacity of the National Evaluation and Testing Service (NETS) to handle national assessment has received priority among the Education Sector Development Framework and Programme objectives.[11]

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[9] Ministry of Education. 2012. *Asian Development Bank—Secondary Education Modernization Project II Completion Report*.

[10] Through ADB, 2013, Terms of Reference for Consultant's Team.

[11] Ministry of Education. 2007. *Education Sector Development Framework and Programme.* Battaramulla. p. 62.

Table A3.1: Sri Lanka—Strengths, Weaknesses, Opportunities, and Threats Analysis Tables on School-Based Assessments

a. School-Based Assessment

	Helpful/Positive	Harmful/Negative
Internal	Strengths • Highly reliable—several assessments • Highly valid—covers several objectives • Immediate feedback is possible • Assessment tasks are preplanned • Popular among students • Skill development encouraged	Weaknesses • Poor monitoring—internal and external • SBA grades are not moderated • Teachers use only a few assessment modalities, out of the 25 recommended • Use of rubrics is poor • Lack of national standards to maintain comparability • Inadequate training on SBA
External	Opportunities • SBA grades are certified by Department of Examinations • Helps to reduce examination pressure • Ability to assess a wide range of objectives • Ability to improve student learning • SBA grades can be used to compensate for entry requirements for GCE (A/L)	Threats • SBA grades are not well accepted • Lack of faith in teacher judgments • Negative attitudes of teachers, principals, and trade unionists • Lack of clear understanding of SBA objectives among principals and teachers

b. Public Examinations

	Helpful/Positive	Harmful/Negative
Internal	Strengths • Practical tests are conducted for aesthetic subjects • Item analyses are carried out and results are disseminated • Ability to mark answer scripts within a short period through conference marking method • Ability to release results within short periods • Special facilities provided for candidates with special educational needs • Availability of an item bank	Weaknesses • Summative evaluation only • Question papers are loaded with lower-level cognitive questions • Modern technologies not fully utilized (e.g., for printing, scoring, data analysis) • Lack of professionally qualified staff for research and development
External	Opportunities • GCE (O/L) and (A/L) results are highly accepted locally and internationally • Results serve as proxy indicators of educational outcomes • Availability of trustworthy and competent question paper setters, moderators, and translators • Availability of a network of experienced marking examiners	Threats • Examination pressure for students • Lower pass rate • Meeting strict deadlines • Dependence on external experts in setting question papers and marking scripts • Criticisms from media and trade unionists • Maintaining confidentiality

continued on next page

Table A3.1 *continued*

c. School Term Tests

	Helpful/Positive	Harmful/Negative
Internal	Strengths • Principals and teachers are in favor of conducting school term tests • Enables monitoring of learning achievement of students • Promotes motivation among students • Enables zonal education offices to identify poorly performing schools and take remedial measures	Weaknesses • Patterns of conducting tests are not consistent among provinces • Test results are not satisfactorily analyzed and not properly utilized for the benefit of students • Quality of question papers is poor (mistakes are often reported in media) • Several circulars have been issued by the MOE on school term tests, and has resulted in confusion
External	Opportunities • Enables comparison of student achievement across schools, as common test papers are administered • Provides professional development opportunities for teachers participating in test paper construction, as these are constructed under the guidance of competent in-service advisors and subject directors	Threats • Some provinces have not adhered to the circulars on term tests issued by the Ministry of Education • School term tests contradict the SBA policy • Unbearable cost for some small schools

d. National Assessments

	Helpful/Positive	Harmful/Negative
Internal	Strengths Information from national assessments can be used to • make policy decisions on education, • improve quality of student learning, • make judgments about the quality of student learning with reference to national standards, • judge the effectiveness of reforms and innovations, and • monitor changes in student achievements over time.	Weaknesses National assessment results are usually reported by national, provincial, or zonal levels and not by school level. Hence, they are not much help for individual schools.
External	Opportunities • If questions from international assessments (e.g., teacher institutional manuals) are included in national assessment question papers, results from national assessments can be used in a limited way to make international comparisons on student achievement. (This strategy has been tried in Sri Lanka in 2006, and 2012 grade 8 national assessments.) • Information from national assessments provides opportunities for provincial education authorities to identify weaknesses and take remedial measures.	Threats • Conducting national assessments is highly costly and often donor funding has to be sought.

GCE (A/L) = General Certificate of Education - advanced level, GCE (O/L) = General Cewrtificate of Education - ordinary level, MOE = Ministry of Education, SBA = school-based assessment.

Source: Author.

2. Department of Examinations and Public Examinations

In Sri Lanka, the entire system of public examinations is centrally controlled by the NETS of the Department of Examinations (DOE), which functions within the purview of the MOE. According to the present organizational structure, the DOE is headed by the commissioner general of examinations and is assisted by nine commissioners of examinations who are in charge of nine specific branches, and 20 deputy commissioners of examinations. The deputy commissioners are, in turn, assisted by 21 assistant commissioners of examinations. In addition, there is a set of staff officers that includes accountants, administrative officers, computer programmers, system analysts, and technical officers.

The DOE is held in high esteem by everybody in Sri Lanka. The general public and employers—both local and foreign—accept the results it produces. However, there are issues associated with the examination system. It only serves as a summative assessment, and examinations are loaded with lower-level cognitive ability testing, which causes adverse effects on the school system, the learning behavior of students, and the teaching of school subjects.

Conducting public examinations for the school system is the main function of the DOE. In addition, it conducts different types of examinations such as selection, promotion, efficiency bar, and certificate examinations for various government ministries, semigovernment departments, and private organizations. About 150 such examinations are conducted per year. Furthermore, the DOE conducts about 30 foreign examinations per year for institutions such as the Cambridge Examination Board, London University, City & Guilds, and Chartered Institute of Management Accountants.[12]

a. Public Examinations

Three major public examinations conducted by the DOE for school-level candidates are the Grade 5 Scholarship Examination, GCE (O/L) Examination, and GCE (A/L) Examination.

The Grade 5 Scholarship Examination, which comprises two question papers, is held at the end of grade 5 and is used mainly for selecting students to receive scholarships and for admission to grade 6 in prestigious schools. The national school assessment policy framework of the new Education Sector Development Program is expected to define a policy for the Grade 5 Scholarship Examination. Individual certificates to those candidates who score more than 70% on the scholarship examination are issued.[13]

The GCE (O/L) Examination is held at the end of grade 11 for certification and selection purposes. Only those who satisfy the minimum requirements proceed to grade 12. Question papers are prepared for 52 subjects in Sinhala, Tamil, and English.

The GCE (A/L) Examination is held at the end of grade 13 for certification and selection purposes. Admission to universities, the National Colleges of Education, and other

[12] Department of Examinations, National Evaluation and Testing Service. 2011. *Sixtieth Anniversary Commemoration Issue (1951–2011)*. Battaramulla. p. 28.

[13] Department of Examinations, National Evaluation and Testing Service. 2011. *Sixtieth Anniversary Commemoration Issue (1951–2011)*. Battaramulla.

government tertiary institutions is based on the marks (or z-scores) scored at this examination. Question papers are prepared for 47 subjects in Sinhala, Tamil, and English.

A major strength of the public examination system, as revealed by SWOT analysis, is the ability to release results within short periods. This enables the candidates to move to the next stage in education or seek employment without waste of time. On the other hand, lower pass rates and maintaining confidentiality are found to be major threats (Table A3.1).

b. Assessing Skills and Career Options

Practical skills are assessed only in aesthetic subjects and art in the national public examinations. In the GCE (O/L) and GCE (A/L) examinations, practical tests are conducted for the subjects of dancing, music, plays, and other performing arts by boards appointed by the commissioner of examinations. These evaluation boards comprise external examiners and a teacher who teaches the relevant subject at the school. This practical evaluation is considered as a part of the SBA program (Circular No.2004/35). In the GCE (O/L) Examination, the subject of art is assessed through two written tests. Paper I is a 1-hour objective test and Paper II is a 2-hour short-answer test. The duration of the practical test is 2 hours, and candidates are required to draw three pieces of art, selecting one each for three given categories. In both GCE (O/L) and GCE (O/L) classes, different skills related to the subjects in the curriculum are assessed at the school level by the teachers, mainly through SBA modalities.

With regard to career options, presently there is no assessment carried out at the national level. However, the subject of career guidance and counseling has received special attention from the policy makers. One of the nine consultancies implemented by the MOE Education for Knowledge Society Project Package 2 in 2011 was in the area of career guidance.[14]

c. Assessing Students with Special Educational Needs at Public Examinations

Every year, a considerable number of candidates with special needs apply for national examinations conducted by the DOE. Most of them need different types of special help to take the test. A mechanism is in place at the DOE to identify candidates who need special help and to provide the necessary concessions.[15] As special examination centers are set up for the benefit of candidates with special needs at locations such as schools for the hearing and visually impaired and blind, principals and candidates can request assistance from the center most convenient for them. There is, however, room for improvement with respect to the services mechanism and availability of necessary facilities.

d. Participation of Nongovernment Sector Public Examinations

The DOE conducts public examinations mainly for students in government schools or nonfee-levying private schools. However, any person who is not registered as a student in a government or nonfee-levying private school may apply for the two public examinations, GCE (O/L) and GCE (A/L), as private candidates, subject to some conditions.

[14] Footnote 11, p. 21.

[15] Department of Examinations, National Evaluation and Testing Service. 2012. *Report—National Symposium on Reviewing of the Performance of School Candidates: GCE (O.L.) Examination, 2011.* Battaramulla.

In the education system, there are some fee-levying private schools, established as business organizations and registered with the Registrar of Companies, referred to as "international schools." They all offer English medium education. Some of them offer the national curriculum, and the others prepare students for international examinations such as London Ordinary Level and Advanced Level Examinations. According to unpublished data, there are more than 300 such schools functioning and more than 100,000 students studying in them. In 1999, the government allowed students in international schools to sit for public examinations as private candidates.[16]

3. Governance at the Central, Provincial, Zonal, and School Levels

With the introduction of the 13th Amendment to the Constitution of Sri Lanka, education became a devolved function. Under the present structure, there are four layers between the central ministry and the school: the provincial ministry, the provincial department, the zonal office, and the divisional office. The central ministry is responsible for conducting public examinations and national assessment surveys, and making policy decisions on assessment.

At present, there are 9 provincial ministries, 9 provincial departments, 92 zonal offices, and 304 divisional offices. While the provincial ministry is responsible for issuing policy directions and guidelines on matters coming within its purview, the provincial department of education, under a provincial director of education, is responsible for planning, implementation, management, and direction of all education programs in the province, with assistance of the zonal and divisional offices.

The subject of assessment and examinations is delegated to a deputy director of education at both provincial departments of education and zonal education offices. Several responsibilities relating to school term tests, such as organizing, conducting, marking scripts, and analyzing results, fall under provincial and zonal education directors.

Many stakeholders contribute to the governance of schools under the present system. Key contributors in the majority of schools are principals, deputy or assistant principals, sectional heads and teachers, school development committees, past pupil associations, and parents. However, principals are mainly responsible for conducting term tests in their schools.

The governance of school term tests deserves special attention. The situation regarding the conducting of secondary level school term tests has become somewhat complex in recent years. With the implementation of the SBA scheme, in 1998, the MOE informed the schools through a circular that term tests were not necessary and should be stopped. However, some schools continued the term tests on their own. A survey by the NEC also revealed that most principals and teachers were in favor of conducting term tests. Hence, it was decided to reconsider the use of term tests, in a manner that does not contradict the principles of SBA. A special committee appointed by the minister of education recommended that school term tests be organized and conducted at the zonal level.[17]

[16] Ministry of Education. 2012. *National Strategic Plan for the General Education Sector—Education Sector Development Framework and Programme (2012–2016)*. Colombo. p. 13.

[17] Ministry of Education. 2008. *School-Based Assessment Scheme—Grades 6–13: Relevant Concepts and Information.* Battaramulla: Department of Examinations Press. p. 38.

A directive was issued by the MOE providing instructions on how to conduct school term tests during the year in 2009 [Ref. No. ED/1/24/1/1(1)]. It stated that the first-term test should be organized and conducted at the school level, the second-term test at the zonal level under the responsibility of the zonal directors of education, and the third-term test at the provincial level under the responsibility of the provincial directors of education.

Subsequently, another circular was issued by the MOE providing instructions on how to conduct school term tests from the third term of the year 2009 and afterward (Circular No. 2009/30). It recommended that neighboring schools within a zone should be organized into small groups, such as "school families," and that school term tests should be collaborative to make them more systematic. With a view to providing an orientation for students sitting for the GCE (O/L) and GCE (A/L) examinations, the circular emphasized that the last term test for grades 11 and 13 should be conducted at the provincial level (grade 11 test in November and grade 13 in July). Taking into consideration the problems encountered when school term tests were conducted according to the instructions provided in Circular No. 2009/30, the MOE decided to conduct term tests at the school level beginning in 2010. A fresh circular was issued by the MOE on this issue (No. 2010/16). It emphasized that all three term tests should be conducted at the school level under the responsibility of school principals.

However, information collected from a limited sample of provincial and zonal deputy directors of education, school principals, and in-service advisors has revealed that the latest circular (No. 2010/16) is not yet implemented in the majority of schools, and most of these schools conduct term tests in a manner that is closer to the previous circular (No. 2009/30). It is evident that school term tests are not conducted consistently in all provinces. As shown in the SWOT analysis in Table A3.1, a major weakness of school term tests is the poor quality of question papers. Glaring mistakes are often highlighted in the media. Nonadherence to MOE circulars on school term tests by some provinces is identified as a major threat.

4. An Overview of Assessments Operating in the School System

Assessments operating in the school system can be classified in several ways. An attempt is made here to classify them according to type, method, purpose, and frequency. For the purpose of this document, these categories are defined as follows:

(i) Types of assessment are those related to the broad outputs of assessment, such as written, practical, and performance outputs.
(ii) Methods of assessment are more specific strategies of assessment, such as questioning, observation, quizzes, tests, and portfolios.
(iii) In recent literature, purposes of assessment are classified into three broad categories: assessment for learning, assessment as learning, and assessment of learning.
(iv) The frequency of assessment is mainly associated with the level and purpose of assessment.[18]

[18] L. Earl and S. Katz. 2006. *Rethinking Classroom Assessment with Purpose in Mind.* Western and Northern Canadian Protocol for Collaboration in Education.

Assessments in Sri Lanka are carried out at three main levels: national, provincial and zonal, and school. Assessments carried out at the national level are the Grade 5 Scholarship, the GCE (O/L), and the GCE (A/L) examinations. These examinations are conducted by the DOE and are mainly written tests. Assessments carried out at the provincial and zonal levels are the term tests for grades 10–13. These are conducted by the provincial education departments and zonal education offices, and are also mainly written tests. SBA and term tests are the main types of assessments carried out at the school level. Several assessment modalities, including practical work and projects, are used for SBA, while term tests are mainly written tests. The majority of these assessments belong to assessment *of* learning and assessment *for* learning types.

At the national level, the public examinations are conducted once a year, toward the end of the year. At the provincial and zonal levels, examinations are conducted more frequently as term tests or midyear tests. At the school level, classroom assessments are carried out daily or weekly under the SBA scheme, in addition to occasional short tests or term tests. Table A3.2 details the assessments operating in the Sri Lankan school system.

Table A3.2: Sri Lanka—Types, Purposes, Methods, Tools, and Frequency of Assessment at Different Levels

Level	Exam/Test/ Assessment	Purpose	Type	Frequency	Method	Test Items / Tools Used
National	Grade 5 Scholarship	Summative—selection	Written	Once a year	Paper-and-pencil test	- MCQs - Short answer - Long answer --- - Marking schemes
	GCE (O/L)	Summative—certification and selection	• Written and SBA modalities • Written, SBA modalities, and practical (for aesthetic subjects)	Once a year	- Paper-and-pencil test -Performance test (for aesthetic subjects)	- MCQs - Structured essay - Essay - SBA modalities --- - Marking schemes - Rubrics
	GCE (A/L)	Summative—certification and selection	• Written and SBA modalities • Written, SBA modalities, and practical (for aesthetic subjects)	Once a year	- Paper-and-pencil test -Performance test (for aesthetic subjects)	- MCQs - Structured essay - Essay - SBA modalities --- - Marking schemes - Rubrics

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Table A3.2 *continued*

Level	Exam/Test/ Assessment	Purpose	Type	Frequency	Method	Test Items / Tools Used
Provincial	Third-term test for GCE (O/L)—Grades 10 and 11	Summative—comparison of achievement between schools and between zones	• Written • Practical (for aesthetic subjects) • Optional	Once a year	• Paper-and-pencil test • Performance test (for aesthetic subjects)	- MCQs - Structured essay - Essay - SBA modalities ---------- - Marking schemes - Rubrics
Zonal	All term tests (including A/L) except third-term test for grades 10 and 11	Summative—comparison of achievement between schools and between zones	• Written • Practical (for aesthetic subjects) • Optional	Once a term	• Paper-and-pencil test • Performance test	- MCQs - Short answer - Structured essay - Essay ---------- - Marking schemes - Rubrics
School: Primary (Grades 1–5)	School-based assessment (SBA)	Formative—diagnosis	• Written • SBA modalities • Informal	Continuous	• Paper-and-pencil test • Performance test • Portfolio	- MCQs - Short answer ---------- - Marking schemes - Checklists - Rating scales - Anecdotal notes
	Term tests (only for grade 5)	Summative—to monitor learning progress	Written	Once a term	Paper-and-pencil test	- MCQs - Short answer ---------- - Marking schemes
	Essential learning competency assessment	Summative—to ensure mastery in essential learning competencies	Written	At the end of each key stage	Paper-and-pencil test	- MCQs - Short answer ---------- - Marking schemes

continued on next page

Table A3.2 *continued*

Level	Exam/Test/ Assessment	Purpose	Type	Frequency	Method	Test Items / Tools Used
School: Grades 6–11	Term tests	Summative—monitor learning progress	Written	Once a term	Paper-and-pencil test	- MCQs - Short answer - Structured essay - Essay --- - Marking schemes
	SBA	Formative—diagnosis	• Written • SBA modalities	Continuous	• Paper-and-pencil test • Performance test	- MCQs - Short answer - Structured essay --- - Marking schemes - Checklists - Rating scales - Rubrics
School: Grades 12–13	Term tests	Summative—to monitor learning progress	Written	Once a term	Paper-and-pencil test	- MCQs - Short answer - Structured essay - Essay --- - Marking schemes
	SBA	Formative—diagnosis	• Written and SBA modalities • Written, SBA modalities, and practical (for science and aesthetic subjects)	Continuous	• Paper-and-pencil test • Performance test	- MCQs - Short answer - Structured essay - Essay --- - Marking schemes - Checklists - Rating scales - Rubrics
	Project work assessment	Summative—assessment of higher-order skills		One individual and one group project during the GCE (A/L) course	• Data collection and analysis • Report writing	- Marking schemes - Checklists - Rating scales - Rubrics

A/L = advanced level, GCE = General Certificate of Education, MCQ = multiple-choice question, O/L = ordinary level,

Source: Author.

5. SWOT Analysis for Assessment of Student Learning in the School System

Results of a SWOT analysis of all major assessments operating in the school system are shown in Table A3.3.

Table A3.3: Sri Lanka—Strengths, Weaknesses, Opportunities, and Threats Analysis for Assessments in the School System

	Helpful/Positive	Harmful/Negative
Internal	**Strengths** • Availability of established mechanisms to conduct public examinations, national assessments, SBA, and school term tests • Ability to evaluate answer scripts of public examination and release results within short periods • Availability of mechanisms at DOE for carrying out postexamination statistical analyses and disseminating results • Availability of an item bank at DOE • Conducting of practical tests for aesthetic subjects at GCE (O/L) and (A/L) examinations • Availability of a mechanism to assess attainment of mastery in essential learning competencies at primary level • Information from national assessments helps to make policy decisions on education	**Weaknesses** • Absence of a national assessment policy • Presence of large proportions of lower-level cognitive items in examination question papers • Emphasis is on assessment *as* learning and assessment to inform is minimal • Credibility of SBA grades is low, due to lack of a proper moderation mechanism • Only a few of the recommended assessment modalities are used by teachers for SBA • School term tests are not conducted in a consistent manner throughout the provinces, which has resulted in confusion in the school system • Analysis of school term test results is not carried out in a satisfactory manner • Nonparticipation in international assessments
External	**Opportunities** • GCE (O/L) and (A/L) results are highly accepted locally and internationally • National assessments provide valuable information for provincial education authorities to identify poorly performing zones and schools to take remedial measures, and for curriculum developers to improve the curricula • School term tests conducted by zonal education offices help identify poorly performing schools to take remedial action • SBA helps to reduce examination pressure on students • Initiatives relating to standards that have been introduced could lead to standards-based curriculum development and assessment	**Threats** • Maintaining confidentiality in public examinations • Conducting national assessments is highly costly and often donor funding has to be sought • Stakeholder emphasis on SBA seems to be declining gradually • Lack of faith in teacher judgments relating to SBA • Negative attitudes of some teachers, principals, and trade unionists toward SBA • School term testing contradicts the SBA policy • Heavy examination stress is created for students by examinations • Lower pass rates in some subjects at GCE (O/L) and GCE (A/L) examinations

A/L = advanced level, DOE = Department of Examinations, GCE = General Certificate of Education, (O/L) = ordinary level, SBA = school-based assessment.

Source: Author.

6. Assessment in Nonformal Education Programs

Different types of nonformal education (NFE) programs are currently available for non-school-going children and others having educational needs to improve their literacy and vocational skills.[19]

One of the main types is basic literacy classes and functional activity-based literacy classes. These classes help prepare children of compulsory education age to enter into a suitable grade in a formal school. Children in these classes are assessed formatively throughout the year using mainly informal methods, such as observation and questioning, by the literacy advisor. At the end of the year, each child is assessed by the literacy advisor along with the divisional director of education. The objective of this assessment is to determine whether the child has acquired the basic literacy skills needed to enter a formal school, and if so, to decide the suitable grade for the child. This assessment is done using simple written, speaking, and listening tests.

Another main type includes vocational training programs, which can be categorized as income-generating programs, interest programs, and those conducted in community learning centers. These programs cater to school leavers and other adults (e.g., housewives) to enable them to enter the world of work and/or to gain higher-level skills in areas that interest them. The assessment methods used in these programs are mainly competency based and criterion referenced, and are associated with the objectives of the programs. Assessment decisions are based upon a collection of evidence gathered over a period of time. The emphasis is on practical aspects, rather than theory, and the quality of the products created by the participants. Certificates are issued to participants at the end of a program. Displaying the products created by participants at divisional, zonal, and provincial exhibitions plays an important role in these programs.

The assessment approaches used in the NFE programs are somewhat flexible, not uniformly practiced, and not yet well developed. Financial and technical assistance for the improvement of the assessment approaches in the NFE sector is seen as an urgent need.[20]

7. Assessment in Technical and Vocational Education and Training

Assessment of competencies plays an important role in the TVET sector. Competency-based assessment evaluates skills, knowledge, and attitudes set out in a particular national competency standard over a period of time. Assessors collect sufficient valid evidence on several dimensions through a portfolio and decide whether the applicant is competent to perform in the occupation.

The National Vocational Qualifications (NVQ) Framework of Sri Lanka consists of seven levels of instruction. NVQ levels 1–4 are designations for craftspeople, and successful candidates are issued national certificates. NVQ levels 5 and 6 are diploma level, whereas Level 7 is for degree-equivalent qualification. Up to Level 4, competencies acquired through several types of informal and prior learning are recognized.

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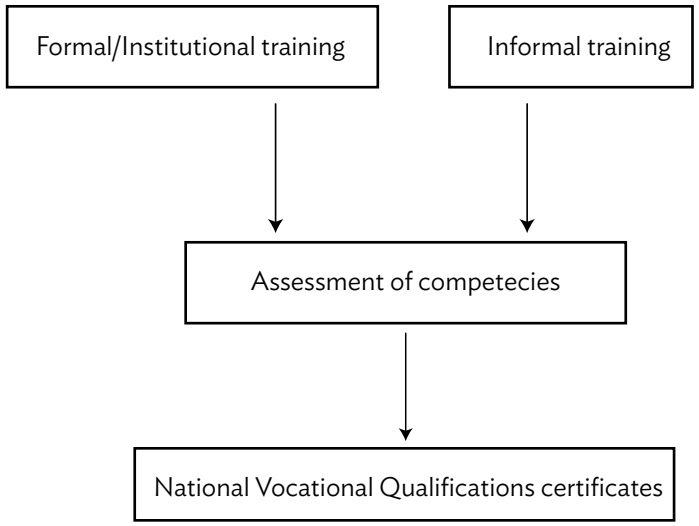
[19] Ministry of Education. 2007. *Education Sector Development Framework and Programme*. Colombo.

[20] Information on assessment practices in NFE programs was gathered from the director of NFE and special education at the MOE, and the director of NFE at Western Province Department of Education.

Figure A3.2: Sri Lanka—National Vocational Qualifications Certificate Awarding Process



Source: Tertiary and Vocational Education Commission. 2009. *National Vocational Qualifications Framework of Sri Lanka––Operations Manual.* Colombo.

Competencies are assessed through recognition of prior learning against the NVQ Framework before candidates are awarded an NVQ certificate at the appropriate level (Figure A3.2).

For the award of qualifications for levels 5 and 6, module-based formative and summative assessments are conducted.[21]

8. Assessment at National Colleges of Education and Teachers' Colleges

The National Colleges of Education (NCOEs) offer a preservice 3-year course leading to a National Diploma in Teaching, comprising a 2-year residential course in an NCOE and a 1-year internship in schools. The prospective teachers are assessed both internally and externally. The internal assessment, which covers 60% of the total marks, is carried out by the respective NCOEs through continuous assessment and includes components such as internal test results, action research, practical teaching during internship, personality, and extracurricular activities. The external assessment, which covers 40%, is conducted by DOE through a written test held at the end of the second year. The final grades are computed at the NIE by taking into consideration marks for both internal and external assessments. The average mark for each component should be 50% or more to acquire a passing grade.

[21] Tertiary and Vocational Education Commission. 2009. *National Vocational Qualifications Framework of Sri Lanka––Operations Manual.* Colombo.

Teachers' colleges conduct a 2-year, full-time in-service course for selected untrained teachers in the system, leading to a Teachers' Certificate. The respective teachers' colleges are responsible for assessing the practical teaching of teacher trainees. The final examination is conducted by DOE, which computes the final grades taking into consideration the marks for both components.

9. Assessment at the University Level

Until about a decade ago, practices for assessing students differed widely among the different universities and also among different faculties within the same university. In general, the university assessment methods included continuous assessment (from the late 1990s), examinations at the end of semesters, midsemester tests, classroom tests, and take-home assignments.

Development of a comprehensive quality assurance framework for the Sri Lankan higher education system was initiated in 2001 as collaborative work between the University Grants Commission and the Committee of Vice Chancellors and Directors. As an outcome of this initiative, an academic procedures handbook for Sri Lankan universities was developed, and was published in 2003.[22] Part 1 of this handbook was dedicated to a code of practice on student assessment. The code is intended to be used to

- guide and inform institutional activity,
- promote and disseminate good practice, and
- encourage a commitment to continuous improvement.

In a general form, the handbook highlights that any assessment of the three broad types—diagnostic, formative, or summative—can be used for any or all of the above purposes. This is expected to serve as a broad guideline for assessment of students.

Although a wide variation in student assessment practices is still prevalent among the universities, it is believed that the diversity has been reduced as a result of the guidelines provided through the *Handbook on Code of Practice of Assessment of Students*. Some universities use alternative methods of assessment (e.g., performance assessment, authentic assessment, projects, and portfolios) in addition to traditional methods (e.g., written tests).

B. Utilization of Assessment Results

Information derived from different types of assessments, such as national assessments, public examinations, and school term tests, is used effectively by many different end users for a variety of purposes. The main purposes include determining the achievement levels of students, examining the validity of instruments, and conducting research.

[22] Quality Assurance and Accreditation Council. 2003. *Academic Procedures Handbook for Sri Lankan Universities: Part 1—Code of Practice on Assessment of Students*. Colombo 5: QAAC Press.

1. Performance of National Assessments on Learning Outcomes

A national assessment is a survey of schools and students (and sometimes teachers) that is designed to provide evidence, at the level of the education system, in identified curriculum areas (e.g., reading or literacy, mathematics or numeracy, science).[23]

In Sri Lanka, the first national assessment was carried out in 1994 by the National Institute of Education, in grade 5, in conjunction with Monitoring Learning Achievement, a project organized by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the United Nations Children's Fund (UNICEF). Subsequently, national assessments have been held periodically in grades 4, 8, and 10 by the National Education Research and Evaluation Centre (NEREC), University of Colombo. These included three national assessments at grade 4, three national assessments at grade 8, and one national assessment at grade 10. The World Bank and the International Association for Evaluation provided the technical knowledge and support to NEREC. Further, the Open University of Sri Lanka held one national assessment at grade 10.[24] Details of the 2003, 2007, 2009, and 2012 NEREC national assessments are given in Table A3.4.

Table A3.4: Sri Lanka—Grade 4 National Assessment of Learning Outcomes

Province	Proportion of Students Scoring over 50%								
	First Language			Mathematics			English		
	2003	2007	2009	2003	2007	2009	2003	2007	2009
Western	81.7	88.2	86.3	80.5	88.8	86.5	53.1	68.0	74.1
Central	67.0	79.4	78.5	63.5	79.0	76.8	31.6	44.6	55.9
Southern	72.0	83.3	86.1	71.5	84.5	85.2	36.0	54.8	62.4
Northern	61.0	78.7	83.7	53.3	76.5	79.5	22.9	39.9	54.8
Eastern	57.7	72.7	73.7	52.3	74.6	70.2	21.9	44.3	41.9
North Western	75.1	85.5	87.1	74.0	85.7	86.4	32.0	54.9	64.8
North Central	70.7	83.4	83.1	72.1	84.5	81.8	29.3	43.3	50.6
Uva	64.2	77.4	79.8	62.5	78.1	80.8	27.3	40.3	51.9
Sabaragamuwa	70.8	81.4	86.5	68.5	82.6	87.1	33.4	46.7	64.2
Sri Lanka	**68.9**	**81.1**	**82.9**	**66.5**	**81.5**	**81.8**	**31.9**	**48.5**	**58.4**

Source: Ministry of Education. 2012. *National Strategic Plan for the General Education Sector—Education Sector Development Framework and Programme (2012–2016)*. Battaramulla.

Table A3.4 shows that, in terms of students scoring more than 50%, there was a significant improvement of learning outcomes in first language, mathematics, and English from 2003 to 2009.

[23] Department for International Development of the United Kingdom. 2011. *Guidance Note: A DFID Practice Paper*. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/67619/nat-int-assess-stdnt-ach.pdf.

[24] Ministry of Education. 2012. *National Strategic Plan for the General Education Sector (Education Sector Development Framework and Programme 2012–2016)*. p. 24.

Percentages of grade 4 students achieving mastery by scoring more than 80% in first language, mathematics, and English in the national assessments in 2003 and 2007 are shown in Table A3.5.

Table A3.5: Sri Lanka—Achieving Mastery in First Language, Math, and English, Grade 4 Students by Province

	Proportion of Students Achieving Mastery (over 80%)					
	First Language		Mathematics		English	
Province	2003	2007	2003	2007	2003	2007
Western	53.5	61.1	52.3	68.9	19.5	30.4
Central	33.8	45.3	35.3	51.7	8.4	15.6
Southern	42.6	54.8	44.2	60.8	12.7	20.0
Northern	22.7	39.7	25.1	47.3	5.0	13.3
Eastern	23.7	37.8	25.2	47.6	5.6	15.0
North Western	42.2	55.4	43.1	62.9	8.5	19.1
North Central	35.6	49.1	40.6	57.6	8.1	12.2
Uva	33.9	46.7	33.0	53.9	7.6	13.1
Sabaragamuwa	40.2	49.4	42.7	57.8	10.2	15.6
Sri Lanka	36.5	48.7	37.9	56.5	9.5	19.6

Source: Ministry of Education. 2012. *National Strategic Plan for the General Education Sector—Education Sector Development Framework and Programme (2012–2016)*. Battaramulla.

There was a considerable increase in the percentages for all the three subjects (Table A3.5). However, the percentages achieving mastery in 2007 cannot be considered as satisfactory.

Details of grade 8 students scoring over 50% in the 2005 and 2008 national assessments are shown in Table A3.6.

Table A3.6: Sri Lanka—National Assessments of Grade 8 Students

	Proportion of Students Scoring over 50%					
	First Language		Mathematics		Science and Technology	
Province	2005	2008	2005	2008	2005	2008
Western	76.7	82.6	40.1	61.7	60.3	75.1
Central	69.4	74.6	32.7	40.7	54.0	61.3
Southern	73.7	72.1	33.4	43.1	54.9	62.3
Northern	65.4	80.0	36.7	52.5	37.4	68.5
Eastern	65.6	67.7	32.8	41.2	49.3	42.1

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Table A3.6 *continued*

Province	Proportion of Students Scoring over 50%					
	First Language		Mathematics		Science and Technology	
	2005	2008	2005	2008	2005	2008
North Western	72.0	64.0	31.0	37.4	58.7	45.1
North Central	74.4	71.2	33.3	41.2	55.4	61.3
Uva	68.7	64.5	31.4	39.4	57.0	51.6
Sabaragamuwa	70.7	77.6	30.9	48.9	52.9	65.7
Sri Lanka	70.7	70.6	33.6	45.4	53.2	59.3

Source: Ministry of Education. 2012. *National Strategic Plan for the General Education Sector—Education Sector Development Framework and Programme (2012–2016)*. Battaramulla.

The proportion of students scoring over 50% in mathematics and science and technology significantly improved over the period 2005–2008 (Table A3.6). Such an improvement was not evident for first language.

The latest national assessment conducted in 2012 focused on grade 8 students. In addition to question papers on mathematics, science, and English, a separate paper was constructed using 40 multiple-choice and short-answer questions selected from the 2011 version of the Trends in International Mathematics and Science Study (TIMSS). The overall performance in mathematics was found to be not quite satisfactory (with a mean score of 51.4). The performance in science was even less satisfactory with a mean score of 42.0. For English, the national mean was 40.0.[25]

According to the SWOT analysis (Table A3.1), the ability to use national assessment information in making policy decisions is a major strength of national assessments, and the potential to make international comparisons on student achievement is a major opportunity. On the other hand, a major weakness is that national assessments are not very helpful to individual schools, since results are usually reported at the national, provincial, and zonal levels and not at the school level. The high cost of conducting national assessments is found to be a major burden.

Since Sri Lanka has not yet taken part in any international assessments of student achievement, such as TIMSS and the Programme for International Student Assessments (PISA), policy makers were compelled to use the findings of these national assessments in making decisions on educational matters.

2. Performance on Public Examinations

In the Sri Lankan context, national examinations conducted by DOE are considered public examinations. Three main school-level public examinations are conducted in Sri Lanka: Grade 5 Scholarship, GCE (O/L), and GCE (A/L) examinations.

[25] National Education Research and Evaluation Centre. 2013. *Summary Report: National Assessment of Achievement of Grade 8 Students in Sri Lanka—2012*. World Bank and Ministry of Education.

The performance of students on the GCE (O/L) and GCE (A/L) examinations can be considered as proxy indicators of educational outcomes to measure the performance of the general education sector, especially in the absence of national assessments at the end of the junior secondary (grade 11) and senior secondary (grade 13) cycles. Performance details of the school candidates (first attempt) at the GCE (O/L) examinations held in 2005–2011 are shown in Table A3.7.

Table A3.7: Sri Lanka—Performance of School Candidates in General Certificate of Education, (Ordinary Level) Examinations, 2005–2011

Result Category	2005	2006	2007	2008	2009	2010	2011
Number of exam takers (five or more subjects)	268,111	259,768	276,522	281,028	272,200	271,644	270,032
Number qualified for GCE (A/L)	133,245	133,112	142,315	159,633	142,938	164,527	164,191
Qualified for GCE (A/L) (%)	49.70	51.24	51.47	56.80	52.51	60.57	60.80
Obtained nine "A" passes (%)	-	-	-	0.74	0.75	1.13	1.45
Failed all subjects (%)	8.02	8.45	7.65	6.22	6.98	5.31	4.74

- = data not available

A/L = advanced level, GCE = General Certificate of Education, O/L = ordinary level.

Source: Government of Sri Lanka, Department of Examinations. 2012. Report—National Symposium on Reviewing of the Performance of School Candidates: GCE (O.L.) Examination, 2011. Battaramulla.

There was a gradual increase in the percentages of students qualifying for GCE (A/L), with a slight decline in 2009 (Table A3.7). The percentages of students obtaining nine "A" passes also increased gradually from 2008 to 2011 compared with 2005. In contrast, the percentages of students who failed in all subjects decreased.

Performance details of two GCE (A/L) examinations are shown in Table A3.8.

Table A3.8: Sri Lanka— Performance of School Candidates in General Certificate of Education (Advanced Level) Examinations, 2005 and 2010

Details	2005	2010
Number sat—School candidates	173,731	177,640
Number qualified for university entrance	102,854	108,725
Qualified for university entrances as percentage	59.2%	61.2%

Source: Ministry of Education. 2012. *National Strategic Plan for the General Education Sector—Education Sector Development Framework and Programme (2012–2016)*. Battaramulla.

There was a slight improvement in the percentage of students qualifying for university entrance on the 2010 GCE (A/L) Examination when compared with the 2005 results (Table A3.8).

1. Validation of Tests and Psychometric Studies

After the release of results of each public school examination, the Research and Development (R&D) Branch of the DOE carries out different types of analyses using the test results, including analyses to establish the validity of tests. The analyses done to establish the validity and other characteristics of the tests are briefly discussed below.

a. School Performance Indexes

Computation of school performance indexes is a frequently used type of analysis. Since 1989, school performance indexes for all schools *(composite school performance index)* and for selected subjects *(subject-performance index)* have been developed by analyzing the GCE (O/L) and GCE (A/L) examination results, using a stanine scale.[26] These indexes are disseminated to all schools and are considered to be accurate indicators of the achievement levels of schools.

b. Annual Review Reports Based on the Performance of School Candidates

The R&D Branch of the DOE also prepares and disseminates annual review reports based on the performance of school candidates for the three school examinations: Grade 5 Scholarship, GCE (O/L), and GCE (A/L). A lot of valuable information on general performance as well as subject-wise performance (based on different types of item analyses) is included in these reports. The reports are presented at annual national symposiums on reviewing the performance of school candidates and are distributed to the relevant officers of the MOE, provincial education departments, and zonal education offices. This evaluation provides a performance profile of students by school, education zone, and province to facilitate comparisons at various levels so that suitable follow-up action may be taken. As a result of this exercise, it was possible to introduce various remedial measures to subjects as well as zones that exhibited poor performance.

c. Item Analyses

Item analyses are carried out to establish various characteristics of test items such as response patterns, facility levels, discrimination ability, and validity, using classical test theory as well as item response theory.

d. Subject-Wise Evaluation Reports

In addition, *subject-wise evaluation reports* for the main subjects of GCE (O/L) and GCE (A/L) examinations are prepared and disseminated annually by the R&D Branch of the DOE. The information contained therein is found to be useful to many stakeholders including examinees, subject teachers, principals, in-service advisors, subject directors, researchers, and parents. The report consists of three parts: Part I—subject objectives and information on subject achievement; Part II—expected answers and marking schemes for papers 1 and 2, and observations on how questions have been answered; and Part III—useful hints the candidates should take into consideration when answering questions, and views and suggestions to improve teaching. A table extracted from the evaluation report for mathematics (subject No. 32) of the 2010 GCE (O/L) Examination is shown in Table A3.9.

[26] A stanine ("standard nine") score is a way to scale scores on a nine-point scale.

Table A3.9: Sri Lanka—Distribution of Grades in Mathematics, General Certificate of Education (Ordinary Level) Examination, 2010

Grade	School Candidates		Private Candidates		Total	Percentage
	No.	%	No.	%		
A	44,336	13.35	1,166	3.29	45,502	12.37
B	21,776	6.56	1,422	4.01	23,198	6.31
C	64,218	19.33	7,542	21.25	71,760	19.52
S	74,326	22.37	11,942	33.65	86,268	23.46
W	127,547	38.39	13,422	37.81	140,969	38.34
Total	**332,203**	**100.00**	**35,494**	**100.00**	**367,697**	**100.00**

Source: Department of Examinations. 2011. Evaluation Report—GCE (O/L) Examination: 32–Mathematics. Battaramulla.

e. Statistical Handbooks

Statistical handbooks based mainly on the three major school examinations are developed and distributed by the R&D Branch of the NETS. These include statistical information ranging from numbers of candidates to results on performance of candidates. They also include general statistics such as those related to organization, evaluation, and issuing of results of school and other examinations conducted by the Department of Examinations. Statistical handbooks serve as a valuable resource to educationists, policy makers, researchers, and others who are interested in information on education and evaluation systems. The first such statistical handbook was published in 2002 and included data from examinations conducted during 1999–2001.[27] The latest in this series was published for examinations conducted during 2008–2010.

4. Recent Studies that Used Public Examination Results

Not many studies based on the results of public examinations have been reported. Among those reported, three studies conducted using Grade 5 Scholarship Examination results stand out: (i) a statistical analysis of the examination results by Samita and Thattil in 2005, (ii) a study of the examination by the NEC in 2005, and (iii) study on the validity of the examination by Gunawardena in 1987.[28]

The Grade 5 Scholarship Examination comprises two test papers. Paper I is an aptitude test with 40 multiple-choice questions to be answered in 45 minutes. Paper II comprises different types of items (e.g., matching, alternate choice, multiple choice, and short free-response) based on the subjects in the primary curriculum (except religion) and with a duration of 1 hour and 15 minutes. Two psychometric studies conducted using the national examination results are summarized below.

[27] Department of Examinations, National Evaluation and Testing Service (NETS). 2002. *Statistical Handbook 1999—2001*. Battaramulla.

[28] S. Samita and R. O. Thattil. 2005. *Statistical Analysis of Grade 5 Scholarship Examination Results*. Battaramulla: Sri Lanka Basic Education Sector Program, Monitoring and Evaluation Unit; G. B. Gunawardena. 1987. *Review of Research on Determinants of Effective School—Sri Lanka*. Maharagama: Research Division, NIE.

The first study, funded by German development cooperation through GTZ, was a statistical analysis of the Grade 5 Scholarship Examination results carried out by Samita and Thattil in 2005. The general aim was to study the impact of the teacher in-service program launched by the Basic Education Sector Program. The results of the Grade 5 Scholarship Examination of schools in all provinces were analyzed to identify the changing patterns of student performance. Data relating to three examinations (2001, 2003, and 2004) were analyzed. One of the main objectives of this study was to compare the learning achievement of pupils in North East and Central provinces, where the teacher in-service program was in operation, with the rest of the provinces. The complete data sets (not samples) were analyzed using the statistical software SAS. Total numbers of schools covered by the study were 9,312 in 2001; 9,203 in 2003; and 9,151 in 2004. The total number of pupils included in the data set was 274,622 in 2001; 292,445 in 2003; and 289,775 in 2004. Since the correlation coefficient between the two test papers was high ($r = 0.86$, $p < 0.0001$), the analysis was carried out for the total of the two test papers.

The analysis of variance of the mean scores showed that the overall trend in performance dropped significantly from 2001 to 2003 and then increased significantly from 2003 to 2004.

A comparison of the means of total marks for the selected provinces with the rest of the provinces is shown in Table A3.10.

Table A3.10: Sri Lanka—Comparison of Means of Total Marks

Year	Mean Mark			
	Nonelected Provinces	North East and Central Provinces (combined)	North East Province (separately)	Central Province (separately)
2001	65.5	60.1	61.8	58.1
2002	62.6	54.8	54.8	54.7
2003	65.7	60.2	60.3	60.2

Source: S. Samita and R. O. Thattil. 2005. *Statistical Analysis of Grade 5 Scholarship Examination Results*. Battaramulla: Sri Lanka Basic Education Sector Program, Monitoring and Evaluation Unit.

Based on the results, the pattern of change was similar for selected provinces and other provinces. However, the mean for the nonselected provinces was always higher than that for the selected provinces for all 3 years. The study concluded that there was no linear trend in the performance of pupils in the different provinces.

The second was a study of the Grade 5 Scholarship Examination carried out by Gunawardhane in 2004 for the NEC. One of the main objectives of this study was to examine the structure and content of the examination, paying attention to the content validity of the examination papers. This objective was studied by pursuing the latest past examination papers over a period of 4 years, from 1999 to 2002.

Test papers (Paper II) were analyzed applying Bloom's classification of cognitive skills to check whether test items were based on knowledge-based skills or on several intellectual skills (Table A3.11).

Table A3.11: Sri Lanka—Analysis of Test Items (Paper II), 1999–2002

Year	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation	Total Items
2002	36	15	14	5	7	0	77
2001	26	16	9	14	12	0	77
2000	37	25	8	5	6	0	81
1999	39	11	15	10	6	0	81
Total	**138**	**67**	**46**	**34**	**31**	**0**	**316**

Source: R. Gunawardhane. 2004. *A Study of the Grade V Scholarship Examination*. Narahenpita: National Education Commission.

The analysis revealed that, every year, nearly half of the items were knowledge-based. The rest of the items were distributed among four intellectual skills, other than evaluation.

Among the long list of findings and conclusions, those related to validity are considered especially important and are as follows:

- Teachers who consider the scholarship examination to be relevant and successful as a selection device perceive that its content validity is high, as it comprises a variety of subject components. It also measures different skills such as comprehension and logical reasoning to a reasonable extent.
- The aptitude test is capable of predicting the probability of future academic success of students. It can be considered as a suitable test in this respect as it clearly selects the better-performing students.

The third study, carried out by Navaratne in 1985, examined the validity of the Grade 5 Scholarship Examination.[29] The sample comprised 845 scholars successful in the 1966, 1973, and 1974 Grade 5 Scholarship Examinations, and their performance on the GCE (O/L) Examination 6 years later was compared to gauge the predictive validity of the scholarship examination. The content validity of the question papers was also evaluated in comparison with the syllabus, according to Bloom's Taxonomy of Educational Objectives. The study concluded that the predictive validity of the examination and the content validity were very low. This study stands out in that it questions the very basis of selection of students as exceptional.[30]

[29] A. A. Navaratne. 1985. *Validity of the Grade 5 Scholarship Examination.* In G. B. Gunawardena. *Review of Research on Determinants of Effective School—Sri Lanka.* Maharagama: Research Division, NIE.

[30] Reported in G. B. Gunawardena. 1987. *Review of Research on Determinants of Effective School—Sri Lanka.* Maharagama: Research Division, NIE.

C. Major Issues and Interventions Introduced

Despite several efforts of the government and other contributing agencies to improve the quality of student assessment practices, many major issues still prevail in the assessment of student learning outcomes (ASLO). Interventions that have already been implemented and those proposed to address the identified major issues are briefly discussed below.

1. Shortcomings in the School Curriculum

Examination-dominated curriculum and teaching–learning can lead to rote learning. As a result, children become ill-equipped to face the demands of life and the world of work, or may miss the opportunity to develop creativity.[31] The relevance of the school curriculum is low in meeting the demands of the 21st century and the global economy. Teaching, learning, and assessments are more oriented toward lower-level cognitive skills.[32]

To address this, the NIE introduced a competency-based curriculum in 2007 at the junior secondary level. The main goal was to improve the quality of education, especially to cater to societal demands for a well-rounded education. With ADB assistance, Secondary Education Modernization project (SEMP) reformed the secondary curriculum, placing greater emphasis on higher-order learning competencies and enhancing facilities for GCE (A/L) studies.

2. Absence of National Standards in the School Curriculum

Although the SBA program was implemented in Sri Lanka's school system about 10 years ago, questions about the validity of SBA continue to be raised. Both parents and the community want assurances that the judgments that are made about, and the grades that are awarded to, student work in one school are comparable to those made in other schools across the country. In the absence of national standards, such assurances are not possible, since national standards are critical to the successful implementation of an SBA program.

Standards reflect what is valued within the education community as important for students to know, understand, and do. They give teachers, parents, and students a common language to describe the quality of learning that is expected for the students' age group. Standards will help to improve student learning and achievement levels.

Literature on assessment distinguishes between two types of standards: (i) content or curriculum standards, which indicate what students are expected to know, understand, and be able to do in a specific content area or subject; and (ii) performance or achievement standards, which indicate how well students are expected to learn to demonstrate proficiency at different levels, such as "toward basic," "basic," "high," and "very high." The standards can be thought of in terms of "what?" and "how well?".

The use of predefined standards in SBA ensures that students and teachers know what is expected for each level of achievement and can work together to achieve the best result for

[31] C. Gunawardena. 2010. *Quality Issues in Secondary School Education in Sri Lanka*. http://wikieducator.org/images/9/92/Chandra_Gunawardena.pdf.

[32] Ministry of Education. 2007. *Education Sector Development Framework and Programme*. Battaramulla.

the student, comparability from school to school can be achieved, and teachers can discuss standards with parents when reporting a student's achievements.[33]

In Sri Lanka, until recently, standards-based education and assessment did not receive adequate attention. The first notable attempt in this direction was initiated by the NETS in 2008, with financial assistance from the Education Sector Development Framework and Programme of the World Bank. The aim of this initiative was to improve student assessment and examination practices by introducing the concept of "standards." Under this initiative, the R&D Unit of the NETS developed a set of 11 booklets titled *Examination and Assessment Guidelines* in collaboration with NIE curriculum developers and involvement of practicing teachers, for six core subjects in grades 10 and 11.[34] The subjects include mathematics, science, history, three languages, and five religions. Copies of these booklets have been distributed to all secondary schools preparing students for the GCE (O/L) Examination. A set of trainers in selected subjects have trained teachers on how to use these guidelines for classroom teaching, learning, and assessment.

However, limited information gathered from samples of teachers from different provinces who attended meetings or workshops at the NIE has revealed that the assessment and examination guidelines are not used satisfactorily by the majority of teachers for either instructional purposes or SBA. They have mentioned that these booklets are only occasionally used when preparing question papers for school tests. One of the main reasons given was that teachers had not been sufficiently trained on how to use the guidelines.[35]

Until 2011, performance standards were not available for the rest of the GCE (O/L) subjects, all the grade 6–9 subjects, and all the GCE (A/L) subjects. In 2011, the MOE implemented the performance standards consultancy under Package 2 of the ADB-funded Education for Knowledge Society Project. Under this consultancy, content and performance standards were developed for six selected subjects in grades 6–9 (English, mathematics, practical and technical skills, science, Sinhala, and Tamil).

Although standards frameworks are now available for six subjects for grades 6–9, there is no evidence that these are effectively used for the ongoing curriculum revision work at the NIE and for SBA practices.

3. Limited Use of Assessment Modalities

In conducting SBA, teachers still tend to use only a limited number of the 24 recommended modalities. They should be encouraged and guided to use a greater variety of modalities. It will be necessary to identify the modalities that are seldom used by teachers and the underlying reasons why. During in-service sessions and school visits, the in-service advisors can show teachers how to resolve classroom difficulties and improve student learning by

[33] J. Reynolds and G.L.S. Nanayakkara. 2011. *Monograph—Standards: A Model for Grades 6–9 Subjects in Sri Lankan Schools.* Education for Knowledge Society Project. Colombo: Ministry of Education.

[34] Department of Examinations, National Evaluation and Testing Service. 2008. *Examination and Assessment Guidelines—English Language.* Battaramulla.

[35] G. L. S. Nanayakkara. Monthly Progress Report Submitted for the Education for Knowledge Society Project. Colombo: Ministry of Education. Unpublished.

adopting different methods (e.g., demonstrations, discussions, and engaging the teachers in activities).

4. Lack of Funds to Implement Interventions

Due to unmet demand for education, the government is often faced with funding problems. As a result, the government finds it difficult to invest adequate funds to implement some of the important initiatives. Establishing public–private partnerships (PPPs) is considered a promising solution to this issue. A PPP is said to exist when public sector agencies join with the private sector—employers, philanthropists, media, civic groups, and/or service providers—to attain a shared goal.

Although PPPs are relatively new to the Sri Lankan education system, several such partnerships seem to operate at different levels in the system, in different sectors. Among such partnerships, the following stand out:

- a PPP in the ICT sector, the Dialog Television Initiative—"Nenasa" (Wisdom) TV program;[36]
- a PPP in the university sector, contribution to university research studies; and
- a proposed PPP with private universities for establishing five university colleges dedicated to technology.

At present, these PPPs do not seem to have direct links with assessment of student learning. However, these initiatives include components that could be highly relevant for assessment of student learning in the future.

5. Poor Use of New Technology for Self-Learning and Assessment

In the Sri Lankan education system, self-learning is highly encouraged among students starting from the primary level. Students widely use traditional methods such as "book learning" for this purpose. Although many new methods for self-learning are available today with the development of new technology, such methods are not yet popular among many of the students.

As assessment is an integral part of learning, and self-learning also should be followed up by self-assessment. In addition to traditional methods of self-assessment, many modern methods are now available. Most of these make use of new technology, particularly ICT. Awareness and use of modern self-learning and self-assessment methods are found to be poor among students and teachers.

Two interventions—SchoolNet and Intel® Education Initiatives—have been selected and implemented to promote the use of ICT in learning and assessment.

The MOE, with the ADB-funded SEMP, has established SchoolNet, a wide area network connecting more than 1,500 senior secondary schools with computer resource centers, provincial education offices, zonal education offices, provincial ICT centers, NCOEs, the National Institute of Education (NIE), and the MOE. Currently, SchoolNet is being managed by the Education for Knowledge Society Project of the MOE. SchoolNet opens up

[36] *Sunday Times*. 2011. Dialog Television Initiative. 30 October.

a wide array of opportunities to raise the quality of general education and can be thought of as a platform for next-generation learning. It is expected to facilitate efficient distribution of electronic content to all participating schools. One of the significant expected developments is the increased interaction between students and teachers from different schools to facilitate teaching and learning. Interactive multimedia educational materials related to a few key subjects in the GCE (O/L) (grades 10 and 11) and GCE (A/L) (grades 12 and 13) are now available from SchoolNet. The enormous potential of SchoolNet is still largely untapped. In particular, the strong capability of SchoolNet to interact with students and teachers from different schools can be harnessed to develop programs relating to assessment of student learning.

Intel® EM has offered the MOE a teacher professional development program specifically designed for Sri Lanka, the services being at no cost. The MOE and Intel® have collectively undertaken this initiative to promote the professional development of teachers in Sri Lanka and, through them, motivate and empower the students to pursue the highest levels of achievement. It is believed that the teachers will use this opportunity as a stepping stone to enter the technology age. The chair of Intel® has stated that: "The scope of this program represents the industry's recognition that all the educational technology is worth nothing if teachers don't know how to use it effectively. Computers aren't magic, teachers are."[37]

Under this initiative, a series of short courses named as Intel® Teach Elements are made available for teachers. Intel® Teach Elements is a series of high-interest, visually compelling short courses that provide deeper exploration of 21st century learning and assessment concepts. These short courses are designed for teachers with intermediate technology skills. They have no prerequisites and can be taken anywhere in the Intel® Teach portfolio sequence. Intel® Teach master teachers can facilitate short courses without retraining. It is noteworthy that one of the Intel® Teach Elements courses is Assessment in 21st Century Classrooms. This is an interactive e-learning experience that offers an in-depth look at assessment that meets the needs of 21st century teaching and learning. In this course, teachers see how assessment strategies can benefit their teaching practices and their students' learning. They learn how to plan, develop, and manage student-centered assessment. They follow three teachers to see how they are implementing embedded and ongoing assessment methods in their classrooms.

In Sri Lanka, from 2006 to 2013, Intel® Teach had reached 15% of teachers, 15% of schools, 20% of students, 50% of teacher educators, and 65% of NCOEs.

6. Large Proportion of Items that Test Lower-Order Mental Abilities in Public Examinations

Postexamination item analyses carried out by the R&D Branch of the DOE during the past years have revealed that question papers of Grade 5 Scholarship, GCE (O/L), and GCE (A/L) examinations contain a large proportion of items that test lower-order abilities.

The test item bank at the DOE is not yet well developed. The DOE is improving it to be able to supply quality test items that measure higher-order thinking skills.

[37] Intel® Teach Program. Intel® Education Initiative. http://iteach.schoolnet.lk.

At present, the DOE item bank has a collection of multiple-choice questions written for eight GCE (A/L) subjects during 2007–2011. Out of these, about 600 items in GCE (A/L) physics have been finalized and are intended to be used from 2013. The DOE is in the process of writing and pretesting more items for GCE (O/L) and GCE (A/L). Once the pretested items are scaled, they will have to be coded and stored in a manner that allows easy retrieval according to the needs of the DOE.

By including good-quality items, it would be possible to produce an examinee-friendly question paper. Such question papers are expected to dispel test anxiety and enable the students to demonstrate their true abilities.

Expediting the ongoing improvements to the item bank is seen as an urgent necessity to enable it to supply high-quality items for question papers of the forthcoming examinations.

D. Recommendations and Future Directions for Innovation

Sri Lanka has a well-developed education system. However, it lacked a national school assessment policy framework. Recently, the government appointed a national assessment committee, under the leadership of the NEC chair, to develop such a framework and this is expected to include clearer policies on national school assessment.

In Sri Lanka, SBA plays a vital role in ASLO. The aim of the SBA scheme implemented in the school system in 1999 is to improve the quality of learning, teaching, and assessment. SBA is considered as more valid and reliable than one-shot examinations. The main responsibility of implementing the SBA scheme in grades 6–9 lies with the NIE, and in grades 10–13 it lies with the DOE. It has been revealed that SBA implementation in grades 6–13 suffers from several shortcomings. At present, under the SBA, a set of 24 learning, teaching, and assessment modalities have been recommended for assessing the development of pupil competencies. However, studies have revealed that teachers tend to use only a limited number of the modalities.

This section presents key recommendations that have been formulated from the findings. An attempt has also been made to highlight a few reforms and innovations in assessment that are expected to emerge through new initiatives. A summary of key recommendations include the following:

(i) Initiate measures to develop a standards-based curriculum, at least in the next curriculum revision due in 2023, to enable moving toward standards-based assessment.
(ii) Upgrade the essential learning competencies (ELCs) introduced for each key stage in the primary curriculum in the next curriculum revision and train teachers to carry out assessments with reference to upgraded ELCs.
(iii) In conducting in-service and preservice programs for teachers, pay special attention to strengthening teacher capacity in areas such as diagnosis, remediation and feedback; error analysis; assessment rubrics using a variety of

assessment modalities; authentic assessment; assessing higher-order thinking skills; assessment *as* learning; and school tests—scoring outputs and reporting results.

(iv) Provide professional development opportunities to the academic staff members in TVET institutions, NCOEs, and universities to enhance their knowledge and skills on student assessment strategies appropriate to their fields.

(v) Review and revise components relating to the Classroom Assessment Practices Survey in the NCOE curriculum, and give NCOE lecturers further training based on the revised curriculum.

(vi) Strengthen continuous assessment practices in NCOEs.

(vii) Provide professional development opportunities for the relevant officers in the MOE, NIE, and zonal education offices to update their knowledge and skills in areas relating to student assessment and examinations.

(viii) Appoint competent committees to study, in depth, the issues and shortcomings relating to SBA, school term tests, and public examinations, as well as assessment practices in NCOEs, NFE programs, and TVET programs, to propose necessary measures to resolve the issues.

(ix) Initiate steps to broaden the adoption of ICT-based applications in schools, TVET, and higher education, and introduce new such initiatives to the systems.

(x) Pursue the efforts initiated by the MOE to ensure that Sri Lanka participates in international assessments in the future.

(xi) Explore possibilities for developing an appropriate scheme of assessment for South Asia.

1. Conceptual Framework for Recommendations

A conceptual framework was developed to facilitate the formulation process of recommendations and their presentation (Table A3.12).

The vision is to develop a well-balanced assessment system that puts more emphasis on assessment *for* learning and assessment *as* learning, rather than on assessment *of* learning, and that enables all students to improve their levels of achievement.

The following recommendations have been formulated in accordance with this vision, and are grouped under 10 subtopics.

a. Curriculum Revision and Standards-Based Assessment

The current competency-based curriculum was implemented in 2007, commencing in grades 6 and 10. According to the National Curriculum Policy, implementation of the second curriculum revision cycle commenced in 2015. Revised curricula were implemented in Grade 6 and Grade 10 in 2015; and in Grade 1 in 2016. Third cycle of the curriculum revision is scheduled to commence in 2023. It is now evident that the revised curriculum will also be competency-based and not based on standards. A curriculum that is not based on national standards has serious implications on assessment, especially on SBA and examinations. Comparability of SBA grades between schools cannot be achieved, and a sound moderation scheme cannot be designed without establishing content standards.

It is recommended that steps be initiated to develop a standards-based curriculum, at least in the curriculum revision due in 2023. It will pave the way to move toward standards-

Table A3.12: Sri Lanka—Conceptual Framework for Recommendations

Area of Recommendation	Main Focus of Recommendation	Specific Topics to Be Emphasized
Curriculum development	Curriculum revision	• Standards-based curriculum and assessment • Upgrading essential learning competencies
Professional development of teachers	• In-service training • Preservice training	• Formative assessment • Assessing higher-order skills • Assessment as learning • Authentic assessment • Competency-based assessment • Performance assessment • Scoring rubrics • Portfolio assessment • Continuous assessment • ICT-based assessment • Error analysis • Scoring student outputs • For teachers only: – SBA practices – School tests
Professional development of lecturers	• NCOE lecturers • TVET institution lecturers • University lecturers	
Professional development of officers and trainers	MOE—Nonformal Education Branch	Assessment of NFE programs
	NIE—Curriculum Development	SBA guidelines, tools, and training
	DOE—Research and Development Branch	Item analysis using item response theory
	DOE—Confidential Branch	Question paper setting and moderation
	DOE—Computer Department	IBM, AS/400 series computer system training
	Zonal education departments: officers and in-service advisors	Classroom assessment practices Item analysis of school term tests
Issues relating to assessment systems and examinations: (i) SBA, school term tests, and public exams; (ii) NFE programs; and (iii) TVET	Appointment of competent committees	Diagnose causes for the issues and propose effective solutions
ICT-based applications	Use of ICT	Improve the implemented applications and introduce new applications
International assessment	• Global level • Regional level	• Subject area options • Grade-level options • Frequency options
Capacity building of institutions	• DOE	• Automated packing system • Upgrading printing machinery
Research	• Research grants • Teacher action research • Student research projects	• Classroom assessment practices • SBA • School term tests • Public examinations

DOE = Department of Examinations, ICT= information and communication technology, MOE = Ministry of Education, NCOE = National College of Education, NFE = nonformal education, NIE = National Institute of Education, SBA = school-based assessment, TVET= technical and vocational education and training.

Source: Author.

based assessment. As moving toward this target will be a major reform in the curriculum development field, it should be well planned and designed.

b. Essential Learning Competencies

A new assessment feature, Attainment of Mastery in Essential Learning Competencies at the end of a key stage, was designed and implemented under the 1997 Education Reform. These ELCs had been subjected to minor changes during the past curriculum revisions. However, there is evidence that attention to this feature has diminished over the years. To maintain the quality of this feature, ELCs must be revised periodically and teachers must be trained to use the revised ELCs.

It is recommended to upgrade the ELCs introduced for each key stage in the primary curriculum in the next curriculum revision, conforming to the new curricula, and to train teachers to carry out assessments with reference to upgraded ELCs.

c. Professional Development of Teachers

To provide effective help to lagging students, it is essential that their learning difficulties first be diagnosed, followed by planning and implementing appropriate remedial measures. It is evident that this process is not practiced to a satisfactory level by many teachers, especially at the secondary level. Many teachers do not use "authentic assessments" (a form of assessment in which students are asked to perform real-world tasks that demonstrate meaningful application of essential knowledge and skills) and rubrics for scoring. Classroom Assessment Practices Survey Questionnaire (CAPSQ) results have revealed that teacher assessments are focused more on lower-order thinking skills, and one of their most needed areas for professional development is administering tests and examinations, with emphasis on scoring and reporting results. A large number of teachers in the system do not possess the necessary knowledge and skills in many important assessment practices.

It is recommended that in-service and preservice programs conducted for teachers should pay special attention to strengthening teacher capacity in the following areas:

- diagnosing learning difficulties of students, planning appropriate remedial measures, and providing effective feedback based on diagnosis;
- applying "error analysis" strategies to enable teachers to effectively diagnose learning difficulties of lagging students, particularly in mathematics, to facilitate planning of remedial measures;
- designing rubrics and using them effectively in student assessments, with emphasis on diagnosis and providing feedback;
- using a greater variety of assessment modalities, recommended for SBA;
- carrying out effective authentic assessments;
- assessing higher-order thinking skills;
- promoting assessment *as* learning among students; and
- conducting valid school tests, scoring student outputs, and reporting results.

d. Professional Development of Lecturers

Effective assessment helps the lecturers in TVET institutions, the NCOEs, and universities to assess the standing of their students and direct them to higher levels of achievement. Therefore, lecturers should possess the necessary knowledge and skills related to student

assessment strategies that are appropriate to their fields. A large number of these lecturers have not been trained in carrying out student assessment effectively. Further, the conduct of CAPS survey has revealed that preservice training has no significant impact on classroom assessment practices of teachers or on their assessment literacy.

It is recommended that professional development opportunities be provided to the academic staff members in TVET institutions, NCOEs, and universities to enhance their knowledge and skills on student assessment strategies appropriate to their fields. Areas such as assessing higher-order thinking skills, continuous assessment, competency-based assessment, performance assessment, scoring rubrics, authentic assessment, and portfolio assessment should receive special attention in programs conducted for all groups. Further, they should also be exposed to modern assessment practices, especially using new technology. In TVET, assessing recognition of prior learning is seen as an important area. These institutions should establish their own staff development CAPs centers, if not already available, to enable in-house training. Components relating to the NCOE curriculum should be reviewed and revised, and NCOE lecturers should be further trained, based on the revised curriculum. Continuous assessment practices in NCOEs should also be strengthened.

e. Professional Development of Officers or Trainers

Officers in the MOE, NIE, DOE, and zonal education offices who are responsible for handling tasks associated with student assessment and examinations should possess the necessary knowledge and skills in these areas to enable them to discharge their responsibilities effectively and efficiently. Adequate opportunities have not been provided to these officers to update their knowledge and skills.

It is recommended that the relevant officers in the MOE, NIE, and zonal education offices be provided with opportunities to update their knowledge and skills in areas relating to student assessment and examinations. A few specific areas are mentioned below as examples.

(i) Ministry of Education. The nonformal education branch of the MOE has implemented several NFE programs. The assessment approaches used in these programs are not yet well developed and suffer from several shortcomings. Reviewing the current assessment approaches, taking measures to improve and update them, and designing new assessment approaches deserve special attention. Professional development programs for NFE officers should preferably focus on these aspects.

(ii) National Institute of Education. At present, subject committees at the NIE are responsible for incorporating guidelines on assessment, including SBA, and assessment tools into the teacher instructional manuals. Training of master trainers is also one of their main functions. Professional development for NIE officers should pay special attention to strengthening these aspects.

(iii) Department of Examinations. One of the main tasks carried out by the R&D Branch of the DOE is analysis of results. Professional development for officers of the R&D Branch should preferably include item analysis, with special reference to item response theory analysis.

One of the main responsibilities of the Confidential Branch is setting question papers. At present, question papers for Grade 5 Scholarship, GCE (O/L), and GCE (A/L) examinations are set by panels appointed by the commissioner general of examinations, with members drawn from educational institutions and universities. To improve the quality of question papers, these panel members and those who carry out the moderation and validation processes should be trained on setting examinee-friendly question papers that include questions for testing higher-order skills. Further, measures should be initiated to appoint in-house panels for setting question papers for scholarship and GCE (O/L) examinations, and to provide the necessary training for the officers selected for these panels.

A new computer system—an IBM AS/400—has been newly installed at the DOE. But members of the computer staff were not given any special training on how to use this system, other than the vendor training, which was found to be insufficient. Selected staff members of the Computer Branch should be provided training in different related fields, such as computer programming and analysis, to maximize the use of this system.

(iv) Zonal Education Offices. Zonal education officers in charge of examinations are expected to analyze the school term test marks and provide feedback to the schools. In-service advisors are expected to assist them. Professional development for this group should preferably include analysis of marks, with special reference to item analysis using simple software packages (e.g., Microsoft Excel), and how to provide effective feedback to schools. In addition, their knowledge and skills on classroom assessment practices should be improved.

f. Issues Related to Assessment Systems and Examinations

Several systems are in place for formative and summative assessments of student learning achievement. Many of these systems in the school education, nonformal education, and TVET sectors are found to suffer from multiple issues and shortcomings. Initiatives under ADB and World Bank projects to improve and systematize SBA implementation have not been sustained after the projects ended (e.g., the SBA Facilitation Program). At present, both the DOE and the NIE believe that further support to reintroduce and realign SBA with new developments in education is very much needed. Similarly, the assessment systems used in the nonformal education and TVET programs are found to be weak and need to be innovatively upgraded and strengthened. Furthermore, complaints are often leveled against the three public examinations—Grade 5 Scholarship, GCE (O/L), and GCE (A/L)—for the mental stress students have to undergo due to the examination pressure.

It is recommended that the MOE and the Ministry of Youth Affairs and Skills Development appoint competent committees to study, in depth, the issues and shortcomings relating to SBA, school term tests, and public examinations; and the assessment practices in NCOEs, NFE programs, and TVET programs, and then to propose necessary measures to resolve the issues. In the general education sector, two issues deserve special attention: introducing an appropriate moderation mechanism to the SBA scheme to enhance the credibility of SBA grades; and introducing appropriate changes to the structures of all three public examinations, with a view to reducing the examination pressure of students.

g. Use of Information and Communication Technology

In many countries, ICT has been used effectively for many educational purposes in various ways. Some of the widely used applications are (i) using ICT-based aids for instruction; (ii) using ICT for computer-assisted learning; (iii) engaging students in ICT-based activities (e.g., developing portfolios, conducting projects, and making presentations); and (iv) integrating ICT into the assessment processes (e.g., TVET). The huge potential of using ICT in education has not yet been tapped to a satisfactory level in Sri Lanka. Availability of ICT-based applications is limited; their use for teaching, learning, and assessment is poor; and the scope for improvement is high.

It is recommended that measures be taken to widen the scope of the already implemented ICT-based applications in schools, TVET, and higher education, and to introduce new initiatives to the systems. Three ICT-based applications are briefly discussed as examples for special consideration.

(i) **Computer-assisted assessment**. Used in many foreign universities, this is the use of computers to assess students' progress, and has a wide range of formats. There is evidence that some Sri Lankan universities also have adopted computer-assisted assessment techniques, in a limited way. Action needs to be taken to strengthen this ICT-based application in places where it is practiced, and to promote its use in other institutions.

(ii) **SL2College**. SL2College is an educational not-for-profit organization formed by a global community and driven by volunteers since its inception in 2005. An ICT-based program aimed at helping university students, SL2College helps Sri Lankan students by providing free, accurate, in-depth, and unbiased information about many aspects of higher education within the country and overseas. It is run by past and present Sri Lankan graduate students, faculty members, and entrepreneurs residing in many countries. The vision of SL2College is to become an "information hub for Sri Lankan students seeking to pursue higher education."[38] The quality of this ICT-based application needs to be reviewed, as it seems to deserve support for further improvement.

(iii) **ICT-based self-learning and assessment**. This is a website of the Khan Academy created in 2006, and supplies a free online collection of more than 2,400 microlectures via video tutorials stored on YouTube. These cover topics in several subjects including math, physics, chemistry, biology, astronomy, economics, and computer science. Each video runs for 10 minutes, and the tutorials are made with drawings that make the content more vivid.

Khan Academy also provides a web-based exercise system that matches students' performance and tests on their abilities. Students can make use of the extensive video library and practice exercises and assessments from any computer with web access, including modern mobile phones. The adaptive assessment exercises presented allow students to practice any available subject at their own pace.[39]

[38] SL2College. www.sl2college.org.

[39] Khan Academy. www.khanacademy.org/about.

The NIE has already conducted discussions with Khan Academy and has initiated work to translate and adapt materials relevant to the Sri Lankan curricula. These will be made available to Sri Lankan students.

h. Participation in International Assessment

Sri Lanka has not participated in any international assessments of student achievement, such as TIMSS and PISA. This has prevented comparisons of achievement levels of Sri Lankan students with those of other countries, and has also prevented similar comparisons with regard to curricula. However, it is encouraging to learn that the MOE has taken initiative in this direction and is planning to participate in international assessment, particularly PISA. Such participation entails significant funding, for which the MOE is in the process of discussing with ADB and the World Bank.

It is recommended that the MOE pursue its efforts and take necessary measures to ensure that Sri Lanka participates in international assessments in the future. Possibilities for developing an appropriate assessment scheme for South Asia should also be explored. This has already received the attention of the MOE.[40]

i. Institutional Capacity Building

Many responsibilities relating to assessment and examinations fall under the DOE. It has been learned that efficiency in delivering the outputs has been affected due to lack of human and physical resources in some crucial DOE branches and units (e.g., R&D Branch, Packing Unit, Printing Branch, and item bank).

It is recommended that measures be taken to identify the branches and units in DOE that are in need of human and physical resources for further improvement and supply these resources.

In particular, it is recommended that necessary additional facilities, especially high-quality computers, and user-friendly and efficient software packages, be provided to the R&D Branch. Expert technical assistance and necessary modern equipment should be provided to the item bank to enable supply of high-quality test items for forthcoming examinations. To facilitate the huge task of packing question papers, which is currently done by staff officers, an automated packing system should be installed. Printing machinery should be upgraded by moving toward digital printing.

j. Research Related to Assessment and Examinations

Research studies can contribute immensely to improving the current assessment and examination practices as well as to creating new related initiatives. There is a dearth of research associated with assessment practices and examinations in Sri Lanka.

It is recommended that conducting research relating to student assessment and examinations be promoted and supported in all sectors (school education, TVET, and higher education). The following specific recommendations deserve special attention:

[40] Ministry of Education. 2012. *National Strategic Plan for the General Education Sector—Education Sector Development Framework and Programme (2012–2016).*

- When awarding research grants, the NEC should give priority to awarding grants for research relating to classroom assessment practices, school term tests, and public examinations.
- Teachers should be promoted, trained, and guided to carry out classroom-based action research.
- Education faculties of universities and NCOEs should encourage their students to undertake research studies relating to student assessment and examinations for their major projects and dissertations.

2. Innovations in Assessment and Examinations

Many innovations in the field of assessment and examinations have emerged during the past few decades. It is recommended that innovations in assessment and examinations relevant to the Sri Lankan context be identified and studied in depth to be considered for future implementation.

Six interventions relating to assessment of student learning outcomes have been already initiated to address identified major issues. These are (i) reform and revise curriculum, (ii) move toward standards-based education and assessment, (iii) encourage and guide teachers to use a greater variety of assessment modalities, (iv) seek public–private partnerships, (v) promote the use of ICT-based self-learning and assessment, and (vi) improve the item bank at the DOE to be able to supply quality items. It is recommended that the current status of each intervention be evaluated and necessary action be taken to improve the interventions further.

The need to improve student assessment practices and examinations in Sri Lanka has been pointed out by several educationists and stakeholders. Some initiatives to respond to this need have been already launched, while some are in the pipeline. These initiatives are expected to lead to innovations in the field of assessment and examinations. The main focus of this subsection is to highlight the status of these efforts.

a. Reducing Examination Pressure

Policy makers are considering possible changes to the current structure of the GCE (O/L) and Grade 5 Scholarship examinations, with a view to reducing examination pressure. In the GCE (O/L) Examination, all the question papers are currently administered centrally by the DOE. The possibility of conducting centralized examinations for only four core subjects and decentralizing the other subjects is being explored.

The Grade 5 Scholarship Examination consists of two question papers. Paper I is an aptitude test, and Paper II is based on the primary curriculum. The possibility of limiting this examination to only the aptitude test is being explored.

b. New Testing Modes

At present, the DOE conducts mainly written tests and practical tests in the traditional manner. It is worthy to consider whether these testing modes could be adopted: online tests, starting preferably with ICT subjects in the GCE (O/L) and (A/L) examinations; and open-book tests for selected examinations.

c. Learning Management System

The learning management system initiated by the NIE is one of the first steps taken toward promoting online education within the school system in Sri Lanka, where students and teachers can share teaching and learning materials and interact through SchoolNet or the internet. A large amount of resource material required for the learning management system has been prepared by the NIE, and is now available for dissemination over the internet. There is a lot of scope for improving this system further. It is worth noting that the assessment system of the learning management system must be aligned with the existing materials that have been developed.

d. New Technology Stream for General Certificate of Education – Advanced Level

In 2013, a technology stream was introduced to the GCE (A/L) in 250 schools. It is expected to expand to another 1,000 secondary schools. Initially, teachers of the University of Vocational Technology of the Ministry of Youth Affairs and Skills Development will teach new subjects being introduced in the new stream. Furthermore, the University Grants Commission has initiated action to commence a new degree program, the B.Sc. (Technology), for the benefit of students following the technology stream in school.[41]

Practical training and development of competencies play major roles in these new courses. Thus, the new stream and the degree program are posing challenges to the NIE, the DOE, and the University Grants Commission in terms of curriculum development as well as assessment and examinations.

e. Self-Paced Learning

The MOE has focused its attention on introducing a new methodology called *multilevel teaching* to primary education, on a pilot basis, to promote self-paced learning. In multilevel teaching, milestones of the syllabus are identified, and a set of activities are prepared to reach each milestone. The teacher has to provide opportunities to all the children to engage in activities to reach each milestone. Children work at their own pace to reach each milestone. Therefore, stressful conditions can be eliminated.[42]

It seems appropriate to introduce a somewhat similar, but more broadly based, program used widely in the Philippines, the Dynamic Learning Program. This program works on the principle of "learning by doing." It is a student-centered system of teaching that focuses on student activity rather than on traditional classroom lectures. The setup is 70% student activity and 30% lecture and discussions. National experts do the majority of the lectures via video. The students can learn independently because each activity has a clear learning target.

It is worthwhile to explore the applications of this methodology in order to learn from others' experiences. It is envisaged that this methodology will be able to contribute toward improving the practices in multigrade schools in Sri Lanka.

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[41] *Sunday Observer.* 2014. Establishment of New University College by Youth Affairs and Skill Development Ministry. 23 February.

[42] Ministry of Education. 2012. *National Strategic Plan for the General Education Sector—Education Sector Development Framework and Programme (2012–2016).*

3. Suggested Action Plan

It has to be noted that some recommendations deserve immediate implementation (within 1–5 years) and some can be delayed (by 5–10 years). An action plan suggested for implementing activities related to the recommendations is presented for consideration in Table A3.13.

Table A3.13: Sri Lanka—Suggested Action Plan for Implementation of Recommendations

Activity	1–5 Years	5–10 Years
Develop a standards–based curriculum and assessment system		√
Upgrade essential learning competencies and training of primary teachers		√
Conduct in-service programs on assessment and examinations for teachers	√	
Conduct professional development programs on assessment and examinations for lecturers in National Colleges of Education, TVET, and universities	√	
Conduct professional development programs on assessment and examinations for officers and trainers in the Ministry of Education, National Institute of Education, and zonal education offices	√	
Adopt measures to resolve issues and shortcomings relating to school term tests, school-based assessment, public exams, and assessment practices in nonformal education Affairs and TVET programs (Ministry of Education and Ministry of Youth Affairs and Skills Development)	√	
Widen the use of ICT-based applications in school, TVET, and higher education	√	
Participate in an international assessment		√
Develop the capacity of the Department of Examinations by supplying necessary human resources and modern equipment (e.g., automated packing system, modern printing machinery, and computers)	√	
Promote and support research activities in all sectors (school, TVET, and higher education)	√	

ICT = information and communication technology, TVET = technical and vocational education and training.

Source: Author.

References

Asian Development Bank. 2013. *Terms of Reference for Consultants Team (FIRM). TA8335-SRI: Human Capital Development and Implementation Support*. Manila.

Daily News. 2013. National Skills Competition for 2013/2014: "Touch Your Future." 24 October.

Department of Examinations, National Evaluation and Testing Service (NETS). 2011. *Statistical Handbook (2008–2010)*. Battaramulla.

———. 2012. *Conducting Examinations in Sri Lanka: From the Past to Da*te. Battaramulla.

European Centre for the Development of Vocational Training. Third International Workshop on Curriculum Innovation and Reform: Changing Assessment to Improve Learning Outcomes, 26–27 April 2012, at Thessaloniki, Greece. www.cedefop.europa.eu/en/events/19351.aspx.

Glasgow Caledonian University. Undated. *Computer-Assisted Assessment: The Handbook*. https://economicsnetwork.ac.uk/handbook/printable/caa_v5.pdf.

Gonzales, R. D. L. C., and C. M. Callueng. 2014. Classroom Assessment Practices of Filipino Teachers: Measurement and Impact of Professional Development. In C. Magno and M. J. Gaerlan, eds. *Essentials on Counseling and Education: A Festchrift of Prof. Rose Marie Salazar-Clemena*. Manila: APSA. pp. 220–242.

Gunawardena, G. B. 2012. *Dr. C. W. W. Kannangara Memorial Lecture–23: Kannangara Vision: Challenge in Reforming Education*. Maharagama: National Institute of Education.

Jones, S., and H. Tanner. 2008. *Assessment: A Practical Guide for Secondary Teachers*. Second ed. London: Continuum.Khan Academy. *Individualize Learning and Increase Classroom Interaction Using Free Technology*. https://education.skype.com/resources/699-khan-academy-individualize-learning-and-increase-classroom-interaction-using-free-technology.

Learning Captain. 2012. Under Dynamic Learning Program, No More Boring Teachers, Schools and Homeworks. http://school-principal.blogspot.com/2012/06/under-dynamic-learning-program-no-more.html.

Microsoft Sri Lanka Initiative. www.microsoft.com/srilanka/TransformingEducation.aspx

Ministry of Education (MOE). 2005. *Education for Economic Development and Prosperity*. Battaramulla.

———. 2013. *Education First Sri Lanka*. Pitakotte: Sisira Printway.

Ministry of Education, Secondary Education Modernization Project II. 2009. *Final Report, Volume 3.2: Reports on SBA*.

Ministry of Education and Higher Education, Primary Education Planning Project. 2000. *Guidelines for the Implementation of the Primary Education Reform*. Battaramulla.

National Education Commission. 2009. *National Policy Framework on Higher Education and Technical and Vocational Education*. Narahenpita.

Quality Assurance and Accreditation Council. 2003. *Academic Procedures Handbook for Sri Lankan Universities: Part 1—Code of Practice on Assessment of Students*. Colombo 5: QAAC Press. http://www.qaacouncil.lk/publications/code_practices/cop_1.pdf.

SchoolNet Sri Lanka. www.schoolnet.lk.

Sri Lanka Vocational Training System and Requirements. http://www.humanitariansrilanka.org/Psychosocial_Forum/Sri%20Lanka_Vocational_Training_System_and_Requirements.html.

Sunday Observer. 2011. Higher Education Ministry Public–Private Project on University Research. 2 January.

———. 2013. SL2 College: Tips to Become More Marketable in a Competitive Job Market. 8 December.

———. 2014. Establishment of New University Colleges by Youth Affairs and Skills Development Ministry. 23 February.

Sunday Times. 2011. Dialog Television Initiative. 30 October.

UNESCO Bangkok, ICT in Education. 2012. Khan Academy—Redefining Learning and Fostering Changes in Education. www.unescobkk.org/education/ict/online-resources/databases/ict-in-education-database/item/article/khan-academy-redefining-learning-and-forstering-changes-in-education.

UNESCO–UNEVOC Information Centre. Sri Lanka: TVET Mission, Legislation, and National Policy or Strategy. http://www.unevoc.unesco.org/wtdb/worldtvetdatabase_lka_en.pdf.

UNICEF Regional Office for South Asia. 2003. *Examples of Inclusive Education: Sri Lanka*. www.unicef.org/rosa/InclusiveSlk.pdf.

Wayamba University of Sri Lanka. 2010a. *Assessing Students in Higher Education Through Alternative Methods.* Gonawila.

———. 2010b. *Learner-Centred Teaching Methodology & Technology to Assess Students.* Gonawila. http://sdc.wyb.ac.lk/wybsdc/templates/td_axetor/sdcbookpdf/09_03.pdf.

The World Bank. 2005. *Treasures of the Education System in Sri Lanka: Restoring Performance, Expanding Opportunities and Enhancing Prospects.* Colombo: World Bank Office.

APPENDIX 4: CLASSROOM ASSESSMENT PREFERENCE SURVEY QUESTIONNAIRE

Thank you for taking the time to complete this survey. It is focused on your current assessment beliefs and practices IN THE CLASSROOM.

This survey consists of three parts:
Part I: Background information
Part II: Statements on classroom assessment preferences
Part III: Assessment alternatives

A.1 At present I am teaching at:

[1] Primary (Grades 1–5)
[2] Junior Secondary (Grades 6–8)
[3] Secondary/High School (Grades 9–10)

A.2 The subject (major) that I teach is:

[1] Bangla [2] English [3] Mathematics
[4] Primary science [5] S. Studies: Bangladesh and world
[6] Agriculture [8] Health education
[7] Religion [9] Technology
[10] Others, please specify, if any ----------

A.3 The average number of students in my class is:

[1] Less than 15 [2] 16–25 [3] 25–40 [4] More than 40

A.4 I have been teaching for:

[1] 1–3 years [2] 4–6 years [3] 7–9 years [4] More than 10 years

A.5 Have you taken in-service training on assessment or classroom testing and evaluation for the past 3 years?

[1] Yes [2] No

A.6 Have you taken courses in class assessment or educational measurement during your preservice training (at PTI and/or teacher training or universities)?

[1] Yes [2] No

A.7 My highest educational attainment is:

[1] SSC [2] HSC [3] Bachelor [4] Master

A.8 I am a:

[1] Male [2] Female

B.1 Instructions: Please read each statement starting with "IN MY TEACHING PRACTICE, I USE ASSESSMENT TO" and then check (√) the appropriate frequency level that best matches your typical assessment practice.

1 = Very rarely or never (less than 10% of the time)
2 = Rarely (10%–25% of the time)
3 = Occasionally (26%–50% of the time)
4 = Very frequently (51%–75% of the time)
5 = Always (more than 75% of the time)

IN MY TEACHING PRACTICE, I USE CLASSROOM ASSESSMENT TO:	Response Option				
	1. Very rarely	2. Rarely	3. Occasionally	4. Very frequently	5. Always
1. Guide students to set their goals and monitor their own progress					
2. Demonstrate to students how to do self-assessment					
3. Determine how students can learn on their own in class					
4. Assist students to identify means of getting personal feedback and monitoring their own leaning process					
5. Help students develop clear criteria of a good learning practice					
6. Set the criteria for students to assess their own performance in class					
7. Measure extent of learning at the end of a lesson or class					
8. Evaluate the level of competence of students at the end of an instructional PROGRAM					
9. Determine the degree of accomplishment of a desired learning outcome at the end of a lesson or subject					
10. Make final decision about the level of learning that students achieved at the end of a lesson or subject					
11. Rank students based on their class performance to inform other school officials					
12. Provide information to parents about the performance of their children in school					
13. Examine how one student performs relative to others in my class					
14. Supply information to other teachers, schools, and employers regarding students' performance in the class					
15. Help students improve their learning process and class performance.					
16. Assist students to determine their learning strength and weaknesses in class					
17. Identify better learning opportunities for students in class					
18. Periodically collect learning data from students to improve instructional process					

Part III: Assessment Alternatives and Teaching

C.1 Please read each statement and then check (√) the appropriate option that describes how frequently you do typical assessment practice.

1 = Very rarely or never (less than 10% of the time)
2 = Rarely (10%–25% of the time)
3 = Occasionally (26%–50% of the time)
4 = Very frequently (51%–75% of the time)
5 = Always (more than 75% of the time)

I use the following assessment approaches:	Response Option				
	1. Very rarely	2. Rarely	3. Occasionally	4. Very frequently	5. Always
1. Multiple choice					
2. True-false or right-wrong					
3. Matching types					
4. Fill-in-the-blanks or short constructed response					
5. Essay					
6. Performance assessment					
7. Portfolio assessment					
8. Graded recitation					
9. Observations					
10. Term papers or projects					
11. Class presentations					
12. Assignments					
13. Classroom assessment techniques					
14. Others, please specify					

C.2 When I do assessment, I ask questions or give tasks that allow me to know whether students can do the following:

1 = Very rarely or never (less than 10% of the time)
2 = Rarely (10- 25% of the time)
3 = Occasionally (26%–50% of the time)
4 = Very frequently (51%–75% of the time)
5 = Always (more than 75% 0f the time)

	Response Option				
Subject	1. Very rarely	2. Rarely	3. Occasionally	4. Very frequently	5. Always
1. Can recall or remember what is taught in class					
2. Explain ideas and concepts					
3. Use learned information or concept in a new way					
4. Analyze a situation or condition					
5. Justify a stand or decision					
6. Create a new product or point of view or idea					

C.3 Please rate the following areas of assessment in terms of your need for professional development in the continuum:

1 = not needed
2 = some needed
3 = middle needed
4 = very needed
5 = very much needed

Subject	1. Not needed	2. Some needed	3. Middle needed	4. Very needed	5.Very much needed
1. Writing learning outcomes	1	2	3	4	5
2. Constructing objective tests	1	2	3	4	5
3 Defining tasks for performance tests	1	2	3	4	5
4. Choosing the most appropriate item type for a test	1	2	3	4	5
5. Asking essay questions	1	2	3	4	5
6. Preparing observation checklists	1	2	3	4	5
7. Creating rubrics	1	2	3	4	5
8. Developing assessment plans	1	2	3	4	5
9. Linking learning outcomes with assessment	1	2	3	4	5
10. Administering tests and exams	1	2	3	4	5
11. Scoring and marking tests and assessment tools	1	2	3	4	5
12. Reporting assessment results	1	2	3	4	5
13. Others: Please list other areas that you want to know and learn about classroom assessment	1	2	3	4	5

D.1 Assessment literacy is defined as an understanding of the principles of sound assessment. Describe your overall level of assessment literacy on a 10-point scale with 1 as very low and 10 as very high.

1	2	3	4	5	6	7	8	9	10
Very low									Very high

E.1 Read the following statements and indicate how you describe your agreement to each statement on a 5-point scale:

1 = Completely disagree
2 = Disagree
3 = Neither agree nor disagree
4 = Agree
5 = Completely agree

Teaching is an excellent profession	Response Option				
1. Teaching is wonderful profession	1	2	3	4	5
2. I would leave teaching for another profession if I could	1	2	3	4	5
3. I enjoy my school very much	1	2	3	4	5
4. This job gives me professional satisfaction	1	2	3	4	5

F.1 Read the following statements and then encircle the option that describes how frequently you do these, using a 5-point scale:

1 = Never
2 = Seldom
3 = Sometimes
4 = Often
5 = Always

Subject	Response Option				
1. How often do you have conversations with colleagues about what helps students learn best?	1	2	3	4	5
2. How often do you have conversations with colleagues about how to improve assessments?	1	2	3	4	5

Thank you for completing the questionnaire.

Please make sure that you answered all items.

Full name of teacher: _____

Name of school with address: _____

_____

Mobile no. of teacher: _____

_____

Signature of the enumerator:

Innovative Strategies for Accelerated Human Resource Development in South Asia

Student Assessment and Examination
Special Focus on Bangladesh, Nepal, and Sri Lanka

Assessment of student learning outcomes (ASLO) is one of the key activities in teaching and learning. It serves as the source of information in determining the quality of education at the classroom and national levels. Results from any assessment have an influence on decision making, on policy development related to improving individual student achievement, and to ensure the equity and quality of an education system. ASLO provides teachers and school heads with information for making decisions regarding a students' progress. The information allows teachers and school heads to understand a students' performance better. This report reviews ASLO in three South Asian countries—Bangladesh, Nepal, and Sri Lanka—with a focus on public examinations, national assessment, school-based assessment, and classroom assessment practiced in these countries.

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