

A Strategic Plan for the Department of Examination

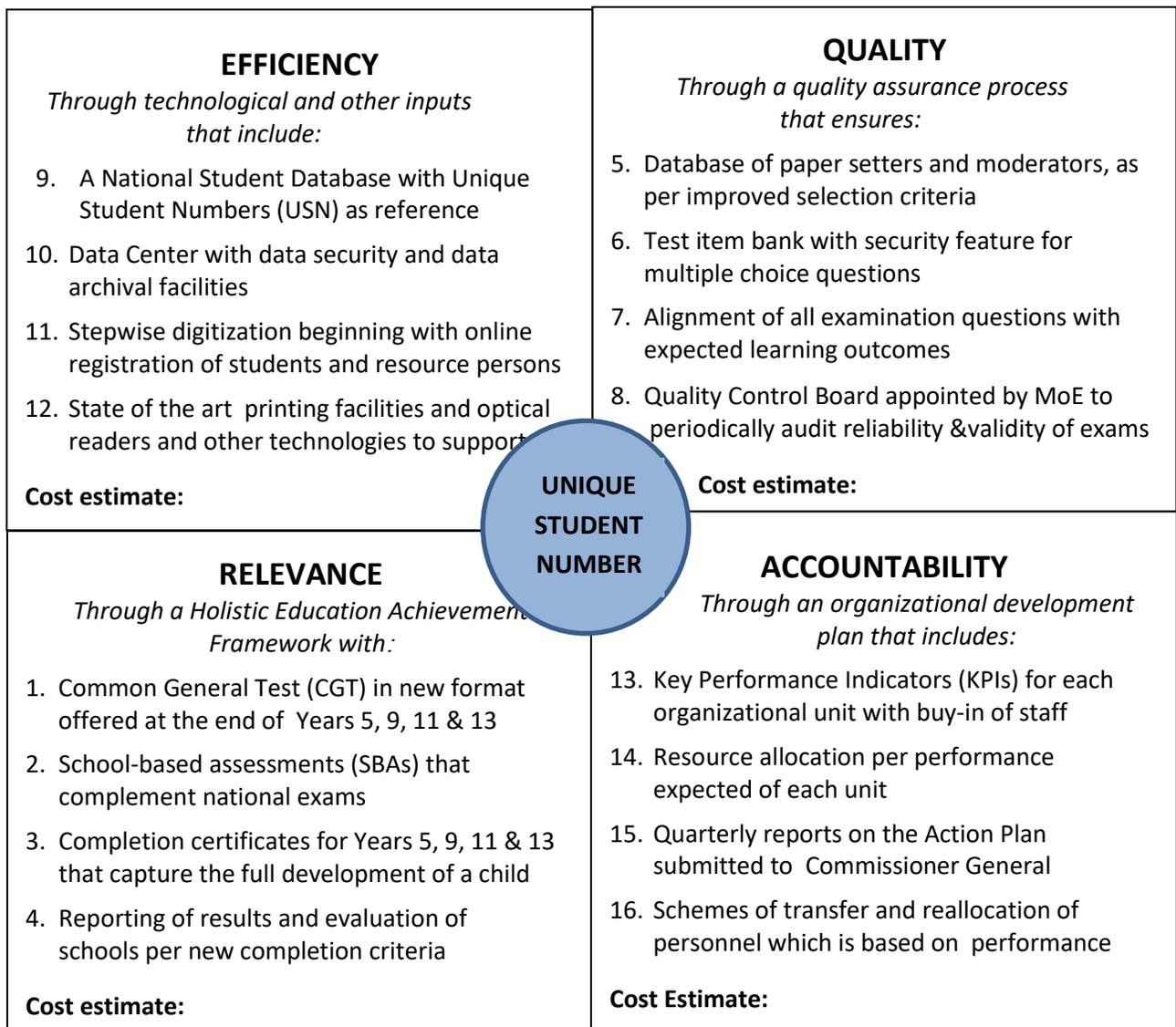
For implementation in 2018-2019

Prepared by Committee of Experts for Reforming the Department of Examination¹

Vision 2020 document of the Department of Examination (DoE, March 2017) contains a self-evaluation of internal processes and a number of steps to improve. A previous Committee appointed by the Ministry of Education (MoE) and another appointed by the National Education Commission too have reviewed the examination processes and made nearly hundred recommendations (MoE 2009 and NIE 2014).

While noting the comprehensiveness of above reports, the present committee notes also the lack of a strategic approach that prioritizes recommendations and makes those actionable. As a response, we propose a strategic plan that includes sixteen key recommendations under the four major goals of EFFICIENCY, QUALITY, RELEVANCE and ACCOUNTABILITY, with a UNIQUE STUDENT NUMBER as a priority.

To make the recommendations actionable, we also present a Holistic Education Achievement Framework (Figure 1) and Templates for measuring performance (Appendix 2), allocating resources (Appendix 3) and an Action Plan with milestones (Appendix 4).



¹ See Appendix 1 for details.

The proposed templates shall be completed by the Department, after which the department shall also complete the cost estimates for each of 16 recommendations and the four summary goals.

This report concerns the three national examinations conducted by the department, but the concepts and the templates proposed here can be extended to other examinations conducted by the department.

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EFFICIENCY

The vision 2020 document of DoE details plans to “bring in a significant change to its functions by using advanced technology on par with the other stakeholders who have become very efficient in providing services to the public and performing its duties paperless as much as possible by digitizing the procedures to reduce number of human labor hours and cut-down time spent on any task.”

The present candidate registration system includes manual process of written forms filled by each school for each examination. The forms are sent to DOE by the schools manually and the data in the forms are entered twice by the data entry staff at DOE. A validation process follows the double entry of data and a series of manual verifications are conducted. For certain examinations a volume of over 500,000 candidates are processed in the said pipeline. Same ‘inefficient’ manual/semi-automated candidate registration process is repeated for each candidate for each student during a student’s school career. The lack of a common system where a student is identified and relevant information can be accessed (unique identification number) also leads to the inability of carrying out student census, progress monitoring and other analysis of student achievement. The Registration of supervisors, invigilators and other support personnel too involves manual processes. Issuing of certificates too is a cumbersome manual process.

Vision 2020 document already has identified the technology needs to address these issues. In this report we collate those proposals in our Action Plan template, and summarize them here under recommendations #1-#4 introducing two technology features and implementation strategies that we feel are pivotal to the envisaged changes.

Recommendation # 1: National Student Database with Unique Student Numbers (USNs)

One of the main recommendations of the committee is to develop a National Student Database to record and maintain student information in a central location. The student data need to be maintained using a Unique Student Number. Unique Student Numbers or USNs are used in countries such as UK, New Zealand and India.

Unique Student number (USN)

When a particular student is registered in the data base his/her information could be accessed and used repeatedly for whatever the examinations he/she is applying for. The purpose of assigning a USN for each student includes strengthening procedures for goal setting and monitoring, policy evaluation and monitoring, thereby contributing to the raising of standards of education. A Unique Student Number Assigned to school shall have the following properties:

- The USN shall be assigned by the Ministry of education
- USNs are to be allocated at the point of a student’s first entry into a schools sector. Generally USN shall be assigned during the grade 1 admission at the schools. However there may be exceptions where student enter the school sector in higher grades.
- USN shall be used for all identification purposes from year 1-13 in the examinations conducted by the department of examinations, insurance schemes, immunization records, school bases assessments etc.
- The USN shall consist of the School District, School ID, Year of admission, a serial Number, and a Check digit.
- The option of NIC to be used as identification is not recommended due to privacy concerns.
- The USN shall remain fixed during the school career of the student even if the student changes to other schools

- Shall be used for maintaining National Results Database;
- Shall be used by schools for management purposes such as school fees, curricular activities, and conducting of school-based assessment and tests.

National Results Database

- National Results Database shall be maintained by the DoE and contain all student education achievement records including results of school-based assessments
- The National Student Database shall be maintained by MoE and contain other data such as insurance, immunization records etc. and should serve as the mother database for the National Results database
- National Results Database shall be used to monitor academic progress of individual students by the MoE and DoE
- It is essential to deploy privacy preserving technologies to protect the data from any potential security breaches.

Recommendation # 2: Data center with data security and data archival facilities

A new Data Center with necessary infrastructure such as power supplies, redundant data communications lines, environmental controls (e.g. air conditioning, fire suppression) and security devices is an essential requirement. An archival system shall be deployed to digitize and archive manual records of examinations conducted prior to 1992.

It is also recommended to use Optical Character Recognition (OCR) and Optical Marker Recognition (OMR) based system in post-processing of marking sheets. This will lead to significant reduction of processing leading to early release of examination results.

Recommendation # 3: Stepwise digitization starting from registration of students & resource persons

It is recommended to automate the appropriate administrative processes of DoE from the point of registration of candidates sitting examinations up to the point of releasing of the results on the web. The school entry records in the National Student Database (NSD) shall be linked to the registration of subsequent examinations such as GCE (O/L) and GCE (A/L). Bio metric data of candidates shall be captured to minimize examination malpractices by the candidates. The examination centers shall be provided devices to authenticate the candidate's identity.

The Proposed Action Plan template can be used for a stepwise implementation of digitization, beginning with online registration of students and online registration of paper markers, supervisors and invigilators through the zonal offices. The student registration will be linked to the national results database. Zonal offices should be equipped to link online with the National Examination Data Center.

We caution against the use of off-the-shelf systems in the digitization process. We suggest such systems should be adopted only after fully understanding the needs during the stepwise implementation. We recommend the use of free and open source technology at the beginning of the digitization process.

Recommendation # 4: Physical facility improvements

Printing of examination papers is a key process demanding high-level of confidentiality and reliability. Manual processes can compromise confidentiality and reliability, and requires large volumes of material leading to environmental impact. The Ministry of Education has already allocated funds for a new printing machine. The new equipment should allow the examiners to feed the camera ready copy to the printing system and the final picketed question papers to be produced by the machine.

QUALITY

The quality of testing and evaluation services is measured by the reliability and validity of the results. Reliability is the degree to which an assessment tool produces stable and consistent results. For example, the tool should not be subject to different interpretations by different individuals. Validity refers to how well a test measures what it is purported to measure.² If somebody answers a question correctly it should be a measure of the learning outcomes expected in that context. If a high score can be obtained with the ability to memorize and memorization is not an expected learning outcomes, such a score is not a valid measure. If confidentiality is breached and some candidates are able to cheat, the whole examination becomes non-valid.

Our recommendations #5 to #9 identify four key elements of a quality assurance process for the Department of Examinations. Our recommendations concern macro changes to improve quality. The Department has the expertise to work out the details.

Recommendation # 5: Database of qualified paper setters and moderators

The department already has specifications in place for paper setters and moderators but these do not seem to be adequately documented or applied consistently. The problem could be the wholesale handing over paper setting functions to Chief Examination Officers who are university teachers. These selected examiners are undoubtedly the subject experts, but their expertise in assessments is not a given. The moderator role too is important. The moderator is the person between the test taker and setter who ensures that the test taker interprets the question correctly. The 2009 Committee headed by Dr. Sedere strongly advocated the use of school teachers in those panels, but members of the present committee with long experience as examiners feel that the system is not yet ready for that.

We recommend that the assessment experts at the DoE play a more important role in these panels of examiners, all panel members irrespective of seniority undergo assessment training, specifications for examiners be documented and made publicly available, and a database of qualified examiners established.

Further the qualifications for papers setters and moderators should be clearly defined and conflict of interest situations clearly identified.

Recommendation # 6: Test item bank for multiple choice questions

The implementation of a test item bank is long overdue. In The 2009 DoE Committee strongly recommended that an item bank is in place by 2011. Obviously there have been obstacles to achieving the goal. In that context, we are happy to note that the Vision 2020 document of the DoE identifies a practical approach as follows:

“Paper setting procedures will also be changed inviting paper setters to send their items [for Paper I or multiple choice component of question papers] to a server specially handled by the head of the Confidentiality Branch. Paper II test items [or more essay type questions] will be set by the paper setting panel.

We endorse this approach but recommend that the department set a time table for completing item banks assigning the responsibility to a head of a branch.

² <https://chfasoa.uni.edu/reliabilityandvalidity.htm>

Recommendation # 7: Alignment of question papers with learning outcomes

The curricula for each subject tested at GCE O/L and A/L specifying the expected learning outcomes is prepared by the National Institute of Education (NIE). Setters of GCE O/L and A/L are given a copy of the approved curricula and they are expected to prepare the question papers to assess the students on the expected learning outcomes. Currently there is no mechanism to independently verify if the question papers have assessed the expected learning outcomes to the expected degree. We recommend, as a way of quality audit, the NIE to submit an annual report to the proposed Quality Control Committee or the Commissioner General evaluating the alignment of question papers at GCE O/L and A/L examinations with expected learning outcomes. Consistency of question papers across different language versions is another serious issue that should be addressed by the Quality Control Committee.

Recommendation # 8: Quality Control Committee to audit reliability and validity of papers

The effectiveness of quality assurance processes need to be checked by a quality control authority. Therefore, we recommend that the Ministry of Education set up a Quality Control Board which meets periodically to look in detail into the reliability and validity of the three national examinations and a selected sample of other examinations conducted by the DoE.

RELEVANCE

The Department of Examination is perhaps the government department with the most impact on society in Sri Lanka. Families organize their lives around the schedules of the three national examinations. Success at these examinations is seen as the major avenue of social mobility, but the exam-centered nature of the education system is also widely seen as the root cause of problems of education in Sri Lanka. This observation is reiterated in all three key reports on the examination system and/or general education published recently (MoE, 2009; NEC, 2014 and NEC, 2016). For example:

“G.C.E O/L and A/L curricula are inconsistent with goals and objectives of general education and have a heavy exam-orientation with public examinations receiving too much attention from students, parents and schools; School curricula and examinations continue on a content heavy and stereotyped cognitive learning model ignoring the 21st century framework for education (MoE, 2009).”

Statistics reveal negative effects of this learning environment. Although Sri Lanka can be proud of high enrolment rates in Primary school attendance rates, only 57% of a youth cohort at any time used to be considered fit for further education as judged by passes and credits required at the GCE O/L which they sit at the end of Year 11.

The recommendations by the NEC to make the education less exam centric include - (1) A reduced number of subjects to be taken at national examinations (2) School-based assessments that capture the full development of a child and are complementary to national tests and (3) Student achievements reported at levels reflecting minimum competency and higher-order competency so that the examination is meaningful to students at different levels of competency (NEC,).

The Ministry of Education has already begun implementing some of these solutions and more through its 13-years of education policy. The reforms include the introduction of vocational courses for students completing year 11, increasing the choices available to students going onto Years 12 and 13. Going further, the present committee proposes four additional recommendations based on a holistic education framework (Figure 1). Such a framework is expected to prepare students better for the increased variety of choices in years 12 and 13.

Currently, students are evaluated only on the basis of their success at written examinations. After the Year-5 scholarship examination, the only other evaluation received by students is the GCE (O/L) examination taken

at the end of Year-11. Both these examination are paper and pencil tests. Such an examination is neither fair nor accurate because they capture only one facet of student learning. We propose the awarding of a certificate for each of the four critical stages of education –i.e. Primary (Years 1-5), Junior Secondary (Years 6-9), Senior Secondary I (Years 10-11) and Senior Secondary II (Years 12-13), with each certificate containing four types of evaluations.

As summarized in

Figure 1, of the four proposed evaluations, two are at national level and other two school-based.

Figure 1. A Holistic Framework for Assessing Student Learning

For recognizing educational achievement at the end of each of the four stages of education

Stage	National Level		School-based		Certificate Issued (Combines test results for 1,2 and 3 & Assessment of 4)	Average Age at Completion ³
	1. Common General Test (CGT) ⁴	2. Subject Tests ⁵	3. Subject Tests	4. Assessment of Student Portfolios ⁶		
Primary (Years 1-5)	Yes	No	Yes ⁷	Yes	Primary School Certificate	10 Years 06 Months
Junior Secondary Years 6-9	Yes	No	Yes ⁸	Yes	Junior Secondary School Certificate	14 Years 06 Months
Senior Secondary Years 10-11	Yes	GCE (O/L) ⁹	Yes ¹⁰	Yes	Senior Secondary School Certificate	16 Years 06 Months
Advanced Secondary ¹¹ Years 12-13	Yes	GCE (A/L) ¹²	Yes ¹³	Yes	Advanced Secondary School Certificate	18 Years 06 Months

The national level assessments would include a Common General Test and Subject Tests for a limited set of subjects. School-based assessments include Subjects Tests and Assessment of Student portfolios. All four types of assessments exist already in one or more stages of education. What we propose here is a framework which is consistent across all four stages of education. Recommendations #9 to #13 detail the use of these tests and assessment across all four stages of education as given in the framework.

Proposal No. 08 : Common General Test (CGT) at the end of the four main stages.

The National Education Institute has proposed to further develop the Common General Test which was introduced for the G.C.E. (advanced Level) students in 2000. The proposal moves that the current paper should consist of an essay and questions to test the mother tongue. Secondly, all papers in

³ Currently, age at entry is 5+.

⁴ Should include pass/fail test in oral English and oral second languages, introduced gradually. Oral English/Second language immersion with fluent English speakers as facilitators should be available for all schools beginning with primary schools attended by disadvantaged children. Ideas for implementation should be solicited from teachers and parents, through zonal offices.

⁵ No national level testing of subject knowledge for Year -5 students from 2018 onwards.

⁶ Assessment of child’s aptitude in basic competencies as defined by NEC and MoE (See Appendix 8, Appendix 9 and Appendix 10). See also trial in Ampara Education Zone (Gamage, 2010).

⁷ School based assessments in Religion, Language, Math and Environment studies; verified by NIE for scholarship finalists.

⁸ Current set of subjects include: **SIX COMPULSORY SUBJECTS:** Religion and Value Education, First Language, Math, Science, English and Civics and Social Studies; **GROUP I:** වාණිජ විද්‍යාව (#60), භූගෝලය (#61), ප්‍රජාවාරය (#62), ව්‍යවසායකත්වය (#63), දේවන ඛස (#64-65) හා විවිධ භාෂා (#66-#72); **GROUP II:** සංගීතය (#40-42), චිත්‍ර (#43), නැටුම් (#-44-45), සාහිත්‍යය/රසාස්වාදය (#46-49) හා නාට්‍ය (50-52); **GROUP III:** තාක්ෂණය (#81-83), කලා ශිල්ප (#84), ශාඛ විද්‍යාව (#85), සෞඛ්‍ය හා ශාරීරික අධ්‍යාපනය (#86), සන්නිවේදනය හා මාධ්‍යය (#87), යතුරු ලියනය (#94)

⁹ Six Compulsory subjects only

¹⁰ In addition to the compulsory six subject students would be tested on three subjects selected from Group 1 to III

¹¹ In Singapore this stage is known as Post-secondary education while in UK it is Called Further Education stage.

¹² A reduced number from the present set of 62 subjects in four streams of study

¹³ Some of the subjects including vocational subjects will assessed at school level only

general should consist of a first part that tests the minimum competencies and a second part that tests higher cognitive abilities (NEC 2016).¹⁴

We, in this report, attempt to move further from that proposal and propose that a common general test so developed should be introduced at the end of the four main stages; grade 5 grade 9, grade 11 and grade 13. The objective of the Common General Test is to make it compulsory for schools to provide the minimum competencies to all students who pass through each main stage.

As a secondary outcome of one such Common General Test, students who demonstrate better performance at the higher competency level can be selected and scholarships granted at the end of each stage. Such a move will relieve the small children from the pressure exerted on them by the parents and the society who consider the Grade 5 scholarship examination as the one and only critical point in life.

It is our belief that the introduction of a Common General Test at the end of grades 5,9, 11 and 13 will give the schools the required information to take the children along the thirteen years of school education. Then, that test will become the mechanism that will assess whether the schools play their basic role towards allowing the children to move up in learning by providing them with the minimum competencies.

A Common General Test which the students have to face at the end of each main stage is suggested in column C as the first of the four components of education in table 1.

Proposal No. 10: Common General Test at the end of grade 5 to be used for granting scholarships.

Grade 5 scholarship examination, G.C.E. (Ordinary Level) examination and G.C.E. (advanced Level) Examination are the three instances of testing the knowledge of subjects through national examinations. Out of these three examinations, the scholarship examination is set in such a way that it has a first paper that comes in the form of an I.Q. test and a second paper that tests the knowledge of subjects taught. Our proposal is that, question that tests the knowledge of subjects except the mother tongue should be removed from that examination and testing the knowledge of subjects should be limited to school based assessments with common General Test proposed for grade five being considered as a scholarship examination.

Primary curriculum expects the children to gain knowledge through explorations done with pleasure. However, the portion relating to subject knowledge of the present scholarship examination has become a heap of facts to be remembered.

For example, through an essay titled, 'trees around us' the child is expected to talk about any given plant. A scholarship examination guide book released recently with past question papers from 2000 - 2016 had questions of over 100 species of plants; the shape of their branches, flowers and about their propagation. (See annexure 6 for more information)

Preparing for the scholarship examination means preparing for the fathomless`unseen' syllabus. This is a tragedy. In order to change this tragic system we propose to remove the part of testing the subject knowledge from the scholarship examination and restricting it to school based assessment and evaluations.

However, to prevent such school based assessments from becoming yet another competitive evaluation, we propose that only whether the children have completed their school based assessments

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or not? Should be checked in order to make it an additional qualifications for the students with better performance at the Common General Test to be entitled for scholarships.

The scholarship examination which evolved as an I.Q test became an examination that tested knowledge on the premise that teachers might evade subject knowledge. We believe that by making the completion of such school based assessments a requirement not only for the scholarship examination but also for the primary examination, a solution for the above issue can be found.

Further, the circular 23/2017 issued by the Ministry of Education provides instructions on the implementation of the school based assessment system from 2017 onwards. It has been supplemented by a form to record the marks of the school based assessments. Arrangements have already been made to recruit supervisors to monitor the school based assessment system.

At the junior secondary level subject knowledge is tested only on school, zonal or provincial level. Discussions are underway to bring down the number of subjects the G.C.E. (Ordinary Level) students have to sit at the national level examinations and fill the void at the school level.

A vocational curriculum that is tested at the school level for the G.C.E. (Advanced Level) students is set to be introduced. It is recommended that minimum competency levels and higher competency levels of every paper be tested.

In this context, our proposal of mitigating the scholarship examination to a Common General Test and testing the subject knowledge at school level is consistent with the current policies. Therefore we recommend that the Common General test conducted at the end of primary stage is a suitable alternative for the scholarship examination.

Proposal No. 11 - Student profiles to evaluate additional common competencies.

The National Education Commission report of 1992 introduced for the first time the National Education Objectives (Annexure 07) and a set of common competencies (annexure 01) to be imparted to children to reach those competencies.

These objectives and the related competencies, updated in 2003 are found on the opening pages of 'all Teacher's Guides even today. These competencies which are over 50 in number have been categorised under main competency categories of Communication. Personality development, Environment, World of work, Religion and values, sports and leisure and learning to learn. However, even today, a child who leaves school after 13 years or less gets the results of an examination conducted to test the knowledge of subjects.

As a remedy to this, we propose the use of student profiles to test such competencies including Personality Development. The National Education Commission has recommended that student profiles should be used to demonstrate the competencies of Health and physical education and the second language (NEC 2016, page 28)

Through the identification of these common competencies and giving them recognition will enable students to gain a holistic education which is the accepted method in the world. The Technical and

vocational syllabus suggested by the government for students of grade 12 and 13 will prepare the students to face life with confidence.

Proposal No. 12 - A new method of recording students results and school assessments.

In countries like Singapore, the education authorities record the results of the G.C.E. (Ordinary level) examination as a percentage of students who have passed one or three subjects. But in our country passing six subjects with mathematics and mother tongue is defined as passing the G.C.E. (Ordinary level) examination. It is pertinent to find out how the government defines the passing of the G.C.E. (Ordinary Level) examination in the context of implementing the policy of 13 years of school education.

According to the criteria at present, there is a massive competition among schools to show the best results from the three national examinations. We hardly pay attention to the fact whether the children who have passed the examinations are ready to face life. The reason of that is the absence of absolute measurements at present. The Common General test which is the first test of the education performance which we propose as an absolute measurement, will be very important. The onus is on every school to coach 100% of its children to reach the minimum level of competency or beyond. This criterion will become a new methodology in school based assessments.

The primary, junior, secondary, senior secondary, or Higher Secondary certificate (table 1, column G) which we propose to award at the conclusion of each main stage will not only record the results of students but also will become a new methodology of school based assessments.

In this context it is the responsibility of every school to award a certificate to each child that demonstrates with evidence the competencies relating to personality and citizen training in addition to subject competencies. We introduce a format for such a certificate through annexure No. 10.

ACCOUNTABILITY

The 2009 MoE Committee had carried out a comprehensive evaluation of the processes at DoE to make detailed recommendations calling for increase physical resources, application of technology, increased cadre and more training. The 2017 human resource plan of the DoE essentially mirrors the recommendations of the 2009 Committee report. While the present committee concurs on the need for additional inputs, we recommend that these inputs should be linked to the performance of each respective branch. We give the following recommendation #13- 16 to correct.

Recommendation # 9: Key Performance Indicators (KPIs) and targets for each organizational unit

It is critical that each branch of the DoE adopts a set of Key Performance Indicators (or KPIs) and strive to achieve those. In **Error! Reference source not found.** we give a template with indicative KPIs is for each organizational unit in the DoE.

Any initiatives ICT driven or otherwise will be only as good as the commitment of the staff. Therefore It is critical that each unit individually and organization as whole engage in consultation and discussions before deciding on the KPIS for 2018, say. It is sometimes good for the morale of the staff to have not-so-hard-to-reach targets written down but have an understanding that they will strive to achieve 50% of more.

Recommendation # 10: Adequate inputs to achieve expected performance

In a letter to Secretary of the Moe dated May 30, 2017, the Commissioner General has noted that cadre of DoE has not increased since 2000. Noting also the additional responsibilities expected due to the two A/L examinations that are to be held in the same year in 2019 (Appendix 11), the Commissioner General outlines the anticipated human resource requirements for the Department. While endorsing the Commissioner General's requests we recommend that increased inputs should be linked to KPIs expected of each branch, as proposed in the section on Accountability.

Once performance expectations in the form of KPIS in in place, it is important to ensure that each unit has the resources –building and equipment, ICTs including hardware and software and adequate cadre and training¹⁵ and knowledge sharing mechanisms for the cadre – to achieve. We include template for allocation of resources for each branch at the DoE (Appendix 3).

Recommendation # 11: An action plan to achieve the performance targets

The natural unit for monitoring of KPIs, allocation of resources and the Action Plan is the present Plan Implementation & Monitoring unit. For more effective monitoring, it would be advisable to have that unit or functioning directly under Commissioner General. The same unit can also provide the administrative support for the proposed Quality Control Committee. We provide template for an Action Plan (Appendix 4), to make the KPIs actionable and monitorable.

¹⁵ The training areas identified by DoE are : Item writing, paper setting and moderating, Assessment evaluation and editing, Development of confidential test items, Assessment of technology subjects, Managerial policy for education assessment, Managerial and problem solving skills (Conducting exams), Human resource management, Finance administration, Exam organization and administration, Online application processing system, Web designing and application development, Procurement management, Public finance, Cloud computing and network management, Document digitization, Information security, Network administration, High performance server utilization, Practical tests for the technical stream and Formative assessment.

Recommendation # 12: Performance based process for reassignment or transfer of personnel

KPIs provide a useful guide for policymakers and heads of agencies to monitor the performance of organization units and reassign responsibilities or transfer personnel or based on performance. Transfer of personnel will of course have to be carried out according existing rules for service category of each staff member concerned.

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APPENDICES

Appendix 1. Committee of experts

Committee of Experts to review examinations and evaluation system and roles and functions of the Department of Examinations to make recommendations for improving the quality and standards of testing and evaluation systems in Sri Lanka appointed by the Secretary for Education by letter dated April 28, 2017.

Members of the Committee

Ex-officio: Mr. S.U.Wijerathne (Chair) and Mr. Tissa Hewavithana

Members: Prof. Gunapala Nanayakkara, Dr. Upali Mampitiya, Mr.T.M.K.B.Tennekoon, Dr.Chamila Thalagala, Dr.R.U. Halwathura, Dr. Sujata Gamage, Dr. Theekshana Suraweera, Dr. Prasad Wimalarathne (Members)

Resource Persons: Dr. P. S. Skantharajah (DoE) and Mr. D. A. Chandrasiri (DoE)

Secretary: Ms. Anupa Weerathne

Terms of Reference

- (A). Examine the Possibility of efficient implementation of the accepted role, duties and responsibilities through functional review on the prevailing administrative structure of the Department of Examinations of Sri Lanka.
- (B). Examine the possibility of incorporating modern technologies and know - how into the national testing process. For Speedy service delivery.
- (C). Examine the possibility of working in par with internationally accepted standards in the process of national level examinations and assessments.
- (D). Examine the modes which could confirm the quality of the national level testing process through providing opportunities to the Department of Examinations of Sri Lanka to work in collaboration with the internationally accepted institutions for testing and assessment.
- (E). Examine the possible ways which could improve the quality, further consolidating the reliability and validity, through introducing item banks for the national level.
- (F). Recommend possible methodologies in order to uplift the quality and the efficiency of the process of assessment of answer scripts under the following sub – headings.
 - (i) Criteria adopted for selecting marking examiners.
 - (ii) Facilities (Physical/Financial) provided to the marking examiners.
 - (iii) Suitable encouragements that could be made for qualitative improvement of the process in place for providing facilities to the marking examiners.
- (G). Examine the feasibility of continuation of conducting the present examinations with the physical and human resources available of present with the Department of Examinations.
- (H). Examine the feasibility of scheduling of school Terms and Examinations to Eliminate Additional Waiting Time after GCE O/L and GCE A/L.
- (I) Examine possible ways and means which could improve high data security and protection.
- (J) Recommend possible Human Resources Development programme to improve the efficiency and the productivity of the service delivery.

Appendix 2. Template for Key Performance Indicators (KPIs) and Targets ¹⁶

(To be completed through branch-level and Department-wide consultations to ensure staff take ownership)

BRANCH	FUNCTIONS	KPIs	Targets for 2018
School Examinations Organization & Results	REGISTRATION OF CANDIDATES - Call applications for examinations, enter data, and issue admission cards; Allocate candidates to centers;	1. Number of Registrations using USN	All three national examinations candidates registered by USN
		2. Time from begin to end	Reduce from xx weeks to yy weeks
	CONDUCTING THE EXAM - Appointing center supervisors, establishing center; paneling of papers		
	RELEASING RESULTS - to schools, private candidates and institutions		
Confidential Branch	- TEST CONSTRUCTION - Call applications for setters, Coordinate the setting of papers)		
	- PRINTING TEST PAPERS - printing, packing and dispatching of question papers centers		
Evaluation	- MARKING - Calling applications selecting chief and assistant examiners; Paneling answer scripts and sending to evaluation centers - Re-scrutinizing answer scripts		
Certificates	- ISSUING OF CERTIFICATES - verifying authenticity; issuing certificates to individuals and institutions		
R&D	- Preparing and distributing qualitative and quantitative analysis reports of school examinations to schools, zones, provinces and policymakers for necessary action - Studying modern practices regarding examination process used internationally and exploring the possibility of making use of such practices to improve examination and testing series - Improve the quality of SBA processes at Senior Secondary Level (Years 10-13)		
Investigations	-		
Plan Implementation and Monitoring	- Prepare annual and five-year plan - Monthly progress reports - Train examination supervisors		
Computer Branch	Entering marks		

¹⁶ Common functional units (Establishment; Accounts; Postal services and Press) or Agency Testing Division are not included here.

Appendix 3. Template for resource allocation

(Demonstrated using Evaluation Branch as an example; to be completed through branch-level and department-wide consultations to ensure staff takes ownership)

	FUNCTIONS	INPUTS /Processes (DoE)				TARGETS
		BUILDINGS/ EQUIPMENT	DATA/ SOFTWARE	NEW PROCESSES	CADRE & TRAINING	
Evaluation Branch	Selecting examination panels; Paneling and sending answer scripts to evaluation centers Re-scrutinizing answer scripts	Facility for paneling and storing answer scripts Marking center at DoE	Examiners database Online link to zonal offices to connect to	Method to reduce re-scrutiny time	Digitize exam conducting /evaluation	Marking time reduced from xx to yy Re-scrutinizing time reduce from xx to yy

Appendix 4. Template for an Action Plan with indicative actions and milestones

(To be completed through branch-level and Department-wide consultations to ensure that staff takes ownership. Sample milestones given for School Examinations Organizations and Results Branch only)

Branch & Actions		2017				2018				2019				2020			
		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec												
All	Stepwise implementation of QA processes				X	←—————→											
School Examinations Organization & Results	Unique Student Number (USN) used in registration of candidates					X	X	X	X	X	X	X	X	X	X	X	X
	Improved Common General Tests for Yrs-5, 9, 11 and 13							Yr-5	Yr-13			Yr-5	Yr-13				All Yrs
	Certification of School-based assessment for Grade V students								X				X				X
	National Results Database populated per USN					←—————→											
	CGTS conducted online															Yr 13	
	Additional exams conducted online																Yr 11
	Additional exams conducted online																Yr 11
Confidential Branch	Database of Chief examiners, Paper setters,																
	TORS Papers setters/Moderators																
	Online registration of same																
	Test item bank beginning with items for MCQ questions																
Evaluation Branch	Construction of facility for paneling and storing answer scripts is in place																
	Construct central marking center in place																
	Procure OCRs																
	Online link to Zonal officers t contact																
	Database of Supervisors, Invigilators, Paper markers; contacted online																
	TORs for same																
	Online registration of same through zonal offices																
Certificate	Online portal with payment gateway																
	New Holistic education certificate(trial)																
	Stepwise implementation of QA processes, beginning with the documentation of QA steps for the branch																

Investigations	Receive snapshots of each examination center identifying candidates and their seating location																		
	Provide examination centers with devices to capture biometric data																		
	Use bio metric data for authentication of candidates																		
R&D	CGT exams at end of Yrs5,9,11and 13																		
	Accreditation of SBA certifying centers																		
	Holistic Assessment of student achievement																		
	Ranking of schools based on Holistic student achievements																		
	Preparing educational achievement of youth reports by age cohort																		
	Assessment methodology training for Examiners/ Moderators																		
Plan Implementation &Monitoring	Training for Supervisors, Invigilators																		
	Identify needs and facilitate internal staff training																		
	Annually update KPIs and Resource allocation plans																		
	Staff awareness programs on KPIs																		
	Carry out staff satisfaction surveys and report																		
	Assist the Commissioner General to monitor KPIs and prepare reports																		
	Assist the Quality Control Committee with its annual Reliability and Validity Report to the MoE																		
Computer Branch	Deploy OCRs																		
	Implement increasing levels of data security																		
	Data Center																		
	Data Archival and retrieval ability																		
	Digitize Pre-1992 results																		

Appendix 5. International good practices in testing and evaluation¹⁷

With increasing pressures of globalization and the rise of East Asian nations as leaders in the world economy, developed countries in the West too are struggling to equip their youth for the 21st century. We look at education in UK and USA as well as Singapore which is an Asian country with an education system similar to Sri Lanka, UK and other countries in the Commonwealth for good practices.

Scholarship exams for at Age 10 (Or Year 5)

Scholarship examinations similar to ours in purpose are held in Australia (Year-7 Test)¹⁸, Singapore (PSLE)¹⁹ and UK (11-Plus)²⁰. By all accounts these examinations do not seem to distort the educational process as in Sri Lanka. Therefore, as we seek solutions to examination-centeredness beginning with primary stages, we should look for ways not to abolish the exam, but to improve it after studying the modes of testing used in these and other countries.

Examinations at age 16 (or Year-11)

A GCE (O/L) examination in more or less similar form is offered for students completing the senior secondary stage in Singapore, Sri Lanka or UK, but the differences across the countries are worth noting.

Secondary Education in Singapore places students in the Express, Normal (Academic) or Normal (Technical) bands with different curricular emphases according to how they perform at the PSLE. The different emphases are designed to match their learning abilities and interests. However, students may move from one band or level of difficulty to another at any year in their secondary education. This flexibility across bands is a key feature of the Singapore education system.

Cambridge IGCSE examination which is the international version of GCE (O/L) in UK is popular with students in the non-governmental sector in Sri Lanka and across the world. Though it caters to around a million international test-takers, the test offers only thirty subjects, not counting the wide range of languages it is obliged to offer.²¹

Sri Lanka's GCE (O/L) examination currently offers 51 subjects, with most questions papers made available in all three national languages too. Current discussion on revision to GCE (O/L) examination (NEC, 2016) include a reduction in the number of subjects offered and better differentiation in evaluation through different levels of competence evaluated using two parts of the same paper. For example:

“Recommendation 96: Six core and two optional subjects should be tested at G.C.E. O-L examination. Second National Language, and Health and Physical Education should be assessed as portfolio assessment;

Recommendation 97. Two papers should be prepared for G.C.E. O-L Mathematics test. Paper I will assess ‘Minimum Competency’ and its content and the competencies should be identified in the syllabus. Paper II will assess

¹⁷ In Sri Lanka itself, the National Educational Research and Evaluation Centre of the University of Colombo carries out a National Assessment of Student Achievement examination for a random sample of students in Grade 4 and Grade 8 every three years from 2003 to 2012 (2003, 2006, 2009, 2012). The DoE should study those for lessons.

¹⁸ The Selective High School Placement Test at Year-7 in Australia is designed to measure ability through tests in reading, mathematics, general ability and writing. <https://education.nsw.gov.au/selective-high-schools-and-opportunity-classes/year-7/the-test>. Some schools use International Competitions and Assessments for Schools (ICAS).

¹⁹ National Primary School Leaving Examination (PSLE) of Singapore held at the end of Year-5.

²⁰ The eleven-plus (11-plus) is an examination administered to some students in England and Northern Ireland in their last year of primary education or at the end of Year-5. It is also known as the transfer test. This test is used to admit students to selective schools known as ‘Grammar Schools.’

²¹ Subject tests available in the Cambridge IGCSE examination by Cambridge (30 subjects not counting languages: i.e. Accounting, Agriculture, Art and Design, Biology, Business Studies, Chemistry, Child Development, Computer Science, Design and Technology, Development Studies, Drama, Economics, Enterprise, Environmental Management, Food and Nutrition, Geography, Global Perspectives, History, Information and Communication Technology, Mathematics, Mathematics (Additional), Music, Physical Education, Physical Science, Physics, Science (Combined), Sciences (coordinated), Sociology, Travel and Tourism, World Literature)

the 'Higher Order Abilities and Competencies'. A candidate who gets pass marks for Paper I should be deemed to have obtained a pass in G.C.E. O-L Mathematics. (NEC, 2016)"

Post 16 education and training

According to the Ministry of education in Singapore,²² Upper secondary education begins at age 16 following four years of lower secondary school. Students may choose between three different types of schools: Junior Colleges, Polytechnics and Institutes of Technical Education.

For students who are academically inclined and have the necessary GCE 'O' Level qualifications the option is a 2-year Junior College (or a 3-year centralized institute pre-university course) leading to the GCE 'A' Level examination. Polytechnics are for students who wish to pursue applied and practice-oriented training and have the necessary GCE 'O' Level qualifications. 3-year courses are the norm. Polytechnic graduates with good grades have the opportunity to pursue tertiary education at the universities. Institute of Technical Education (ITE) offers 1- to 2-year technical or vocational courses for students with appropriate GCE 'O' or 'N' Level certificates. Students who do well will be able to proceed to the polytechnics for diploma programs. Qualified candidates may also subsequently progress to the universities.

The availability of different tracks for different levels of performance at the GCE (O/L) plus the ability for lateral transfer across tracks is a unique feature of the Singapore school education system.

In the UK, after the much acclaimed Wolf report of 2002 which made the argument that that school-based vocational education has failed, the government has been struggling to find alternatives. The latest policy is 11 years of compulsory education until age 16 followed by mandatory participation in further education and/or training from age 16-18.²³

"We have increased the age to which all young people in England are required to continue in education or training. This does not mean young people must stay in school. They will be able to choose from:

- *stay in full-time education, for example at a college*
- *start an apprenticeship or traineeship*
- *spend 20 hours or more a week working or volunteering, while in part-time education or training"*

*Local councils are charged with the implementation of this policy. Students can apply to the 16 to 19 Bursary Fund to help with education costs."*²⁴

For those who continue in school the GCE (A/L) in UK offers set of applied subjects as in as shown below, while Sri Lanka recently introduced a technology stream.

General subjects, A/L

Row Labels	GCE_AL_SL (60 subjects) ²⁵	GCE_AL_UK_2017 (41)	SAT_AP, USA (30)
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²² <https://www.moe.gov.sg/docs/default-source/document/education/post-secondary/files/post-secondary-brochure.pdf>

²³ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/536043/Post-16_Skills_Plan.pdf
http://nada.uis.unesco.org/nada/en/index.php/catalogue/#_r=&collection=&country=&dtype=&from=1990&page=1&ps=100&sid=&sk=&sort_by=nation&sort_order=&to=2015&topic=&view=s

²⁴ <https://www.gov.uk/government/publications/2010-to-2015-government-policy-young-people/2010-to-2015-government-policy-young-people>

²⁵ 1. Physics, 2. Chemistry, 7. Mathematics, 8. Agricultural Science, 9. Biology, 10. Combined Mathematics, 11. Higher Mathematics, 13. General English, 14. Civil Technology, 15. Mechanical Technology, 16. Electrical, Electronic & Information Technology, 17. Food Technology, 18. Agro Technology, 19. Bio Resource Technology, 20. Information & Communication Technology, 21. Economics, 22. Geography, 23. Political Science, 24. Logic Scientific Method, 25A. History of India, 25B. History of Europe, 25C. History of Modern World, 28. Home Economics, 29. Communication, 31. Business statistics, 32. Business Studies, 33. Accounting, 41. Buddhism, 42. Hinduism, 43. Christianity, 44. Islam, 45. Buddhist Civilization, 46. Hindu Civilization, 47. Islamic Civilization, 48. Greek & Roman Civilization, 49. Christian Civilization, 51. Art, 52. Dancing (Indigenous), 53. Dancing (Bharatha), 54. Oriental Music, 55. Carnatic Music, 56. Western Music, 57. Drama & Theatre (Sinhala) , 58. Drama & Theatre (Tamil) , 59. Drama & Theatre (English) , 65. Engineering Technology, 66. Bio systems Technology, 67. Science for Technology, 71. Sinhala, 72. Tamil, 73. English, 74. Pali, 75. Sanskrit, 78. Arabic, 81. French, 82. German, 83. Russian, 84. Hindi, 86. Chinese, 87. Japanese

1-General	4	3	5
2-Math & Computer Science	3	3	5
2-Science	4	5	7
3-History & Social Science	9	6	9
4-Business	3	1	
5-Aesthetic studies	9	4	5
6-Professional/Vocational	-	10	
7-Technology	10		
8-Religions & culture	9	1	
9-World Languages & culture	9	7	8
10-Other		1	
Grand Total	60	41	39

Applications-oriented subjects in GCE (A/L)

UK (9)	Sri Lanka – Technological (9)	Sri Lanka – Vocational (common curriculum, Proposed, 9)	Sri Lanka –Vocational (Applied curriculum, Proposed, 26)
1. Health & Social Care 2. Law 3. Leisure 4. Media / Film / TV Studies 5. Physical Education 6. Travel & Tourism 7. ICT 8. Design & Technology 9. Engineering	1. Agro Technology 2. Bio Resource Technology 3. Bio systems Technology 4. Electrical, Electronic & Information Technology 5. Engineering Technology 6. Food Technology 7. Information & Communication Technology 8. Mechanical Technology 9. Science for Technology	1. First Language (Sinhala or Tamil) 2. Applied English and Communication Skills Development 3. Aesthetics and related skills 4. Information and Communication Technology skills 5. Citizenship Education and related skills 6. Health and life skills necessary for social well-being 7. Entrepreneurship skills 8. sports and other related activities 9. Career guidance programs	1. Child Psychology and care, 2. Health and Social Care, 3. Physical Education ad Sports, 4. Performing Arts, 5. Event Management, 6. Arts and Crafts, 7. Interior Designing, 8. Fashion Designing, 9. Graphic Designing, 10. Art and Designing, 11. Landscaping, 12. Applied Horticultural Studies, 13. Livestock Product Studies, 14. Food Processing Studies, 15. Aquatic Resource Studies, 16. Plantation Product Studies, 17. Construction Studies, 18. Automobile Studies, 19. Electrical and Electronic Studies, 20. Textile and Apparel Studies, 21. Metal Fabrication Studies, 22. Aluminum Fabrication Studies, 23. Software Development, 24. Web Development, 25. Tourism and Hospitality, 26. Environmental Studies

As the MoE develops avenues for students who will continue in school Sri Lanka, it should heed these good practices and existing curricula at home and in UK and Singapore. For example, emulation of more service-oriented courses offered by UK would be particularly attractive for students who are currently attracted to the Arts stream.

Personal Development and Citizenship Portfolio

There is a lot of interest in assessing character development of students, though educators argue that these measures should not be used to assess teachers or schools, but as feedback for students and their parents. Following are some references:

https://tn.gov/assets/entities/education/attachments/wbl_portfolio_capstone_look-fors.pdf

Betty McDonald (2012). Portfolio assessment: direct from the classroom. *Assessment & Evaluation in Higher Education* Vol. 37, Issue. 3, pp.

KIPP Report Card,

KIPP (2015). Character Growth Card. Found in www.kipp.org or

<http://www.montgomeryschoolsmd.org/uploadedFiles/about/strategicplan/kipp.pdf> and based on:

- Tough, Paul (2012). *How Children Succeed: Grit, Curiosity, and the Hidden Power of Character*. Random House Books;
- Dweck, C.S. (2006). *Mindset: How You Can Fulfill Your Potential*. New York, NY: Random House;
- Peterson, C. (2006). *A Primer in Positive Psychology*. New York, NY: Oxford University Press;
- Peterson, C., Seligman, M. (2004). *Character Strengths and Virtues*. New York, NY: Oxford University Press and

– Seligman, M. (2011). Flourish. London: Nicholas Brealey.

KIPP Character Report Card and Supporting Materials

KIPP CHARACTER REPORT CARD										
Jane Smith		KIPP Imagine								
Grade: 8		Date: 01/28/11		Q2		Q2				
OVERALL SCORE				4.30	Teacher 1	Teacher 2	Teacher 3	Teacher 4	Teacher 5	Teacher 6
Zest				4.28						
1	Actively participates	4.50	4	5	5	4	4	5		
2	Shows enthusiasm	4.17	5	4	3	4	4	5		
3	Invigorates others	4.17	3	4	5	4	5	4		
Grit				4.11						
4	Finishes whatever he or she begins	4.00	4	5	3	4	4	4		
5	Tries very hard even after experiencing failure	4.17	5	4	4	3	4	5		
6	Works independently with focus	4.17	4	4	3	4	5	5		
Self Control – School Work				4.33						
7	Comes to class prepared	4.50	4	5	5	5	4	4		
8	Pays attention and resists distractions	4.50	4	5	4	5	4	5		
9	Remembers and follows directions	4.17	4	5	5	4	3	4		
10	Gets to work right away rather than procrastinating	4.17	5	4	4	4	3	5		
Self Control - Interpersonal				4.54						
11	Remains calm even when criticized or otherwise provoked	4.50	4	5	4	5	5	4		
12	Allows others to speak without interruption	4.83	5	5	5	4	5	5		
13	Is polite to adults and peers	4.50	4	5	4	5	4	5		
14	Keeps his/her temper in check	4.33	4	5	4	4	5	4		
Optimism				4.25						
15	Gets over frustrations and setbacks quickly	4.33	5	4	4	4	5	4		
16	Believes that effort will improve his or her future	4.17	5	4	4	3	4	5		
Gratitude				4.25						
17	Recognizes and shows appreciation for others	4.17	4	4	5	4	5	3		
18	Recognizes and shows appreciation for his/her opportunities	4.33	5	4	5	3	4	5		
Social Intelligence				4.33						
19	Is able to find solutions during conflicts with others	4.17	4	4	3	5	4	5		
20	Demonstrates respect for feelings of others	4.50	5	4	4	4	5	5		
21	Knows when and how to include others	4.33	5	4	4	4	5	4		
Curiosity				4.28						
22	Is eager to explore new things	4.17	5	4	3	4	5	4		
23	Asks and answers questions to deepen understanding	4.50	5	4	5	4	4	5		
24	Actively listens to others	4.17	4	4	5	4	5	3		

SCALE

- 1= Very much unlike the student
- 2= Unlike the student
- 3= Somewhat like the student
- 4= Like the student
- 5= Very much like the student

Appendix 6. Learning outcomes stated v. measured in primary stage II

(a) Learning outcomes on 'Trees' as stated in the primary curriculum

Grade 3

- 1.1 ආසන්න පරිසරයේ වැඩෙන ශාක විමර්ශනය කර වාර්තා කරයි.
- 1.2 ශාකයක ප්‍රධාන කොටස් හඳුනා ගෙන වාර්තා කරයි.
- 1.3 ශාක පත්‍රවල ඇති සුවිශේෂ ලක්ෂණ ගවේෂණය කර වාර්තා කරයි.
- 1.4 පැළෑටි හා ගස්වැල් ආශ්‍රිතව ගායන හා රංගනවල නිරත වෙයි.
- 1.5 විවිධ ශාක කොටස් භාවිත කරමින් නිර්මාණ කරයි.
- 1.6 ගස්වැල්වල පැවැත්මෙහි ඇති වැදගත්කම අගය කරයි.
- 1.7 ගස්වැල් ආශ්‍රිතව සකස් කෙරෙන නිර්මාණාත්මක ක්‍රීඩාවල නිරත වෙයි.

Grade 4

- 1.1 පැළෑටි වැඩීම සඳහා විවිධ සාධක බලපාන ආකාරය වාර්තා කරයි
- 1.2 ශාකයක ප්‍රධාන කොටසක් ලෙස මල් හඳුනාගෙන ඒවායින් ලැබෙන ප්‍රයෝජන අගය කරයි
- 1.3 ශාක හා සතුන් අතර ඇති සම්බන්ධය හඳුනා ගනිමින් වාර්තා කරයි
- 1.4 ඖෂධීය වටිනාකමක් සහිත ශාක සංරක්ෂණයට දායක වෙයි.
- 1.5 ශාක කොටස් ඇසුරින් විවිධ නිර්මාණ කරයි.
- 1.6 ශාකවල වටිනාකම මතු වන පණිවිඩ රැගත් ගායන හා රංගනවල නිරත වෙයි.
- 1.7 ගස්වැල් පිළිබඳ නිර්මාණාත්මක ක්‍රීඩාවල නිර්මාණාත්මක ව නියැලෙයි.

Grade 5

- 5.1 අපේ පැවැත්ම සඳහා උපකාරී වන ආහාර පාන සපයා ගැනීමට ගස්වැල්වල ඵලවලින් ලැබෙන ප්‍රයෝජන අගයමින් නිසි පරිදි භාවිත කරයි.
- 5.2 ගස්වැල්වල ඵලවල විවිධත්වය පිළිබඳ විමසිලිමත් ව අධ්‍යනය කරමින් ඒවායේ පැවැත්මට දායක වෙයි.
- 5.3 විශේෂ අවධානයක් යොමු කළ යුතු පැළෑටි හා ගස්වැල් සංරක්ෂණය කිරීමට දායක වෙයි.
- 5.4 අවට පරිසරයේ පැළෑටි හා ගස්වැල්වල විවිධත්වය අගය කරමින් ඒවා පවත්වා ගැනීමට දායක වෙයි.
- 5.5 ගස්වැල් හා පැළෑටි සම්බන්ධ ඵලදායී නිර්මාණ කරයි.
- 5.6 ශාක ආරක්ෂා කිරීමේ වැදගත්කම මතු වන ගායන හා රංගනවල නිරත වෙයි.
- 5.7 ශාකවල විවිධත්වය මතු වන නිර්මාණාත්මක ක්‍රීඩාවන් හී නියැලෙයි.
- 5.8 ගස්වැල් ඇසුරින් මානසික සුවය ලබා ගනිමින් වින්දනයක් ලබයි.

(b) Knowledge tested in the Grade five Scholarship examination 2015, for example

- 31. රෝස පැහැති දළු හටගන්නා ශාකයකි.

(1) දෙහි	(2) නා	(3) බුලත්	(4) කොස්
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- 32. එක් බීජයක් පමණක් තිබෙන පලතුරකි.

(1) නෙල්ලි	(2) දිවුල්	(3) මැංගුස්	(4) දෙළුම්
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- 33. කාල නියමයක් නොමැතිව වසර පුරා ම මල් පිපෙන්නේ පහත සඳහන් කුමන ශාක වර්ගයේ ද?

(1) රබර්	(2) පොල්	(3) එරබදු	(4) රඹුටන්
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- 34. ශාක පත්‍ර ආහාරයට ගන්නා සතෙකි.

(1) බකමුණා	(2) උකුස්සා	(3) සමනළයා	(4) ගොඳුබෙල්ලා
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- 35. බොහෝ විට ඇඳුම්වල හෝ සතුන්ගේ ශරීරවල හෝ ඇලවී ව්‍යාප්ත වන බීජයකි.

(1) හොර	(2) තුන්තිරි	(3) කුඩලු	(4) වරා
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Appendix 7. National Goals of Education

Source: NEC, 2003 and reproduced in all Teacher's Guides (Grade 1-12)

- (i) Nation building and the establishment of a Sri Lankan identity through the promotion of national cohesion, national integrity, national unity, harmony, and 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 honourable place in the international community, based on justice, equality and mutual respect.

අධ්‍යාපනයේ ජාතික අරමුණු

- (1) මානව අභිමානයට ගරු කිරීමේ සංකල්පයක් මත පිහිටා ශ්‍රී ලාංකික බහුවිධ සමාජයේ සංස්කෘතික විවිධත්වය අවබෝධ කර ගනිමින් ජාතික ඒකිබද්ධතාවය එකමුතුකම සහ සාමය ප්‍රවර්ධනය තුළින් ,ජාතික සමගිය ,ජාතික සෘජු ගුණය , ජාතිය ගොඩ නැඟීමට සහ ශ්‍රී ලාංකීය අන්‍යන්‍යතාවය තහවුරු කිරීම
- (2) වෙනස් වන ලෝකයක අභියෝගයන්ට ප්‍රතිචාර දක්වන අතර ජාතික උරුමයේ මාහැගි දායාදයන් හඳුනා ගැනීම සහ සංරක්ෂණය කිරීම.
- (3) මානව අයිතිවාසිකම්වලට ගරු කිරීම ,යුතුකම් සහ වගකීම් පිළිබඳ දැනුවත් වීම හා දැනුම බැඳීමකින් යුතුව , එකිනෙකා කෙරෙහි සැලකිලිමත් වීම යන ගුණාංග ප්‍රවර්ධනය කිරීමට ඉවහල් වන සමාජ සාධාරණත්ව සම්මතයන් සහ ප්‍රජාතන්ත්‍රික ජීවන රටාවක් ගැබ් වූ පරිසරයක් නිර්මාණය කිරීම සහ පවත්වා ගෙන යාමට සහාය වීම.
- (4) පුද්ගලයින්ගේ මානසික හා ශාරීරික සුව සම්පත සහ මානව අගයයන්ට ගරු කිරීම මත පදනම් වූ තිරසාර ජීවන ක්‍රමයක් ප්‍රවර්ධනය කිරීම.
- (5) සුසමාහිත වූ සමබර පෞරුෂයක් සඳහා නිර්මාපන හැකියාව වගකීම හා ,විචාරශීලී චින්තනය ,ආරම්භක ශක්තිය , වගවීම ඇතුළු වෙනත් ධනාත්මක අංග ලක්ෂණ සංවර්ධනය කිරීම.
- (6) පුද්ගලයාගේ සහ ජාතියේ ජීව ගුණය වැඩි දියුණු කෙරෙන සහ ශ්‍රී ලංකාවේ ආර්ථික සංවර්ධනය සඳහා දායක වන එලදායී කාර්යයන් සඳහා අධ්‍යාපනය තුළින් මානව සම්පත් සංවර්ධනය කිරීම.
- (7) සිසුයෙන් වෙනස් වන ලෝකයක් තුළ සිදුවන වෙනස්කම් අනුව හැඩ ගැසීමට හා ඒවා පාලනය කර ගැනීමට පුද්ගලයින් සුදානම් කිරීම සහ සංකීර්ණ හා අනපේක්ෂිත අවස්ථාවන්ට සාර්ථක ව මුහුණ දීමේ හැකියාව වර්ධනය කිරීම.
- (8) ජාත්‍යන්තර ප්‍රජාව අතර ගෞරවනීය ස්ථානයක් හිමි කර ගැනීමට දායක වන යුක්තිය සමානත්වය සහ අන්‍යෝන්‍ය , .ගරුත්වය මත පදනම් වූ ආකල්ප හා කුසලතා පෝෂණය කිරීම

Appendix 8. Original set Basic Competencies related to National Goals of Education

(Source: NEC, 2003, pp. 66-68)

CATEGORIES:

- | | |
|---------------------------------------|---|
| (1) Communication/සන්නිවේදනය | (5) Religion and Ethics/ආගම හා සාර ධර්ම |
| (2) Personality Development/පෞරුෂත්වය | (6) Play and the Use of Leisure/ක්‍රීඩා හා විවේකය |
| (3) Environment/පරිසරය | (7) Learning to Learn/ඉගෙනීමට ඉගෙනුම |
| (4) World of Work/වැඩ ලෝකය | |

DETAILS

<p>Communication Competencies in communication are based on four subsets: Literacy, Numeracy, Graphics and IT Proficiency. 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 colour. IT proficiency: Computer literacy and the use of information and communication technologies (ICT) in learning, in the work environment and in personal life.</p>	<p>1. සන්නිවේදනය <u>සාක්ෂරතාව:</u> සාවධානව ඇහුම්කන් දීම, පැහැදිලිව කතා කිරීම, තේරුම් ගැනීම සඳහා කියවීම, නිවැරදිව හා නිරවුල්ව ලිවීම, ඵලදායී අයුරින් අදහස් හුවමාරු කර ගැනීම; <u>සංඛ්‍යා හුරුව:</u> භාණ්ඩ, අවකාශය හා කාලය ගණන් කිරීම, ගණනය හා මිනුම් සඳහා ක්‍රමානුකූල ඉලක්කම් භාවිතය; <u>රූපණය:</u> රේඛා හා ආකෘති භාවිතයෙන් අදහස් පිළිබිඹු කිරීම, රේඛා, ආකෘති හා වර්ණ ගලපමින් විස්තර, උපදෙස් හා අදහස් ප්‍රකාශනය හා වාර්තා කිරීම; <u>තොරතුරු තාක්ෂණ ප්‍රවීණත්වය:</u> පරිගණක දැනුම, ඉගෙනීමේදීද, සේවා පරිශ්‍රයන් තුළදීද, පෞද්ගලික ජීවිතයේදීද තොරතුරු හා සන්නිවේදන තාක්ෂණය උපයෝගී කර ගැනීම තුළින් සන්නිවේදනය</p>
<p>Personality Development Generic skills such as creativity, divergent thinking, initiative, decision making, problem solving, critical and analytical thinking, team work, inter – personal relations, discovering and exploring ; - Values such as integrity, tolerance and respect for human dignity; - Emotional intelligence.</p>	<p>2. පෞරුෂත්ව වර්ධනය : නිර්මාණශීලීභාව, අපසාරී චින්තනය, ආරම්භක ශක්තිය, තීරණ ගැනීම , ගැටළු නිරාකරණය කිරීම, විචාරශීලී හා විග්‍රහාත්මක චින්තනය; කණ්ඩායම හැඟීමෙන් යුතුව කටයුතු කිරීම, පුද්ගලාන්තර සබඳතා, නව සොයා ගැනීම් හා ගවේෂණය වැනි කුසලතා; සෘජු ගුණය, ඉවසා දරා සිටීමේ ශක්තිය හා මානව අභිමානයට ගරු කිරීම වැනි අගයයන්; චිත්තවේගී බුද්ධිය</p>
<p>Environment 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, the trees, forests, seas, water, air and life – plant, animal and human life.</p>	<p>3. පරිසරය සමාජ පරිසරය ජාතික උරුමයන් පිළිබඳ අවබෝධය; බහුවාර්ගික සමාජයක සාමාජිකයන්වීම පිළිබඳ සංවේදීතාව හා කුසලතා; සාධාරණය යුක්තිය පිළිබඳ හැඟීම; සමාජ සම්බන්ධතා; පුද්ගලික වර්ශාව; සාමාන්‍ය හෝ නෛතික සම්ප්‍රදායන්, අයිතිවාසිකම්, වගකීම්, යුතුකම් හා බැඳීම් වෛෂ්ටික පරිසරය සජීවී ලෝකය, ජනතාව හ වෛෂ්ටික පද්ධතිය, ගස් වැල්, වනාන්තර, මුහුද, ජලය, වාතය හා ජීවය - ශාක, සත්ත්ව හා මිනිස්- යන්න ජීවිතයට සම්බන්ධ වූ අවබෝධය, සංවේදී බව හා කුසලතා;</p>

<p>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. Included here are skills in using tools and technologies for learning, working and living.</p>	<p>භෞතික පරිසරය අවකාශය, ශක්තිය, ඉන්ධන, ද්‍රව්‍ය හා භාණ්ඩ හා මිනිස් ජීවිතයට ඒවායේ ඇති සම්බන්ධතාව; ආහාර, ඇඳුම්, නිවාස, සෞඛ්‍ය, සුව පහසුව, නින්ද, නිස්කලංකය, විවේකය, අපද්‍රව්‍ය හා මල පහ කිරීම යනාදිය සම්බන්ධ අවබෝධය, සංවේදීතාව හා කුසලතාව ඉගෙනීම වැඩ කිරීම හා ජීවත් වීම සඳහා මෙවලම් හා තාක්ෂණය ප්‍රයෝජනයට ගැනීමේ කුසලතා මෙහි අඩංගු වේ.</p>
<p>World of work Employment related skills to maximize their potential and to 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.</p>	<p>4. වැඩ ලෝකයට සුදානම් වීම ආර්ථික සංවර්ධනයට දායක වීම, තම වෘත්තීය ලැදියා හා අභියෝගනා හඳුනා ගැනීම, හැකියාවන්ට සරිලන අයුරින් රැකියාවක් තෝරා ගැනීම හා වාසිදායක හා නිරසාර ජීවනෝපායක නිරත වීම යන හැකියාවන් උපරිම කිරීමට හා ධාරිතාව වැඩි කිරීමට අදාළ සේවා නියුක්තිය හා සම්බන්ධ කුසලතා</p>
<p>Religion and Values 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.</p>	<p>5. ආගම හා ආචාර ධර්ම තම දෛනික ජීවිතයේදී ආචාර ධර්ම, සදාචාරාත්මක හා ආගමානුකූල හැසිරීම් රටාවන්ට අනුගත වෙමින් වඩාත් උචිත දේ තෝරා එයට සරිලන සේ කටයුතු කිරීම සඳහා අගයයන් උකහාගැනීම හා ස්වීයකරණය</p>
<p>Play and Leisure Pleasure, joy, emotions and such human experiences as expressed through aesthetics, literature, play, sports and athletics, leisure pursuits and other creative modes of living. (vii)</p>	<p>6. ක්‍රීඩාව හා විවේකය සෞන්දර්ය, සාහිත්‍යය, සෙල්ලම් කිරීම, ක්‍රීඩා හා මලල ක්‍රීඩා, විනෝදාංශ හා වෙනත් නිර්මාණාත්මක ජීවන රටා තුළින් ප්‍රකාශ වන විනෝදය, සතුට, ආවේග සහ එවන් මානුෂික අත් දැකීම්;</p>
<p>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.</p>	<p>7. ඉගෙනීමට-ඉගෙනුම ශීග්‍රයෙන් වෙනස් වන, සංකීර්ණ හා එකිනෙක මත යැපෙන ලෝකයක පරිවර්තන ක්‍රියාවලියක් සඳහා වෙනස්වීම් හසුරුවා ගැනීමේදී එම වෙනස් කම් වලට සංවේදීව හා සාර්ථකව ප්‍රතිචාර දැක්වීමත් ස්වාධීනව ඉගෙන ගැනීමත් සඳහා ශක්තිය</p>

Appendix 9. A measurable set of Basic Competencies related to National Goals

(To be further expanded and developed through wider consultations)

වාරිතානුකූල බව	Respect for traditions	Awareness of the national heritage; 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.	ජාතික උරුමයන් පිළිබඳ අවබෝධය සාමාන්‍ය හෝ නෛතික සම්ප්‍රදායන් පිළිබඳ හැගීම; තම දෛනික ජීවිතයේදී ආචාර ධර්ම, සදාචාරාත්මක හා ආගමානුකූල හැසිරීම් රටාවන්ට අනුගත වෙමින් වඩාත් උචිත දේ තෝරා එයට සරිලන සේ කටයුතු කිරීම සඳහා අගයයන් උකහාගැනීම හා ස්වීයකරණය
ආචාරශීලී බව	Politeness	Social relationships, personal conduct; Tolerance; respect for human dignity; Emotional intelligence	සමාජ සම්බන්ධතා; පුද්ගලික හැසිරීම; ඉවසා දරා සිටීමේ ශක්තිය; මානව අභිමානයට ගරු කිරීම, චිත්තවේගී බුද්ධිය
වගකීමෙන් කටයුතු කිරීම	Responsible	Concern for general and legal conventions, rights, responsibilities, duties and obligations	සාමාන්‍ය හෝ නෛතික සම්ප්‍රදායන්, අයිතිවාසිකම්, වගකීම්, යුතුකම් හා බැඳීම්
අවංක බව	Integrity	Integrity; 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.	සෘජු ගුණය; තම දෛනික ජීවිතයේදී ආචාර ධර්ම, සදාචාරාත්මක හා ආගමානුකූල හැසිරීම් රටාවන්ට අනුගත වෙමින් වඩාත් උචිත දේ තෝරා එයට සරිලන සේ කටයුතු කිරීම සඳහා අගයයන් උකහාගැනීම හා ස්වීයකරණය
පොදු කටයුතු වල යෙදීම	Public service	Concern for distributive justice, social relationships, personal conduct, general and legal conventions, rights, responsibilities, duties and obligations	වගකීම්, යුතුකම් හා බැඳීම්, සාධාරණය යුක්තිය පිළිබඳ හැගීම
බහු විධ සමාජයක සහජීවනය	Coexistence in a diverse society	Sensitivity and skills linked to being members of a plural society,	බහුවාර්ගික සමාජයක සාමාජිකයන්වීම පිළිබඳ සංවේදීතාව හා කුසලතා
පරිසර හිතකාමී බව	Environmental friendly	Awareness, sensitivity and skills linked to the living world, people and the ecosystem, the trees, forests, seas, water, air and life – plant, animal and human life.	ජෛව හා භෞතික පරිසරය:සජීවී ලෝකය, ජනතාව හ ජෛව පද්ධතිය, ගස් වැල්, වනාන්තර, මුහුද, ජලය, වාතය හා ජීවය - ශාක, සත්ත්ව හා මිනිස්- යන්ත ජීවිතයට සම්බන්ධ වූ බවට අවබෝධය, සංවේදී බව හා කුසලතා; අවකාශය, ශක්තිය, ඉන්ධන, ද්‍රව්‍ය හා භාණ්ඩ යනාදිය හා ඒවායේ මිනිස් ජීවිතයට ඇති සම්බන්ධතාවය පිළිබඳ අවබෝධය, සංවේදීතාව හා කුසලතාව;
පුද්ගලික වර්ගාව	Personal habits	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. Included here are skills in using tools and technologies for learning, working and living.	ආහාර, ඇඳුම්, නිවාස, සෞඛ්‍ය, සුව පහසුව, නින්ද, නිස්කලංකය, විවේකය, අපද්‍රව්‍ය හා මල පහ කිරීම යනාදිය සම්බන්ධ අවබෝධය, සංවේදීතාව හා කුසලතාව
පුද්ගලාන්තර සබඳතා	Interpersonal relationships	Interpersonal relations, respect for human dignity; - Emotional intelligence.	පුද්ගලාන්තර සබඳතා, , මානව අභිමානයට ගරු කිරීම, චිත්තවේගී බුද්ධිය
සන්නිවේදනය	Communication	Literacy: Listen attentively, speak clearly, read for meaning, write accurately and lucidly and communicate ideas effectively.	සාක්ෂරතාව:සාවධානව ඇහුම්කන් දීම, පැහැදිලිව කතා කිරීම, තේරුම් ගැනීම සඳහා කියවීම, නිවැරදිව හා නිරවුල්ව ලිවීම, ඵලදායී අයුරින් අදහස් හුවමාරු කර ගැනීම;

		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 colour. IT proficiency: Computer literacy and the use of information and communication technologies (ICT) in learning, in the work environment and in personal life.	සංඛ්‍යා භාවිතය: භාණ්ඩ, අවකාශය හා කාලය ගණන් කිරීම, ගණනය හා මිනුම් සඳහා ක්‍රමානුකූල ඉලක්කම් භාවිතය; රූපණ භාවිතය: රේඛා හා ආකෘති භාවිතයෙන් අදහස් පිළිබිඹු කිරීම, රේඛා, ආකෘති හා වර්ණ ගලපමින් විස්තර, උපදෙස් හා අදහස් ප්‍රකාශනය හා වාර්තා කිරීම; තොරතුරු තාක්ෂණ ප්‍රවීණත්වය: පරිගණක දැනුම, ඉගෙනීමේදීද, සේවා පරිශ්‍රයන් තුළදීද, පෞද්ගලික ජීවිතයේදීද තොරතුරු හා සන්නිවේදන තාක්ෂණය උපයෝගී කර ගැනීම තුළින් සන්නිවේදනය
නායකත්වය	Leadership	initiative, decision making	ආරම්භක ශක්තිය, තීරණ ගැනීම , ඉවසා දරා සිටීමේ ශක්තිය
කණ්ඩායමක වැඩ කිරීම	Teamwork	Teamwork	කණ්ඩායම හැඟීමෙන් යුතුව කටයුතු කිරීම
විචාරශීලී බව/ගවේෂණ ශීලී බව	Critical thinking	Creativity, divergent thinking, , problem solving, critical and analytical thinking; discovering and exploring	ගැටළු නිරාකරණය කිරීම, විචාරශීලී හා විග්‍රහාත්මක චින්තනය; නිර්මාණශීලීබව, අපසාරී චින්තනය, නව සොයා ගැනීම් හා ගවේෂණය
සෞන්දර්ය	Aesthetics	Aesthetics	සෞන්දර්ය
සාහිත්‍ය රසාස්වාදය	Appreciation of literature	Appreciation of literature	සාහිත්‍යය
ක්‍රීඩා	Sports	Sports	සෙල්ලම් කිරීම, ක්‍රීඩා හා මලල ක්‍රීඩා
විවේකය හා විනෝදාංශ	Hobbies and leisure pursuits	Hobbies and leisure pursuits	විනෝදාංශ හා වෙනත් ජීවන රටා තුළින් ප්‍රකාශ වන විනෝදය, සතුට, ආවේග සහ එවන් මානුෂික අත් දැකීම්
ස්වයං ඉගෙනුමට පෙළඹීම	Independent learning	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.	ඉගෙනීමට-ඉගෙනුම: ශිෂ්‍යයන් වෙනස් වන, සංකීර්ණ හා එකිනෙක මත යැපෙන ලෝකයක පරිවර්තන ක්‍රියාවලියක් සඳහා වෙනස්වීම් හසුරුවා ගැනීමේදී එම වෙනස් කම් වලට සංවේදීව හා සාර්ථකව ප්‍රතිචාර දැක්වීමත් හා ස්වාධීනව ඉගෙන ගැනීමත් සඳහා ශක්තිය;
වැඩ ලෝකයට සූදානම	Workplace readiness	Employment related skills to maximize their potential and to 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.	වැඩ ලෝකයට සූදානම් වීම: ආර්ථික සංවර්ධනයට දායක වීම, තම වෘත්තීය ලැදියා හා අභියෝගතා හඳුනා ගැනීම, හැකියාවන්ට සරිලන අයුරින් රැකියාවක් තෝරා ගැනීම, වාසිදායක හා තිරසාර ජීවනෝපායක නිරත වීම

Appendix 10. A Sample of a Completion Certificate for Senior Secondary School

IAMAGOOD STUDENT
THISISAGOOD SCHOOL
December, 2018

(1) Common General Test (CGT), 2017

Reading	Pass
Writing	Pass
General intelligence	Pass

(2) General Certificate of Education (Ordinary Level), 2017

Religion	Pass
Sinhala	Pass

(3) School Based Assessment of Subjects, 2016-2017

Religion	80
Sinhala	75
Math	50
Commerce	65
Technology	90
Physical Education	85
Communication	75
Art	55

(4) Personal Development and Citizenship Portfolio

Following attributes have been selected by the student for illustration through his/her portfolio.

Communication
Drama
Leadership
Community service

All related contents have been certified by undersigned evaluators.

Section Head

Principal

School Inspector

Appendix 11. Implications of the 13-Years of Education on the exam timetable & university admissions

If the 13-years of schooling policy can be implemented in 2018 for those children sitting for the GCE (O/L) in December of 2017, that batch of students will be the first batch to enter university by Ages 18-19 and within 9 months or less after sitting for their GCE A/L.

Such a saving valuable time for our youth would be remarkable contribution to HR development in Sri Lanka, but one challenge need to be addressed – **first**, the logistics of conducting two A/L examinations in 2019 and giving entry to public universities to two batches 25,000 or more in 2020. Some can be given opportunity to study in fee-levying public institutions such as KDU, NSBM or designated private institution by offering study vouchers to up to 50% of the batch. Even the 13 public universities which are presently free-of-charge may want to compete for these students holding vouchers. If the voucher is successful, the government can double then number of university students it supports without incurring the expense of opening additional public universities and diluting the resources for the 13 public universities.

YEAR	MONTH	STUDENT BATCH #						
		O/L 2015	O/L 2016	O/L 2017	O/L 2018	O/L 2019	O/L 2020	O/L 2021
2016	Jan-Mar							
	Apr-Jun	*						
	Jul-Sep							
	Oct-Dec		O/L					
2017	Jan-Mar							
	Apr-Jun		*					
	Jul-Sep							
	Oct-Dec			O/L				
2018	Jan-Mar			*				
	Apr-Jun							
	Jul-Sep	A/L						
	Oct-Dec				O/L			
2019	Jan-Mar				*			
	Apr-Jun							
	Jul-Sep	Pub UNI	A/L					
	Oct-Dec			A/L		O/L		
2020	Jan-Mar					*		
	Apr-Jun							
	Jul-Sep		Pub UNI					
	Oct-Dec				A/L		O/L	
2021	Jan-Mar						*	
	Apr-Jun							
	Jul-Sep				Pub UNI			
	Oct-Dec					A/L		O/L