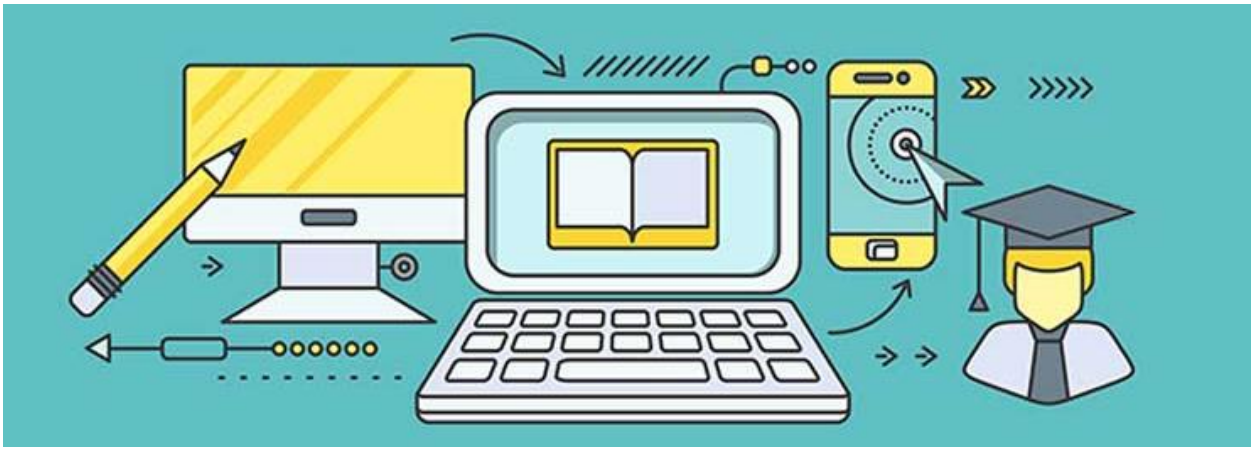

Policy for Digital Transformation of Education

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கல்வி அமைச்சு
MINISTRY OF EDUCATION

ICTA
ideas actioned

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1 INTRODUCTION

In a rapidly changing and interconnected environment, it is essential for education systems, be them schools vocational or higher, to provide students with adequate competencies to cope with social and professional realities in the 21st century. They should be robust and flexible enough simultaneously. As the Information age requires knowledge-based professions to have human capital that can take complex challenges and adapt flexible skill sets to changing demands, the education systems should be strong enough to deliver them. From the supply side it is equally essential that the teachers and administrators are provided the right tools to meet that demand. High-quality and equitable education is a key component in the acquisitions of the key competences for lifelong learning and thus a priority not the policy makers and the policy implementers.

Traditional education systems, as we have seen particularly in the post-COVID-19 period, are not best equipped to cope with the changing nature of learning. The changing demands on learners and their competences, and the need for new ways of teaching and managing complexities can be handled only by the new thinking. This calls for an education policy reform that is focused on ensuring the facilitation of innovative learning environments that can nurture the development of 21st century skills. Educational innovation, i.e. 'any dynamic change intended to add value to the educational process and resulting in measurable outcomes, be that in terms of stakeholder satisfaction or educational performance' is required to create meaningful educational environments that match the needs of students and teachers alike.

While our wish list is extensive, the ability for the current systems to deliver the expectations is questionable. Unexpected and unprecedented pandemic situation has brought up the weaknesses in the traditional education system to visibility. Online learning, in post-COVID-19, has been seriously criticized for its dearth of equal access. Currently, during the lock-down periods there is no practically viable alternative solution for a student without an internet-connected device. Educational institutions have found out that the hard way when sizable sections of students claimed not to have an access device for online sessions.

The argument is that students from financially disadvantaged backgrounds are left behind – not having good internet access means no learning. It was assumed that in mid-2021, only 60% of the primary and secondary level students have access to online education.

Online learning is just another mode of education. It cannot get away from the bigger issues associated with the education that is a private good, while many like it to be a public good, it does not behave so. It is rivalrous; consumption by one individual prevents access to another. It is excludable too; education has a cost and this constrains infinite production. Free education makes it available without a fee on selected instances for a selected group of students but right now that opportunity is

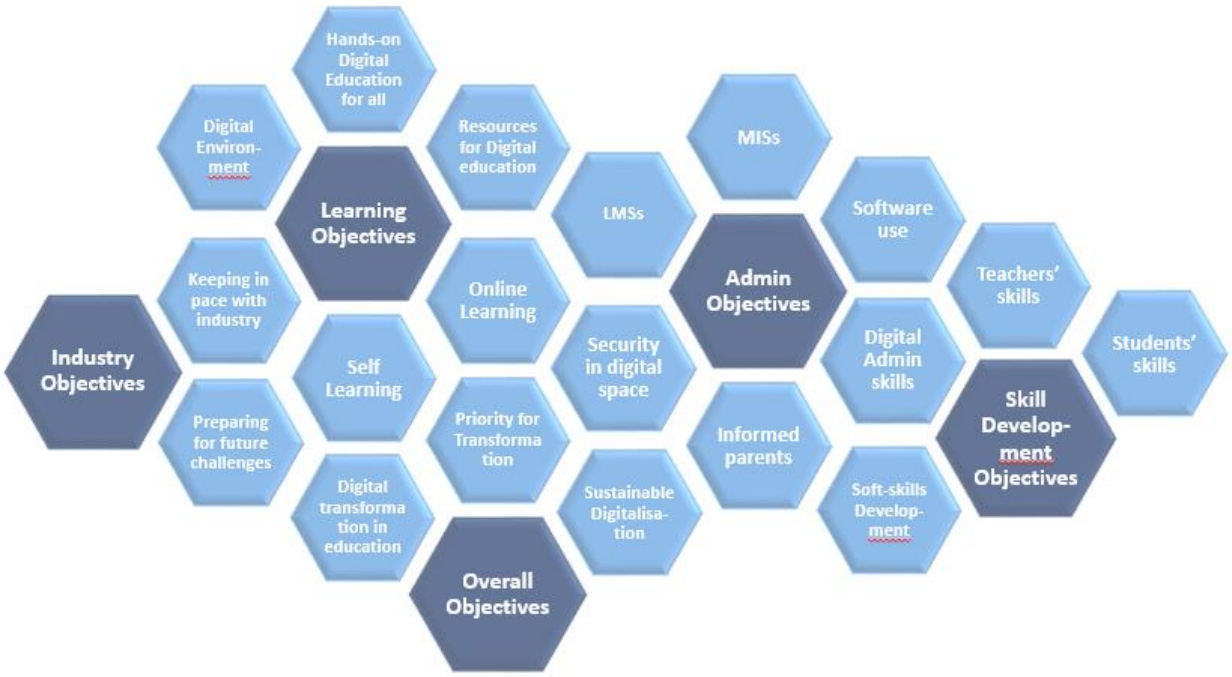
not available in online education, in which the parents have to bear the costs of connection and the end device usage.

In this backdrop, the policy proposes here, the outcome of the three workshops conducted by Ministry of Education jointly with Information and Communication Technology Agency (ICTA) with the participation of Education administrators, professionals, School principals, School teachers, Heads and lectures of vocational training institutes, professors, lecturers and higher educational officials, Industry specialists etc. They have discussed the current issues faced by the:

- Ministry of Education and institutes under the Ministry
- Schools
- Universities
- Vocational Training Institutes

The following outcome is a set of policy solutions suggested by this group of stakeholders, compiled and summarized by ICTA jointly with Ministry of Education.

2 POLICY OBJECTIVES



The following have been identified as overall objectives of introducing a Policy for Digital Transformation of Education

1. **Digital Transformation in Education:** Education, be it primary, secondary or tertiary, is disrupted but at the same time, benefits from the digital transformation; education keeps in pace and changes with the advanced developments taking the best use of the new technologies, trends and applications.

2. **Preparing for Future Challenges:** Students receive an updated and advanced education that trains them to take the challenges of the contemporary job market; locally and internationally. They should always possess the necessary digital skills better than or in par with students from any part of the world.

3. **"Hands-on" Digital Education for All:** The Digital Education received by the students not be purely a theoretical one. Every student, irrespective of the study stream he/she follows, should be given adequate opportunities to have hands-on experience to develop the digital skills within the curricula, as a core part of it. Digital education not be taken complete without the practical component. The digital skills training part not be an additional or supplementary part to the curricula. Depending on the type of the course, always more than at least 10% of the time be allocated to build the digital skills of the students within curricula.

4. **Keeping in Pace with Industry:** The teaching/academic staff, at every school, university and institute, is professionally qualified and experienced in teaching ICT related subjects; they keep in pace with the new technological developments, industry trends and frequently advance their teaching methods to incorporate them in the education process so that the students receive a complete, advanced and up-to-date education.

5. **Digital Environment for Students:** Every school, university, higher education institute, vocational training institute have the ideal environmental to be conducive to student centric digital education; they be fully equipped with computer labs so that the students can be trained providing them adequate and equal opportunities.

6. **Resources for Digital Education:** Students, be them at primary, secondary or tertiary levels, find the necessary resources for their studies (books, journals, videos etc.), at affordable costs. The resources be of high quality and up to date.

7. **Learning Management Systems:** Every school, university, higher education institute, vocational training institute use Learning Management Systems (LMSs) to the best in the process of education.

8. **Self-Learning:** Digital Education cannot and not be constrained to the class rooms, but students are encouraged to do their self-studies improving their knowledge in the core subjects as well as other related subject areas, to be competent digital professionals of the future.

9. **Soft-Skills Development:** A critical component in digital education, that always goes hand-in-hand with hard skills, soft skills (including but not limited to in the area of language, PR and marketing, negotiation, presentation etc.) be given the due recognition and cultivated in students during the process of their digital education.

10. **Management of Information Systems:** Fully pledged Management Information Systems be used for the administration of every school, university, higher education institute and vocational education institute instead of conducting the tasks manually.

11. **Digital Administration Skills:** Administrators of every school, university, higher education institute and vocational training institute be conversant with the digital skills necessary to handle the systems and application they need to handle in their day-to-day operations.

12. **Online Learning:** In case of a situation where the students are prevented from learning activities the typical manner, digital education systems be best used to provide them the learning activities they miss; irrespective of their geographical locations, socio-economic conditions of their families etc. Government, with the true spirit of 'free education' provide the infrastructure facilities (devices, connections etc.) as much as possible, enabling students having continuous and regular education, as close as possible to the traditional class-room education irrespective of their backgrounds.

13. **Teachers' Skills:** The teaching/academic staff, including trainers and teaching assistants be fully conversant with digital technologies and systems they use as teaching tools. Also they are fully equipped with the necessary digital tools and applications, be them hardware or software, for teaching purposes.

14. **Students' Skills:** All students must be competent in handling digital tools for their distance education purposes.

15. **Security in Digital Space:** The students be provided the security in the digital space by understanding the vulnerabilities by teachers and authorities; they be provided with the necessary safeguards.

16. **Informed Parents:** Parents be well aware of the needs of the Digital Education and build a conducive environment at home; they support children the best in the studies.

17. **Sustainable Digitalization:** The digitalization process in every school, university, higher education institute and vocational training institute be sustainable and environment friendly; the e-waste be properly managed.

18. **Software Use:** The software used by each school, university, higher education institute and vocational training institute both for learning activities and management be useful, relevant, up-to date and licensed for the use. (unless in case of open source products)

19. **Priority for the Transformation Effort:** Digitalization of the Education receives the priority it rightfully deserves in the decision making process; all authorities and stakeholders, including the policy makers and implementers, consider it their prime duty to contribute towards achieving the objectives of digitalization of education.

3 OBJECTIVES

3.1 Objective 1: Digital Transformation in Education

Education, be it primary, secondary or tertiary, is disrupted but at the same time, benefits from the digital transformation; education keeps in pace and changes with the advanced developments taking the best use of the new technologies, trends and applications.

POLICY ISSUE 1.1: The government's National Policy Framework, "Vistas of Prosperity" directs the nation for a complete digital transformation in Government, Economy and Society. Education, being an integral part of this transformation, it is essential the Ministry of Education and all educational bodies to take action to be a part of this transformation, building effective relationships with other government agencies driving this transformation.

POLICY 1.1: Ministry of Education and all educational institutes identify the need for digital transformation and be very much a part of the same.

STRATEGIES FOR IMPLEMENTATION:

1. Ministry of Education and all government educational institutes identify at strategic level the need for digital transformation and incorporate that in their strategic and action plans.
2. Maintain close links with Ministry of Technology, Information and Communication Technology Agency (ICTA) and other relevant organizations (e.g. Sri Lanka Telecommunication Regulatory Commission) for carrying out the implementation activities necessary for digital transformation of the education field.

POLICY ISSUE 1.2: Resistance to change is the human nature. It is more prominent when there is a perception that digital transformation makes one's already achieved skills outdated. There is also the need of learning new skills for the career growth, which many will see as a challenge they are not ready to take.

POLICY 1.2: The resistance to digital transformation by different stakeholders must be addressed tactfully, rather than by strict rules and regulations, understanding their true issues and providing practical solutions to them.

STRATEGIES FOR IMPLEMENTATION:

The resistance to digital transformation by academics, officers and parents should be addressed by:

1. Conducting annual assessments focusing on academic & administrative digital

skills;

2. Encouraging the use of digital solutions and provide opportunities (promotions, training etc.) for teachers and
3. Launching awareness campaigns and change management programmes focusing on students, parents & public.

POLICY ISSUE 1.3: Even while the policy makers principally agree for the digital transformation of education, there may be questions of funds for the necessary actions to achieve the same.

POLICY 1.3: Lack of funds should not be an obstacle in implementing the student-centric essential digital education solutions at all educational institutes.

STRATEGIES FOR IMPLEMENTATION:

1. Address the funds issue through a national education budget, which includes allocations for developing ICT environment in all educational institutes.
2. Convert schools, at least some of them, to profit centers for delivering ICT education to the community to ensure self-sustainability
3. For the inadequacy of funds at individual institutes to implement digital solutions, implement a white-listed policy for online platforms and promote locally developed platforms such as e-thaksalava, meet.gov.lk. Universities must also collaborate with industries through UBL (University Business Link) or explore other possibilities.

3.2 Objective 2: Preparing for Future Challenges

Students receive an updated and advanced education that trains them to take the challenges of the contemporary job market; locally and internationally. They should always possess the necessary digital skills better than or in par with students from any part of the world.

POLICY ISSUE 2.1: The demands of the local and international job markets undergo frequent and continuous transformation, as a result of the substantial changes in the industries. The training to be received by the students should be in pace with the industry demand as if not, they would find it difficult to receive the attention of the employers. The market demand for both soft and hard skills, hands-on experience in a gamut of technologies and attributes like willingness to continuously learn and positive attitude towards work. The challenge of the education authorities is to provide the same in the education process.

POLICY 2.1: Digital Education should always be in pace with the current and future industry desired skills of the local and international job markets.

STRATEGIES FOR IMPLEMENTATION:

1. In the process of designing new courses, modules etc., all educational institutions take efforts to make them advanced, up to date and be in pace with the industry challenges.
2. All educational institutes constantly review their syllabi in order to keep in pace with the industry requirements.
3. All educational institutes constantly research on the module development by international universities and all other international educational institutions in order to follow the same locally.
4. Universities and higher educational institutes to take necessary steps to hold regular discussions with industry partners to learn about the industry trends.
5. All educational institutes to send their staff on industry training, local and foreign, to provide the necessary industry exposure for them.

POLICY ISSUE 2.2: Digital education, ideally, should be in constant transformation. This is to allow the new development trends to be accommodated in the syllabi. Somehow, in reality, it is often been observed that there are gaps in this process. Many times, the same syllabi are used for substantially long periods without any modifications and advancements.

POLICY 2.2: The syllabi should be frequently and regularly updated to keep in pace with the latest digital advancements.

STRATEGIES FOR IMPLEMENTATION:

1. Make the syllabi revisions to happen more frequently where more emphasis should be placed on practical assessments and evaluations. (It is recommended to conduct at least 30% - 40% of the evaluation of ICT subjects practically, not just in paper based examinations, as it is done right now.)
2. Provide suitable mechanism to practical evaluations (Development or enhancement of infrastructure / other suitable solution)

POLICY ISSUE 2.3: Particularly in the vocational education, and sometimes in school education, it is seen that the career guidance for students is not always readily available. This prevents them from finding most appropriate careers after successfully completing the professional education.

POLICY 2.3: Recognition of the need for compulsory career guidance for all students before they enter tertiary education as well as the industry after the completion of vocational training courses

STRATEGIES FOR IMPLEMENTATION:

1. Have career guidance centers at every secondary school
2. Expose all secondary school teachers to the career opportunities available in labor markets
3. Connect ICT enabled career guidance system to online learning platforms
4. Offer career guidance online.

3.3 Objective 3: "Hands-on" Digital Education for All

The Digital Education received by the students not be purely a theoretical one. Every student, irrespective of the study stream he/she follows, should be given adequate opportunities to have hands-on experience to develop the digital skills within the curricula, as a core part of it. Digital education not be taken complete without the practical component. The digital skills training part not be an additional or supplementary part to the curricula. Depending on the type of the course, always more than at least 10% of the time be allocated to build the digital skills of the students within curricula.

POLICY ISSUE 3.1: Due to different reasons, at almost all levels, practical "hands-on" experience is not always provided for the students. Still some courses are developed, particularly at higher education and vocational education levels, without giving the due consideration for the practical aspects of digital education. So the students complete these courses without the digital skills essential to survive and compete in the current job market. It was also noted some courses does not offer adequate time for digital studies.

POLICY 3.1: Recognition of the need for "Hands-on" experience at primary, secondary and tertiary levels as a key and indispensable component of Digital Education. Every student, irrespective of the study stream he/she follows, should have the opportunity to develop the digital skills within the curricula, as a core part of it, with adequate time allocated. No student should be deprived of this facility.

STRATEGIES FOR IMPLEMENTATION:

1. Make steps to include practical "Hands on" training as a key component of all study courses of Digital education, be that primary, secondary or tertiary level.
2. Review and if necessary update the course contents at least once in every three years to ensure this requirement is fulfilled.
3. Let students provide their feedback on student evaluations on the adequacy of the practical training they have received during the courses and act on any complaints.
4. Provide, by education authorities, the necessary resources for the students at every level for practical digital skills developments.

3.4 Objective 4: Keeping in Pace with Industry

The teaching/academic staff, at every educational institute, is professionally qualified and experienced in teaching ICT related subjects; they keep in pace with the new technological developments, industry trends and frequently advance their teaching methods to incorporate them in the education process so that the students receive a complete, advanced and up-to-date education.

POLICY ISSUE 4.1: It has been observed that not all lecturers and trainers keep close relationships with the industry, thus missing the valuable input essential in building tomorrow's digital workforce.

POLICY 4.1: All relevant lecturers and trainers at every university and vocational training institute should be maintaining close relationships with the industry and always updated with the industry developments.

STRATEGIES FOR IMPLEMENTATION:

1. Have by every educational institution (university, vocational training institute) an industrial liaison committee for each of their courses
2. Provide mandatory industrial exposure and mandatory technology training for every lecturer/trainer at least once in every 3 years.
3. Organize special allowance for lecturers/trainers to encourage them to undergo industrial training.
4. Provide the necessary devices for the staff members at a fair and easy installment scheme, reconsider the existing salary schema (other allowances too)
5. Identify required carder position and count and review existing policies and circulars to introduce the necessary amendments.
6. Continuously discuss with industry organizations (and if necessary individual firms) to setup flexible mechanisms/processes of updating digital education curricula frequently and regularly

3.5 Objective 5: Digital Environment for Students

Every educational institute, vocational training institute have the ideal environmental to be conducive to student centric digital education; they be fully equipped with computer labs so that the students can be trained providing them adequate and equal opportunities.

POLICY ISSUE 5.1: Physical gaps in learning resources remain a major issue in Digital Education at every level of educational institutes.

POLICY 5.1: All educational institutes must possess the resources (equipment) necessary to create the ideal environment for digital education.

STRATEGIES FOR IMPLEMENTATION:

1. Annually conduct surveys and find the right user requirements by all educational institutes.
2. Maintain well equipped computer labs relevant for the curricular.
3. Provide educational institutes with the equipment and space they need or alternatively, funds to procure the same.
4. Protect the equipment provided so that multiple batches use the same equipment/facilities for substantially longer periods without looking for replacements.
5. Educational institutes monitor and maintain the facilities at good working conditions for the use of the students.
6. Educational institutes regularly and frequently check the condition of the equipment and suggest replacements for any damaged ones.
7. Constantly check whether the equipment/facilities are adequate/advanced enough for the courses to be carried out.
8. In addition to main source of funds, (if possible) use other means to find funds for the equipment/facilities.

3.6 Objective 6: ICT Learning Resources for Digital Education

Students, be them at primary, secondary or tertiary levels, find the necessary learning resources for their studies (books, journals, videos etc.), at affordable costs. The resources be of high quality to address the requirements.

POLICY ISSUE 6.1: Students at all levels, primary, secondary and tertiary, may not always find the learning resources for their studies at affordable costs.

POLICY 6.1: All schools, universities, higher education institutes and vocational training institutes must make the necessary learning resources (books, journals, videos etc.) available to their students for the education purposes.

STRATEGIES FOR IMPLEMENTATION:

1. Regularly conduct surveys to find the user requirements at every educational institute for learning resources (books, journals, videos etc.)
2. Maintain libraries, with content both traditional and digital for the use by the students.
3. Provide educational institutes with the learning resources they need or alternatively, funds to procure the same.
4. Protect the learning resources so provided so that multiple batches use the same equipment/facilities for substantially longer periods without looking for replacements.
5. Educational institutes regularly and frequently check the condition of the learning resources (books, journals, videos etc.) and suggest replacements for any damaged ones.
6. Constantly check whether the learning resources (books, journals, videos etc.) are adequate/advanced enough for the courses to be carried out.
7. In addition to main source of funds, (if possible) use other means to find funds for the learning resources (books, journals, videos etc.).

3.7 Objective 7: Learning Management Systems

Every school, university, higher education institute, vocational training institute use Learning Management Systems (LMSs) to the best in the process of education.

POLICY ISSUE 7.1: Not all education institutes use Learning Management Systems (LMSs) for the learning activities of the students.

POLICY 7.1: All educational institutes must, as appropriately, use Learning Management Systems (LMSs) for the education purposes.

STRATEGIES FOR IMPLEMENTATION:

1. Introduce Learning Management System (LMS) solutions for all courses that require them for education activities.
2. Conduct training for both the teaching staff as well as students for the use of Learning Management Systems (LMSs)
3. Update and maintain, by education institutes, the Learning Management Systems (LMSs)

3.8 Objective 8: Recognize & Facilitate Self-Learning

Digital Education cannot and not be constrained to the class rooms, but students encouraged to do their self-studies improving their knowledge in the core subjects as well as other related subject areas, to be competent digital professionals in the future.

POLICY ISSUE 8.1: Self-learning is an essential part of digital education, but it rarely receives the due recognition. Not all courses are designed to include substantial self-studying components.

POLICY 8.1: Self-Learning is identified as a critical component in digital education. It is essential to create digital infrastructure support for the digital self-learning for students to be competent digital professionals in the future.

STRATEGIES FOR IMPLEMENTATION:

1. Introduce self-learning components in all relevant courses when the curricula are revisited and revised.
2. Monitor and ensure the students complete the necessary self-studying components.
3. Make resources and assessment methodologies available with all curricula are guided by learner-centered education theories.
4. Introduce a grading system for self-learning activities while giving priority to the self-learning in subjects.
5. Introduce online self-evaluation exams methods.
6. Explore the possibilities of re-vitalizing the Nenasala program in a scale up to self-sustainability model

3.9 Objective 9: Soft-Skills Development

A critical component in digital education, that always goes hand-in-hand with hard skills, soft skills (including but not limited to in the areas of language, PR and marketing, negotiation, presentation, communication, team spirit, leadership etc.) be given the due recognition and cultivated in students during the process of their digital education.

POLICY ISSUE 9.1: Not always, it is understood that soft skills should go hand-in-hand with hard ICT skills. So developing soft skills are not considered as a vital part of digital skills training.

POLICY 9.1: Soft skills should be an essential part of the course curricula

STRATEGIES FOR IMPLEMENTATION:

1. Give deliberate focus to integrate activities for inculcating soft skills, including language, PR and marketing, presentation and negotiation, team spirit, leadership etc. in all curricula including case-based learning.
2. Introduce English in every vocational course as a compulsory module while introducing online self-learning English learning applications.

3.10 Objective 10: Digital Management Information Systems for Education Entities

Fully pledged Management Information Systems be used for the administration of all educational institutes and vocational education institutes instead of conducting the tasks manually.

POLICY ISSUE 10.1: Currently, only a few number of educational institutes are managed using Management Systems. Consequently administration might not have the information they require, be late in taking the management decisions and could not get the best use of the resources.

POLICY 10.1: Administration of all educational institutes should be conducted with Management Systems

STRATEGIES FOR IMPLEMENTATION:

1. Provide all educational institutes with comprehensive management systems for their education and administration management purposes.

3.11 Objective 11: Digital Skills of Administration Staff

Administrators of all educational institutes be conversant with the digital skills necessary to handle the systems and application they need to handle in their day-to-day operations.

POLICY ISSUE 11.1: Not always digital skills are considered in administration and decision making in schools, universities, higher education institutes, vocational training institutes etc., for the lack of digital skills by the administrative staff.

POLICY 11.1: Digital skills of administration staff should be duly recognized in administration and decision making in schools, universities, higher education institutes and vocational training institutes.

STRATEGIES FOR IMPLEMENTATION:

1. Have mechanisms for administrators to improve digital skills in their day to day administrative operations.
2. Use recommendations by domain experts in decision making in ICT domains

3.12 Objective 12: Online Learning

In case of a situation where the students are prevented from learning activities the typical manner, digital education systems be best used to provide them the learning activities they miss; irrespective of their geographical locations, socio-economic conditions of their families etc. Government, with the true spirit of 'free education' provide the infrastructure facilities (devices, connections etc.) as much as possible, enabling students having continuous and regular education, as close as possible to the traditional class-room education irrespective of their backgrounds.

POLICY ISSUE 12.1: Adequate bandwidth and quality in connectivity is a must for online education. However, reliable and effective connectivity is not available island wide. Absence of connectivity is a common issue for many areas of the country.

POLICY 12.1: Connectivity should not be a luxury for few but a facility available for all students irrespective of their geographical locations and socio economic conditions of the families. "Connectivity for all" for online education (at affordable costs).

STRATEGIES FOR IMPLEMENTATION:

1. Address connectivity issues faced by schools and students (including home reach) by having a policy for every child to have access to low cost, quality data at home and in school. (The coverage of the networks should be island-wide.)
2. Develop or upgrade national ICT infrastructure for emerging online education requirements.
3. Develop a national policy for Internet access and data usage for educational purposes and provide connections and data island-wide at affordable costs from all the ISPs.
4. Encourage implementing common centers for each village equipped with latest technologies and offer the service based on requirement paid and free basis.
5. Arrange service providers to offer island-wide free or affordable internet packages for students and teachers.

POLICY ISSUE 12.2: End-devices, for online education, are as critical as the connectivity. The issue with devices is many parents are unable to afford them for their children.

POLICY 12.2: Government must make the online education possible for each child, irrespective of their social and economic backgrounds, making suitable end devices available for them. "One-Device for One-Student" for online education in the long run.

STRATEGIES FOR IMPLEMENTATION:

1. Provide devices free of charge or at an affordable cost for students who cannot afford them
2. Provide a suitable device for every teacher engaged in online teaching
3. Provide devices for schools so that children share them
4. Formulate, with local commercial banks, educational loan schemes for both parties (lecturers and students) to purchase devices

POLICY ISSUE 12.3: Online education, with its inherent constrains could not be a suitable alternative to traditional classroom education. Issues about online issues have been raised by students, teachers and parents frequently and constantly.

POLICY 12.3: Online learning should be on par or close with the traditional classroom teaching when it comes to the outcome; the students should not suffer because of the change of the mode to online

STRATEGIES FOR IMPLEMENTATION:

1. Develop governance policy for online education (Teaching, Learning, Assessment, Research and Administration)
2. Develop generic guidelines for online teaching, learning and assessments.
3. To overcome difficulties in conducting supervised assessments, develop a framework that engages alternative assessment methods. E.g. presentations, viva, group assignments, blogs, quizzes, etc.
4. Purchase the required tools for proctoring, so they can arrange proctoring based exams, LMS, peer review methods and other relevant tools with the support of ICT department of the institute.
5. To avoid students and teachers getting tired with the long durations of the sessions, prepare guidelines such that the teaching process (lectures, practical, etc.) is focused on the student with the right use of blended learning tools. E.g. for students in higher education, limit the session duration for 1-2 hours.
6. Improve self-learning techniques and shorten the lecturing time based on

curricula.

7. Resolve problems in online education, (particularly because most vocational education areas are more practical oriented) with:
    - All trainers being trained with digital and e-pedagogy skills;
    - All online education (synchronous) programs are supplemented by an LMS (asynchronous) in virtual learning environment
    - National level e-leaning resources development and management center is established.
    - Introducing practical oriented software and
    - Creating an online platform (Forum) for all students to share knowledge and ask questions.

POLICY ISSUE 12.4: Availability of the connectivity and devices is necessary but not sufficient conditions for online education. It needs to have many other conditions fulfilled to be a success. One critical requirement is the education platforms. Sri Lanka has well developed online education platforms but they may be not fully recognized by the students. So it is essential that they receive the recognition.

POLICY 12.4: Technological and broadcasting initiatives introduced by the Ministry of Education such as e-Thaksalawa must be recognized as national level e-learning platforms and public should be aware of them.

STRATEGIES FOR IMPLEMENTATION:

1. To address the lack of awareness about the programs Gurugedara and e-Thaksalawa, conduct trilingual awareness campaigns using suitable channels such as Mass Media, Social Media, Printed Media, and Electronic Media
2. Create quality and interactive contents for Gurugedara and e-Thaksalawa

POLICY ISSUE 12.5: Going by the recent experiences, technical difficulties on online education, both from the lecturers' end and students' end have been rampant. Many sessions have been prematurely ceased because of these technical difficulties.

POLICY 12.5: Online education activities should run with minimum technical hassles and minimum time waste to students and lecturers.

STRATEGIES FOR IMPLEMENTATION:

1. Arrange a hotline with enough support personnel to provide online technical support for the practical issues that arise in providing online education.

3.13 Objective 13: Skills in Handling Digital Tools (Teachers/Academic Staff)

The teaching/academic staff, including trainers and teaching assistants be fully conversant with digital technologies and systems they use as teaching tools. Also they are fully equipped with the necessary digital tools and applications, be them hardware or software, for teaching purposes.

POLICY ISSUE 13.1: Not all academic/teaching staff is conversant with the digital tools they have to mandatorily use in their day to day operations.

POLICY 13.1: All academic staff should be able to utilize available digital technologies in their respective work areas

STRATEGIES FOR IMPLEMENTATION:

1. Conduct annual assessments focusing the digital skills of principals, teachers and officers with an earning points mechanism to utilize digital technologies for their annual targets.
2. Attach compulsory digital skills assessing components to their work areas (Learning outcome etc.)
3. Make it a strict condition that all teachers, principals and officers completing a set of modules prepared for each level to ensure digital literacy.
4. Identify the range of digital devices which could be used in teaching-learning process.

3.14 Objective 14: Skills in Handling Digital Tools (Students)

All students must be competent in handling digital tools for their education purposes.

POLICY ISSUE 14.1: There can be difficulties in learning activities if the students are not conversant with the necessary skills to handle digital tools.

POLICY 14.1: Students should possess essential digital skills so that they can use the online education tools effectively.

STRATEGIES FOR IMPLEMENTATION:

1. Address the digital skill gaps of the students with creating suitable training content in accessible formats and through practical evaluations.
2. At university level, have specific training programs targeting higher education sector and make them mandatory.
3. Have a unit in each university to conduct trainings, introduce new technologies and provide necessary trainings to other stakeholders. (just as the English training unit)

3.15 Objective 15: Security in Digital Space

The students be provided the security in the digital space by understanding the vulnerabilities by teachers and authorities; they be provided with the necessary safeguards.

POLICY ISSUE 15.1: Children face an increasing threat in the cyber space, as some parties exploit their vulnerabilities to advantage.

POLICY 15.1: Every student, at all levels primary, secondary and tertiary must be protected from cyber threats (or any inconveniences in the digital space) through the joint efforts by teachers, parents/guardians and school/university/higher education/vocational training institute administrators.

STRATEGIES FOR IMPLEMENTATION:

1. Recognize by all education establishments that protecting students from cyber threats as a key requirement of digital education.
2. Schools/Universities and Higher Education Authorities maintain close relationships with parents/guardians and immediately attend to any concerns regarding the security of the students.
3. Schools/Universities and Higher Education Authorities maintain mechanisms through which prompt report of any incident happens to authorities such as Sri Lanka Police and National Child Protection Authority.
4. Schools/Universities and Higher Education Authorities periodically monitor their systems against vulnerabilities that some parties may abuse and take corrective measures.
5. Take measures to restrict students accessing blacklisted sites.
6. Introduce a Computer Emergency Response Team (CERT) for education sector.

3.16 Objective 16: Informed Parents/Guardians

Parents and guardians be well aware of the needs of the Digital Education and build a conducive environment at home; they support children the best in the studies.

POLICY ISSUE 16.1: Not all parents/guardians are aware about the needs and the environment required for the digital education of their children.

POLICY 16.1: Parents and guardians of every student, at all levels primary, secondary and tertiary must be aware of the requirements of digital education and they provide the conducive environment for their children.

STRATEGIES FOR IMPLEMENTATION:

1. Have an integrated mechanism for conducting awareness sessions for the parents/guardians, with the involvement of national level stakeholder parties such as AGS Office, Ministry of Home Affairs, and Family Health Officers etc.
2. Conduct broad promotional programmes through electronic and print media.

3.17 Objective 17: Sustainable Digitalization

The digitalization process in every educational institute be sustainable and environment friendly; the e-waste be properly managed.

POLICY ISSUE 17.1: The disposal of computer and peripheral equipment to the environment could lead to serious environmental issues in the long run.

POLICY 17.1: The Digital Education process must be environmental friendly and sustainable with e-waste recycled or disposed with minimal possible environmental impact.

STRATEGIES FOR IMPLEMENTATION:

1. Have, on the guidance of the Central Environmental Authority (CEA), a mechanism to recycle/dispose the e-waste.

3.18 Objective 18: Software Use

The software used by each educational institute both for learning activities and management be useful, relevant, up-to date and licensed for the use. (Unless in case of open source products)

POLICY ISSUE 18.1: Software used in the education sector is not always useful, relevant, up-to date licensed/authorized.

POLICY 18.1: The software used by education sector should be useful, relevant, up-to date and licensed/authorized for the use.

STRATEGIES FOR IMPLEMENTATION:

1. Select the software to be used for learning and administrative purposes through a committee of knowledgeable individuals.
2. Periodically monitor the installed software for their relevancy for the courses, usability (whether the advanced versions) and/or licensed/authorized for the use.

3.19 Objective 19: Priority for the Transformation Effort

Digital Transformation of the Education effort receives the priority it rightfully deserves in the decision making process; all authorities and stakeholders, including the policy makers and implementers, consider it their prime duty to contribute towards achieving the objectives of digitalization of education.

POLICY ISSUE 19.1: Digital Transformation of the education is not always given its due recognition by the authorities and stakeholders.

POLICY 19.1: Digital Transformation of the education should be recognized as an implementation priority.

STRATEGIES FOR IMPLEMENTATION:

1. Recognize, by all authorities and stakeholders, including the policy makers and implementers, Digital Transformation of the education as an implementation priority.