Government of Samoa
Ministry of Education, Sports and Culture

National Information and Communication Technology in Education Policy

2018 - 2023

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MINISTRY OF EDUCATION, SPORTS AND CULTURE

ACKNOWLEDGEMENT

The National ICT in Education Policy is based on the feedback from many stakeholders in the Education Sector as well as the ICT community in Samoa. The contributions by the National University of Samoa and Samoa Qualifications Authority staff are much appreciated. As well, MESC acknowledges with appreciation the invaluable feedback from staff of the Ministry of Communication and Information Technology and the Internet service providers.

LIST OF ACRONYMS

CC	Creative Commons
CD	Compact Disc
CSP	Communications Sector Plan
ECE	Early Childhood Education
ICT	Information and Communication Technology
ICTMD	Information and Communication Technology and Media Division
IT	Information Technology
KPIs	Key Performance Indicators
LAN	Local Area Network
LMS	Learning Management System
MCIT	Ministry of Communication and Information Technology
MESC	Ministry of Education, Sports and Culture
MOODLE	Modular Object-Oriented Dynamic Learning Environment
MS	Microsoft
OER	Open Educational Resources
OS	Operating System
QAPA	Quality Assurance Performance Appraisal
SDG	Sustainable Development Goals
SDS	Strategy for the Development of Samoa
SNBH	Samoa National Broadway Highway

DEFINITIONS OF TERMS

Analog	Analog is the opposite of digital. Any technology such as vinyl records or clocks with hands and faces, that doesn't break anything down into binary coding to work is analog. Analog, is strictly old school.
ANDROID	An open source operating system for touch screen mobile devices such as smart phones and tablet computers.
Antivirus	A software utility that detects, prevents, and removes viruses, worms, and other malware from a computer.
Application	Application software, to be distinguished from system software or Operating System, is a computer program or group of programs designed for the direct use by the end user.
APTUS	The APTUS device developed and provided by the Commonwealth of Learning, is a mobile server with its own WiFi router. Users of tablets, smart phones and laptops, are able to access several thousand open educational resources as well as MOODLE learning management systems.
Certification Process	The formal recognition of achievement by an authorised organisation e.g. SQA.
Creative Commons	A Creative Commons (CC) license is a public copyright license that enables the free distribution of an otherwise copyrighted work, i.e. for educational purposes.
Cyber Security	The protection of computer systems from the theft and damage to their hardware, software or information, as well as from disruption or misdirection of the services they provide.
Digital	is a signal that is expressed in terms of binary code using digits 1 and 0.
Digital Native	A person who is very familiar with digital technology, computers, etc. because they have grown up with them *(Cambridge Dictionary).*
Firewall	A software used to maintain the security of a network. Firewalls block unauthorised access to or from private networks and are often employed to prevent unauthorised Web users or illicit software from gaining access to private networks connected to the Internet.
Hardware	The physical parts or components of a computer, such as the central processing unit, monitor, keyboard, computer data storage, graphic card, sound card and motherboard.
ICT Literacy	Using digital technology, communications tools, and/or networks to access, manage, integrate, evaluate, and create information in order to

function in a knowledge society.

Information and Communication Technology	All the technology used to handle telecommunications, broadcast media, intelligent building management systems, audio visual processing and transmission systems, as well as network-based control and monitoring functions.
Internal Memory	Internal memory is the storage space on a computer that is directly accessible by a processor without the use of the computer input/output channels.
Internet	A globally connected network system – including private, public, business, academic and government networks – connected by guided, wireless and fiber-optic technologies
Learning Management System	A software application for the administration, documentation, tracking, reporting and delivery of educational courses or training programs.
Local Area Network	Any communication network for connecting computers within a building or small group of buildings.
Malware	Malware (short for malicious software) is any software intentionally designed to cause damage to a computer, server or computer network.
Modem	A modem is a conversion device that converts signals from one device into signals so another device can read. For example, a modem may convert the digital data of a computer into an analog signal that can be read and carried by a telephone line.
MOODLE	A free and open-source learning management system to develop courses, enroll students, manage assignments, e-resources of any kind and discussion forums.
Open Educational Resources	Open Educational Resources (OER) are freely accessible, openly licensed text, media, and other digital assets that are useful for teaching, learning, and assessing as well as for research purposes.
Operating System	Software managing a computer's hardware resources, including Input devices (i.e. keyboard and mouse), Output devices (i.e. monitors, printers and scanners), Network devices (i.e. modems, routers), network connections as well as Storage devices (i.e. internal and external drives). The OS also provides services to facilitate the efficient execution and management of, and memory allocations for, any additional installed software application programs.
Router	A networking device that forwards data packets between computer networks using wired or wireless connections.

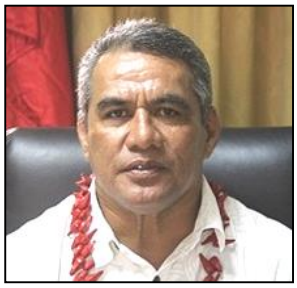
Samoa National Broadband Highway	A government owned Wide Area Network linking government offices throughout Apia and all over Samoa. Most Primary schools are linked to MESC through this network.
Scam	A fraudulent scheme performed by a dishonest individual, group, or company in an attempt to obtain money or something else of value.
SchoolNet (Samoa)	i) A Learning Centre in every college with a server, 17 work stations and a WiFi access point, covering the whole school compound. SchoolNet is a repository of e-resources for English, Mathematics and all Science subjects. ii) The Wide Area Network connecting all school Learning Centres to MESC. Internet access is provided, protected by a special firewall.
Smart Phone	A handheld personal computer with a mobile operating system and an integrated mobile broadband cellular network connection for voice, SMS, and Internet data communication; also supporting Wi-Fi.
Social Media	Social media is an internet-based technology that facilitates the sharing of ideas and information and the building of virtual networks and communities.
Software	Organised information that enables computers to work. Systems software includes the operating system and all the utilities that enable the computer to function. Applications software includes programs that do real work for users.
Support Portal	A network based website providing users with resources to assist their activities through information pages, provision of data files for download, interactive chats etc.
Virus	A computer virus is malicious software code that replicates by copying itself to another program, computer boot sector or document and changes how a computer works. Viruses are a type of malware corrupting the system or destroying data.
Wide Area Network	A network that exists over a large-scale geographical area.
WiFi	A wireless networking technology standard that allows computers and other devices to communicate over a wireless signal.
WINDOWS	Brand name for a type of Operating System software developed and distributed by the Microsoft (MS) company since 1985. MS-WINDOWS is the most common operating system for desktop and laptop computers.

TABLE OF CONTENTS

FOREWORD 10
1. INTRODUCTION 11
2. PURPOSE 11
3. GUIDING PRINCIPLES 12
3.1 Participation 12
3.2 Rule of Law 12
3.3 Quality 12
3.4 Relevance 13
3.5 Transparency 13
3.6 Responsiveness 13
3.7 Equity and Inclusiveness 13
3.8 Effectiveness and efficiency 14
3.9 Accountability 14
3.10 Gender sensitivity 14
3.11 Sustainability 14
4. POLICY STATEMENTS 15
4.1 ICT Literacy as a Life Skill 15
4.2 ICT as a School Subject (Computer Studies) 15
4.3 ICT for Teaching and Learning (all subjects) 15
4.4 ICT for Communication 16
4.5 ICT for Administration 16
4.6 Related Documents 16
5. APPLICATION AND SCOPE 17
5.1 ICT Literacy campaign 17
5.2 Implementation of ICT in the curriculum 18
5.3 ICT for Teaching and Learning 18
5.4 Communication 19
5.5 Administration 19
6. ROLES AND RESPONSIBILITIES 19
6.1 Principals 19
6.2 ICT Supervisors 14

6.3 Teachers 14
6.4 Students 14
6.5 Parents and Guardians 15
6.6 Community 15
6.7 School Inspectors 15
6.8 Ministry of Education, Sports and Culture 15
7. MONITORING, EVALUATION & REPORTING 16
7.1 Monitoring in Schools 16
7.2 Monitoring at MESC 16
7.3 Evaluation and Reporting 17
8. PROCEDURES 17
9. REFERENCES 18
10. APPENDICES 20
Appendix 1: Policy Overview Structure 20
Appendix 2: Risk Management Plan 21
Appendix 3: Implementation Plan 22
Appendix 4: Monitoring and Evaluation Framework 23

FOREWORD



The presence of Information and Communication Technology (ICT) in our lives is increasing and gaining momentum every day. One of the key challenges facing developing countries today is that of preparing for globalisation and the information and communication revolution. The same can be said for education in Samoa. The use of ICT in education is rapidly increasing and it is therefore crucial that a policy is in place to guide, manage, monitor and enhance ICT developments to benefit education in

ICT is a key element for targeting sustainable development of the country that "*Ensure(s) inclusive and equitable quality education and promote lifelong learning opportunities for all*" (SDG4). It will provide opportunities for the distribution of information, platforms for the exchange of knowledge and, valuable tools for the administration of data.

Multiple requirements have to be met in order to realise the fullest extent of these potentials. Technical devices have to be in place when and where needed, network connections have to be fast, reliable and affordable. Furthermore, data management has to be effective at all levels.

Most important of all these requirements however is the ICT literate user. Appropriate skills and knowledge of all ICT users are needed to generate and sustain the positive impact that the use of technology can provide.

The education system is challenged to provide these important skills and knowledge. Students, teachers, principals and school administrators at all levels have to be targeted. ICT literacy is a 21st century life skill that everyone must acquire.

With the rapid and widespread growth of ICT, we have seen a mix of positive and negative challenges. For example, the influence of ICT especially the internet cannot be ignored in our students' lives. The presence of online games and easy access to non-educational sites is a concern.

This policy is therefore extremely crucial. It shall provide the backbone for ICT to serve as a tool that enables improvements in education in Samoa. It is important that this policy adds value to the teaching and learning processes and provides an enabling environment for positive change to occur.

Hon. Loau Solamalemālō Keneti Sio
Minister of Education, Sports and Culture

1. INTRODUCTION

The vision of the Ministry of Education, Sports and Culture (MESC) in Samoa is to encourage lifelong learning by way of access to, and the evaluating of knowledge through creative problem-solving and critical thinking in dynamic national, regional and global economies. As defined in SDG4, this will also ensure inclusive and equitable quality education for the sustainable development of the country.

Within the framework of this vision, the Government of Samoa recognises that knowledge based activities have become increasingly important. This recognition has prompted the Government to drive the use of ICT in education.

This policy is linked to the Government Strategy for the Development of Samoa (SDS) 20162020: Outcome 7[1] and the Communications Sector Plan (CSP) 2017-2022: Goal 2 Outcome 2.2[2] building on the need for MESC to ensure that all students and teachers in Samoa obtain equal access and possible opportunities to use ICT from ECE centres to Secondary level.

Through the introduction of this ICT in Education Policy, the Ministry hopes to better address the rapid changes of technology in education today. The effective use of ICT in the education system is essential for quality teaching and learning. Furthermore, it is key in establishing efficient management, information and administrative processes. Being part of an information age, it is elementary that all people have the basic ICT skills necessary for a quality and to participate in a digital world life and to take part in a digital society. Students must be prepared for the 21st century and given skills needed to succeed in a digital society. Some of these skills include Critical Thinking, Problem Solving, Communication, Collaboration and Visualization. Technology in education enables the development of these important skills.

2. PURPOSE

The purpose of this policy is to guide the process of embedding and integrating ICT in all schools in Samoa to:

- build a common shared understanding of what ICT in Education means among all stakeholders;
- create an enabling environment, mechanisms and priorities for ICT in education and improve communication within the education system and;

[1] SDS Outcome 7: Quality Education and Training Improved

[2] CSP Goal 2: To develop fundamental ICT development skills that can address local and regional needs; Outcome 2.2: Teachers, students & graduates possess upgraded ICT literacies & competencies

- provide modern, relevant content fulfilling the needs and expectations of educators and students.

3. GUIDING PRINCIPLES

The Government of Samoa through MESC and appropriate partners will facilitate the best possible use of ICT to:

- establish appropriate ICT Literacy skills among all students, teachers and Ministry staff;
- support teaching and learning for all subjects of the curriculum;
- enhance administrative capacities as well as
- improve communication channels between the Ministry and schools and all stakeholders.

The policy is guided by the following principles which are in line with the respective ICT related Government regulations.

3.1 Participation

ICT as such is a tool only – it provides opportunities. The impact of ICT is strongly dependent on the competency of the user. Ministry staff, Principals, teachers and students alike - their knowledge and skills in the use of ICT are of highest importance to take full advantage of the wide range of opportunities provided and to take part in the digital society.

Therefore, everyone in the education system must:

- have adequate ICT literacy – the knowledge and skills to operate a computer (tablet, laptop or desktop), open, edit, print and save or delete files, install an application
- be knowledgeable about basic requirements of cyber security – virus protection, appropriate use of Internet, Social Media as well as ethical and responsible use of ICT.

3.2 Rule of Law

This policy is linked to the Education Act 2009 and other related legislation/regulations and policies of MESC and MCIT. These must be enforced impartially and ensure the protection of human rights of all stakeholders and the security of the community at large.

3.3 Quality

A high competency level of users has to go hand in hand with high quality of the technical devices used as well as the network infrastructure and the resources provided. Appropriate quality standards have to be in place regarding security procurement and maintenance of technical equipment as well as software applications and e-resources used.

The quality of integration into teaching and learning has to be secured through appropriate professional development.

Furthermore, ICTs can be used to strengthen teacher professional development thereby contributing to the improvement of quality of education.

3.4 Relevance

ICT helps to communicate, distribute information and ensure access to all kinds of resources. However, this will only have a positive impact when guided by input from relevant divisions and requests submitted from teachers, principals, school inspectors, as well as findings from continuous research to inform best practice.

It has to be assured that content provided through the use of ICT is of relevance to the purpose intended, (i.e. teaching the curriculum or the exchange of administrative data) as well as relevant to local circumstances.

3.5 Transparency

All decisions taken and enforced must be done in an ethical transparent manner and that they follow rules and regulations. It also means that all information by the school and of the school must be made freely available and accessible to parents, students, teachers and all stakeholders who are affected by the decisions made.

3.6 Responsiveness

Throughout the education system ICT is being used in many different ways. It requires that all systems installed here are meaningful and relevant to the users' needs. Feedback by the users and sound monitoring by the system administrators must be there to ensure that these needs are met. Responsiveness is a measure of efficiency and effectiveness to serve all stakeholders in a timely manner and within reasonable timeframes.

To be responsive to the curriculum as well as to best practice of teaching and learning is the key requirement for ICT in education. The use of ICT in the school is not and cannot be a matter for teachers and students of Computer Studies only. Every subject has content areas where specific ICT skills are relevant and needed. This will have to be addressed in the syllabus for the respective subject as these needs are specific to the subject.

All users need to manage behaviour in a positive manner to ensure full functionality of all systems involved and a safe learning environment for all.

3.7 Equity and Inclusiveness

All users must be treated equally, and provided with appropriate access to ICT resources according to their needs irrespective of socially ascribed differences such as gender, socio-economic background, ethnic origin, ability, language, disability, nationality and religion.

3.8 Effectiveness and efficiency

Optimum use:

- of technical equipment to allow users' access to ICT resources of all kind at any time needed and provision of secure ICT environment leading to effectiveness and efficiency.
- of Open Educational Resource (OER) e-resources to improve quality of teaching and learning.

3.9 Accountability

Accountability must be practiced and applied to all decisions taken and effectively implemented especially in the management and use of all human, financial and other resources regardless of their sources.

All users should commit to a culture of using ICT that focuses on improved achievement for all students and effective administration within the school system.

3.10 Gender sensitivity

Even though some of the main achievements in computer programming have been reached by women[3], the use of ICT is still associated mostly with men. Access to technical resources and OER e-resources needs to be aware of stereotyping and discrimination against men and women.

3.11 Sustainability

Students must be encouraged to use ICT and teachers should be their role model here. Research opportunities, interactive learning and even educational games make learning more interesting and even fun. Careful planning for the effective use of resources to ensure programmes are inclusive of relevant stakeholders such as family members, suppliers of ICT related goods and services in the private sector as well as respective Ministries.

The use of ICT in schools needs the full support from all key stakeholders. Parents, guardians, the school committee as well as the whole community have to be aware of the vast opportunities provided by the use of ICT for the students. Their support is crucial to sustain the success.

Cyber security, financial model, Information/data security, and network systems security is of high importance regarding the use of ICT and its sustainability. Awareness regarding possible threats and appropriate protection against malware, viruses and scams has to be implemented to secure ongoing functionality of all systems and effective protection of all data.

[3] https://www.csmonitor.com/Technology/2013/1209/From-Grace-Hopper-to-Ada-Lovelace-women-whorevolutionised-computer-science/Grace-Hopper

4. POLICY STATEMENTS

ICT has become an integral part of everyday life in Samoa. Smart phones and social media already have a significant impact on communication throughout the country – however, this is not always without problems. A generation of 'digital natives' is about to grow up and the education system has to be prepared for that.

ICT provides a vast range of positive opportunities which must not be missed. Possible negative aspects need to be addressed by teaching and training as well as targeted disciplinary action if necessary.

Of high importance here is the abundance of teaching and learning resources made available by the use of ICT as well as the positive impact of interactivity, repetition and visualisation provided by e-resources. Principals and teachers have to effectively use these opportunities to optimise student learning and provide evidence of doing so.

4.1 ICT Literacy as a Life Skill

Adequate ICT literacy refers to individual skills in the technical use of ICT devices as well as knowledge about the rules of appropriate user behaviour. This is comparable to a vehicle driver's license which requests skills in how to drive the vehicle as well as familiarity with the road code. An ICT literate person knows how to use a computer or phone while at least observing basic security measures, i.e. using passwords, having virus protection running, saving files for backup etc.

At the least, basic ICT literacy has to be secured for everyone working in schools and at least for all students from Year 5 level on. A respective certification process has to be installed and regular training opportunities have to be provided.

4.2 ICT as a School Subject (Computer Studies)

Computer Studies as a subject starts at Year 9. Comprehensive knowledge and understanding about hardware, operating systems and applications are targeted here. Students obtain detailed knowledge on how to use major software applications, manage data and how to compile documents and presentations using ICT.

Computer Studies was initially created to provide basic ICT literacy. The school curriculum will further expand the focus on data management, system analysis and even programming.

4.3 ICT for Teaching and Learning (all subjects)

Availability of a wide range of ICT based resources can support teaching and learning. This will improve access to all curriculum materials, supplementary reading materials, work sheets, presentations and video clips to support teaching and learning. Furthermore, e-resources can be interactive, from quizzes with instant feed-back to educational games. This makes learning more interesting and even fun. All these resources can be provided through Wi-Fi-routers, school based or from the MESC Data Center using Wide Area Networks like the SNBH.

If internet access is available, the range of accessibility becomes virtually unlimited. Different from the MESC Data Center and the SchoolNet servers there is no quality control for the resources on the Internet. Users need to be made aware of this and respective training will be provided.

The use of e-resources for teaching and learning affects teaching styles reflecting more of a student centered approach. The Ministry will continue to provide appropriate training for teachers.

4.4 ICT for Communication

The traditional ways of using technology for communication did not become obsolete – a landline phone connection is still mandatory for every school, even though it might be a prepaid service today, similar to cash-power, more suitable for cost management.

Every school needs to have network access, at least Wide Area Network connection to MESC for administration purposes. To ensure communication with parents and guardians, school staff and the community, every school has to have a phone landline and an email address.

Video conferencing use in schools is encouraged. Individual conversations between Principals and MESC officials, training sessions for teacher professional development and even streaming lesson broadcast for students are possible. Every school must have the equipment and facilities needed to take advantage of these opportunities.

4.5 ICT for Administration

The use of ICT will improve efficiency in the collection, management and distribution of data. This will ensure timely and accurate reporting for informed and sound decision-making.

4.6 Related Documents

RELATED DOCUMENTS	LEGISLATIVE & AUTHORITY	YEAR
Education Act 2009	Ministry of Education, Sports and Culture	2009
Teachers Act 2016	Ministry of Education, Sports and Culture	2016
Public Records Act 2011	Ministry of Education, Sports and Culture	2011
National Teacher Development Framework 2018-2028	Ministry of Education, Sports and Culture	2018
School Governance Framework 2018-2028	Ministry of Education, Sports and Culture	2018
School Governance Policy 2018-2023	Ministry of Education, Sports and Culture	2018
School Management Policy 2018-2023	Ministry of Education, Sports and Culture	2018
National Professional Development Policy 2018-2023	Ministry of Education, Sports and Culture	2018
Government Teachers Appraisal Policy 2018-2023	Ministry of Education, Sports and Culture	2018

Asset Management Policy 2017	Ministry of Education, Sports and Culture	2017
Minimum Service Standards for Primary and Secondary Schools 2016	Ministry of Education, Sports and Culture	2016
Early Childhood Education Minimum Service Standards 2015	Ministry of Education, Sports and Culture	2015
ECE National Curriculum Guidelines 2016	Ministry of Education, Sports and Culture	2016
National Curriculum Policy Framework 2006	Ministry of Education, Sports and Culture	2006
National Assessment Policy Framework 2010	Ministry of Education, Sports and Culture	2010
Samoa Education Sector Plan 2013-2018	Ministry of Education, Sports and Culture	2013
Public Service Act 2004	Public Service Commission	2004
Public Finance Management Act 2009	Ministry of Finance	2009
Strategy for the Development of Samoa 2016/17-2019/20	Ministry of Finance	2016
Communications Sector Plan 2017-2022	Ministry of Communication and Information Technology	2017
Samoa National Cybersecurity Strategy 2016-2021	Ministry of Communication and Information Technology	2018
Government Internet and Electronic Mail Policy 2016	Ministry of Communication and Information Technology	2016
Social Media Policy for Government 2017	Ministry of Communication and Information Technology	2017
National ICT Policy 2012-2017	Ministry of Communication and Information Technology	2012
Crimes Act 2013	Ministry of Police and Prisons	2013
Sustainable Development Goals	United Nations	2015

5. APPLICATION AND SCOPE

It is expected that this ICT Policy is relevant for all schools and ECE centres (mission and private schools included).

5.1 ICT Literacy campaign

A set of guidelines for ICT related skills and knowledge will be developed by MESC to define levels of ICT Literacy for specified target groups (i.e. Principals, teachers, school administrators, MESC staff, Primary and Secondary students). In cooperation with NUS and SQA a certification process will be installed to assess and certify proficiency on these various levels of ICT literacy.

To support the individual achievement of the requested proficiency MESC will provide instructional resources in Samoan (manuals, videos) as well as training opportunities

(workshops, tutoring). School and cluster based activities will be implemented, for instructor guided workshops as well as for peer training or self learning. Participation in these activities will depend on the individual needs, based on pre-existing proficiency and experience.

5.2 Implementation of ICT in the curriculum

With basic ICT skills covered in the ICT Literacy campaign, specific ICT skills are integrated into relevant subject's syllabus. For example, Accounting, Economics and Business Studies use spread sheets and database applications, while Visual Arts students use image editing or Graphic Design applications.

Furthermore, the syllabus for Computer Studies as a subject will have to be adapted as well. Instead of covering the whole range of ICT use, the use of computers as problem solving and information management tools could be addressed more specifically with System Analysis and programming to be focused on more intensely.

5.3 ICT for Teaching and Learning

To support teachers and students MESC will further encourage the provision of e-resources. The MESC Data Center will be extended to contain a wide range of e-resources for all subjects and year levels to be accessible from all schools through the existing Wide Area Networks and Internet, for schools with no access to these networks.

Teachers will also be encouraged to use (Open educational Resources) OERs in their teaching as well as develop their own OERs to contribute to the OER repository of teaching resources.

Teacher training will be further extended to improve the use of student-centered teaching methods. With mobile computers, APTUS routers and resources in the SchoolNet Learning Centres, the teachers will be more active to facilitate the students' activities, answer questions and advice on the use of the resources provided.

All these new opportunities will be actively promoted by MESC in a dedicated campaign to ensure that all stakeholders, Principals, school committees and the community at large, are aware of the new opportunities and teaching strategies. Students playing games on a tablet, teachers not lecturing in front of the class – all these changes have to be facilitated and promoted to be appreciated to bring about positive impacts.

This refers as well to the use of Internet. Trainings on all levels as well as manuals and videos will be provided by MESC to ensure most efficient and safe practice.

To ensure the most effective use of ICT in schools for teaching and learning, the Minimum Service Standards (MSS) for ECE centres, schools and Teacher Quality Assurance Procedures (QAPA) will be reviewed and respective regulations implemented.

5.4 Communication

Telephone land lines, Wide Area Network and Internet access the communication between MESC and all schools is covered by ICT. To ensure the sustained availability of these resources the ICT Supervisors have to be assigned to every school and contact information provided to MESC.

MESC will provide training and support for the ICT Supervisors through all channels of communication. In addition, there will be a Support Portal installed at the Ministry, accessible through the Wide Area Network and the Internet. The portal will give free access to Antivirus application installation files and latest updates of virus definitions, educational application installation files, especially for mobile computers and eresources of all kind.

Furthermore, with a screen, a mini or stick computer and a webcam installed, video conferencing will be used between MESC and every school and even between schools alone. This will support Teacher Professional Development programs, curriculum and assessment support activities and allow the streaming broadcast of lessons.

5.5 Administration

Using ICT for administrative purposes is common practice already in all schools and Ministry alike. Exchange of data using ICT will be further improved, through email and direct access to databases on the Wide Area Networks or the Internet. Respective procedures will be developed to guide implementation.

6. ROLES AND RESPONSIBILITIES

This section describes key responsibilities and clarifies the contributing role of Principals, ICT Supervisors, Teachers, Students, Parents and Guardians, Community, School Inspectors and MESC in implementing the Policy.

6.1 Principals

- Secure the procurement and installation of all ICT hardware and infrastructure
- Appoint and observe/monitor the work of ICT supervisors
- Secure the use of ICT for data collection and all administrative purposes
- Use ICT (phone, email, messaging, social media) for own communication, especially with MESC
- Ensure there is commitment to the continuous use of ICT by all teachers and students for research, lessons and assignments
- Facilitate the school's presence on social media to support the school’s role in the community
- Lead teachers and students to observe appropriate safety measures when using ICT
- Regular stocktaking of tablets, laptops and computers assigned to their schools

- Abide by government policies and regulations in the use of social media and networks when communicating with the Ministry, parents, students and other relevant stakeholders

6.2 ICT Supervisors

- Check functionality of school's network connection every school day (Phone line, Wide Area Network router)
- Report non-functioning network connection to the MESC Helpdesk and the respective network provider
- Update antivirus application and virus definitions on all school's computers at least once per week
- Receive information from users regarding faulty school's ICT equipment; report to Principal and facilitate repair or replacement
- Ensure that students' mobile computers and storage devices are virus protected, provide applications and updates as needed
- Observe students' use of ICT regarding cyber security and appropriate content
- Advise students and teachers in the safe use of ICT
- Keep records of all activities and observations on a daily basis
- Abide by government policies and regulations in the use of social media and networks when communicating with the Ministry, parents, students and other relevant stakeholders

6.3 Teachers

- Use ICT for lesson preparation, research and development of course material
- Use ICT to support teaching and learning in accordance with the Minimum Service Standards and Teacher Quality Assurance Procedures
- Take part in the ICT Literacy campaign
- Give support to colleagues to achieve ICT literacy
- When bringing in own mobile computer, strictly follow all rules and regulations
- Strongly observe cyber security rules – use antivirus and avoid inappropriate content
- Improve own IT research skills and share with others
- Teachers to develop OERs and actively user OERs in their teaching.
- Abide by government policies and regulations in the use of social media and networks when communicating with the Ministry, parents, students and other relevant stakeholders

6.4 Students

- Use ICT to support own learning, produce assignment papers and reports
- Take part in the ICT Literacy campaign
- Give support to peers to achieve ICT literacy

- When bringing in own mobile computer, strictly follow all rules and regulations
- Strongly observe cyber security rules – use antivirus and avoid inappropriate content Improve own IT research skills and share with others

6.5 Parents and Guardians

- Support school activities in the use of ICT, especially the ICT Literacy campaign
- Support students in the use of ICT by availability of devices, data and resources
- Observe and give parental guidance to students regarding cyber security and appropriate content

6.6 Community

- Support school activities in the use of ICT, especially the ICT Literacy campaign
- Support students in the use of ICT by availability of devices, data and resources
- Be aware and give guidance to students regarding cyber security and appropriate content

6.7 School Inspectors

- Collect evidence of school ICT supervisor's activities
- Always use school network connection for communication with MESC
- Collaborate with ICTMD and other relevant divisions at MESC on practices in the use of ICT as well as possible professional development needs of teachers and principals
- Provide quarterly report on connectivity and utilisation of ICT in schools

6.8 Ministry of Education, Sports and Culture

- Provide guidelines and standards for the procurement of ICT devices, including minimum standards for donated goods
- Provide guidelines for appropriate use of ICT in schools
- Provide ongoing support and helpdesk facility for school ICT supervisors and Principals during school hours by landline connection, email and messaging
- Liaise with Telephone and Wide Area Network Providers to secure stable and reliable and consistent connectivity to all schools
- Liaise with schools to ensure connectivity to WAN to access resources through the SNBH
- Stage regular visits to all schools, at least once per school term, to check network status and provide support and on-site training for ICT supervisors
- Provide trainings for all teachers regarding the safe and successful use of ICT for all purposes
- Keep records of requests that come through the helpdesk facility
- Provide free Antivirus applications and respective updates to all schools through Network portal and during school visits

- Provide technical support for SchoolNet Learning Center facilities
- Develop and conduct the ICT Literacy campaign for all school staff and students starting from Year 5
- Provide Video Conferencing opportunities between and among MESC and all schools Provide repository of OER e-resources at MESC Data Center and secure availability of these resources for all schools
- Provide Firewall application and settings for Internet access in all schools
- Record national and cluster teacher training and professional development programs and convert into e-resources and disseminate to schools

7. MONITORING, EVALUATION & REPORTING

The Monitoring and Evaluation Framework of KPIs for this Policy is as presented in Appendix 4. The following describes briefly the monitoring at different levels in schools and ministry including its evaluation and reporting.

7.1 Monitoring in Schools

All ICT facilities (i.e. computer labs, SchoolNet Learning Center) have to be accessible and used by teachers and students during the whole school day. Records have to be kept by the school administration regarding lessons given using these facilities and students have to be given access for research and creation of assignment papers when the learning center isn't being used for classroom lessons.

Activities to be monitored in the schools mainly reflect the work of the ICT Supervisors. MESC School Inspectors and the School Operating Division will use monitoring tools to register if these tasks are properly attended to. Furthermore, they will monitor school-based activities related to the ICT Literacy campaign.

MESC IT staff will monitor the presence and technical status of the ICT equipment installed during their regular visits to every school. Furthermore, they will keep record of requests raised by the schools with the MESC Helpdesk facility.

7.2 Monitoring at MESC

Relevant MESC divisions (ICT & Media Division, School Operation Division, Teacher Development Division, Curriculum Design and Materials Division, Policy, Planning & Research Division) will monitor the:

- Progress of certifications in the ICT Literacy campaign
- Activities staged in the ICT Literacy campaign and attendance
- Status of OER e-resources in the repository by subject and year level

- Usage of OER e-resources in the schools
- Use of ICT for data collection and submission between schools and MESC

All divisions will submit their monitoring observations to the ICT & Media Division for evaluation.

7.3 Evaluation and Reporting

The ICT & Media Division at MESC will evaluate the monitoring data as submitted and provide quarterly reports to the MESC Management.

Furthermore, all stakeholders in the ICT Literacy Campaign (MESC, NUS and SQA) will regularly evaluate the progress of the campaign and revise the strategy and resources accordingly.

8. PROCEDURES

This policy further relates to these MESC internal procedures in place for more detailed guidelines regarding technical specifications, access rights and restrictions for the use of ICT at the Ministry and in Government schools:

- The Computer & Network Manual
- Email Manual
- Internet Usage Manual
- Hard & Software Manual

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EFFECTIVE DATE: October 2018

RECOMMENDED REVIEW DATE: 2023

APPPROVED BY THE HON.MINISTER OF EDUCATION, SPORTS AND CULTURE

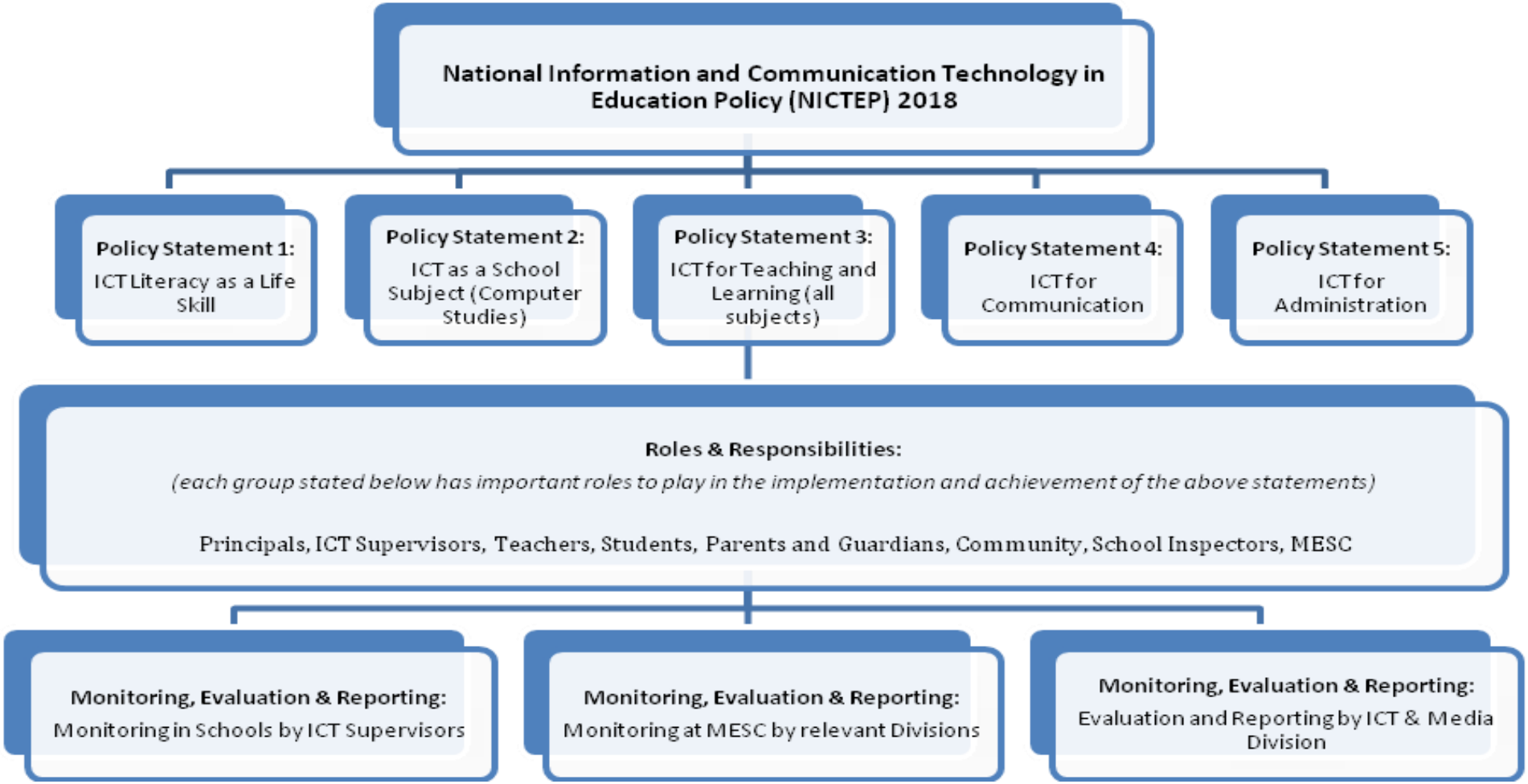
……. …….

Signature **Date**

Loau Solamalemālō Keneti Sio

10. APPENDICES

Appendix 1: Policy Overview Structure



Appendix 2: Risk Management Plan

Risk/Activity	Risk Level	Implications	Mitigation Plan
Full understanding of policy requirements and actions to be taken	**Moderate to High**	Inconsistency of implementing the policy	Conduct/strengthen awareness workshops; continuous monitoring and support by School Inspectors and MESC divisional staff
Availability of ICT equipment and reliable network access	**Moderate to High**	Everyday activities and campaigns cannot be executed as required	Secure sufficient funding from budget and donor support; continuous monitoring and cooperation with network service providers.
Training and ongoing support for ICT supervisors and teachers	**Moderate to High**	Everyday activities and campaigns cannot be executed as required	Secure regular trainings and helpdesk support, strengthen communication with staff at schools through network portals and dedicated communication channels
Availability of applications and eresources relevant to the curriculum	**Moderate to High**	Policy objectives will not be achieved – no positive impact on students' learning	Conduct workshops for MESC Curriculum officers and teachers to strengthen capability for resource related research and development
Sustainability of campaigns	**Moderate to High**	Policy objectives will not be achieved; awareness and skills will not develop as needed	Adequate activities to ensure sustainability to be included in the campaign design – campaign management, monitoring and revision to be set as ongoing tasks
Monitoring	**Moderate to High**	Policy issue areas cannot be solved	Monitor schools for changes that reflect the policy is fully integrated in school planning.
Resistance of staff to change past practices	**High**	Ineffective implementation of the policy Minimal and no improvement from policy implementation over time	Change the mind-set of staff, principals and teachers through correct and open communication by building relationships of trust. Ensure senior management are of the same understanding of the policy requirements

Appendix 3: Implementation Plan

Phase	Action	Timeframe	Responsible Ministry/Organisation
Endorsement Phase to finalise ICT in Education Policy	On-going follow up	June 2018	MESC CORE and Full Executive, Cabinet
Awareness Phase	Conduct meetings with Principals Prepare campaigns	July - September 2018	MESC- ICT&MD, TDAD, SOD, CDMD NUS, SQA
Transition Phase	Initiate campaigns Conduct trainings for campaign staff and ICT Supervisors	October 2018 - June 2019	MESC- TDAD MESC – MERD MESC SOD
Monitoring Phase	Full monitoring of all activities.	July 2019- November 2020	MESC
Review Phase	Evaluate/Conduct review on the effectiveness of policy implementation.	March 2021	MESC

Appendix 4: Monitoring and Evaluation Framework

POLICY MONITORING & EVALUATION FRAMEWORK															
Information and Communication Technology in Education Policy 2018 – 2023															
SDG TARGETS	**SDG INDICATOR**	**SDS KEY OUTCOME**	**GOALS**	**Strategy**	**Outcome**	**Indicator**	**Baseline Data**	**Year 1 Target**	**Year 2 Target**	**Year 3 Target**	**Year 4 Target**	**Year 5 Target**	**Means of Verification**	**Policy Documentation**	**Responsible division**
4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship	4.4.1 Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill	KO 7: Quality Education and Training Improved: All People in Samoa are Educated and Productively Engaged.	Effective use of ICT in Education	ICT Management	Improved use of ICT on all levels	% of schools with active ICT supervisor	2019	80% of schools have ICT supervisors	90%	95%	95%	95%	School visits	ICT in Education Policy	SOD
				ICT equipment in all schools	Improved use of ICT on all levels	% of schools having the defined range of hardware installed & functioning	2018	60% of schools are fully equipped	70%	80%	90%	95%	School visits / MSS	ICT in Education Policy / MSS	SOD
					Improved communication between schools and MESC	% of schools with phone landline and email	2018	80%	100%	100%	100%	100%	School visits / MSS	ICT in Education Policy / MSS	SOD
				ICT Literacy	All teachers having adequate ICT skills	% of teachers certified as ICT literate	2019	60%	70%	80%	90%	95%	Registration records	ICT in Education Policy / QAPA	TDAD / MERD
					All students at college have at least basic ICT skills	% of Year 9 students certified as ICT literate	2019	50%	65%	75%	85%	95%	Registration records	ICT in Education Policy	ICT/ PPRD/ CDMD MERD
						% of Year 12 students certified as ICT literate	2019	50%	65%	75%	85%	95%	Registration records	ICT in Education Policy	ICT/ PPRD/ CDMD MERD

				Use of OER e-resources	Improved teacher performance	% of teachers using OER eresources	2018	60%	75%	85%	95%	95%	School visits / QAPA	ICT in Education Policy / QAPA	CDMD / MERD
				Use of ICT for School Management	Improved collection and submission of data through ICT	% of schools submitting all administrative data using ICT	2018	75%	95%	95%	95%	95%	Statistical Digest	ICT in Education Policy	PPRD
				Monitoring and reporting on connectivity for Schools		% of satisfaction level of provider responsiveness to ministry needs	2018	Increase by 5%	Increase by 5%	Increase by 5%	Increase by 5%	Increase by 5%	School visits and reports	ICT in Education Policy	ICT