National Policy and Strategy on **ICT in Education**

Stakeholder report

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Abbreviations

ADEKUS	Anton de Kom University Suriname
BEIP	Basic Education Improvement Program
EBGS	Morovian Church Education Unit (Evangelische Broeder Gemeente Suriname)
ECOIS	Expertise Center Education and ICT Suriname
EDUCONS	Education and Communication Network Suriname
ICT	Information and Communication Technology
IDB	Inter-American Development Bank
IICD	International Institute for Communication and Development
IOL	Institute for Training of Teachers
ITT	Institute for Advanced Teacher Training
MOECD	Ministry of Education and Community Development
MONR	Ministry of Natural Resources
PC	Personal Computer
PD	Professional Development
PI	Teacher Training College (Pedagogisch Instituut)
PROGRESS	Program effective Schools Suriname
RKBO	Roman Catholic Education Unit (Rooms-Katholiek Bijzonder Onderwijs)
SEAMEO	Southeast Asian Ministers of Education Organization
TAS	Telecommunication Authority Suriname
TCT	Ministry of Transport, Communication and Tourism
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
VOJ	Secondary Education Juniors (Voortgezet Onderwijs voor Junioren)
VVOB	Flemish Association for Development Cooperation and Technical Assistance

1. Introduction

1.1 Introduction

This report presents the findings of a stakeholder consultation process in the education sector of Suriname. It is a deliverable in an overall assignment to support the development of the National Policy and Strategy on ICT in Education ICT in education.

The broader term "ICT in Education" includes school administration tasks. A management information system for the school system (called "EMISS", the Educational Management Information System Suriname) was already developed for MOECD. MOECD also has bought eSchool for school administration. The focus of the National Policy and Strategy on ICT in Education therefore will be more on ICT in teaching and learning (e-Education), although school management is touched within the policy. It also includes the enabling infrastructure, the capacity building of teachers, school administrators and MOECD, needed to implement the policy effectively.[1]

The assignment is being carried out by the International Institute for Communication and Development (IICD, The Hague, the Netherlands) and its subcontractors for the Ministry of Education and Community Development (MOECD) in Suriname, under the 2nd Basic Education Improvement Program (2nd BEIP).

The main objective of this report is to give an overview of the needs of different stakeholders involved in the development of the National Policy and Strategy on ICT in Education.

The report is based on stakeholder consultation workshops and interviews carried out in July, October and November 2013 in Suriname. In total, four regional stakeholder consultations were conducted in Marowijne, Brokopondo, Nickerie and Paramaribo (with participants from Paramaribo, Para and Wanica) and one national consultation was carried out in Paramaribo with national ICT in Education stakeholders. A consultation with the Minister of MOECD and two policy advisors was also organized in October 2013 in order to identify the vision and needs of the Minister on ICT in primary education in Suriname. In November 2013 a validation workshop was conducted in Paramaribo with representatives from all consultation workshops. Next to the face to face consultations a survey was conducted under all schools in Suriname. 200 of the 344 schools participated in the survey. Key findings of the survey are included in the report.

The methodology and research questions used in the stakeholder consultations emanate from the SEAMEO/UNESCO framework[2]. The consultations helped to get deeper understanding of, and answers to the research questions formulated in chapter 5 of the 'Current Status' report.

1.2 Methodology

The methodology is operationalized through research questions on the 10 dimensions of the SEAMEO/ UNESCO model. These dimensions are:

1. National ICT in education vision;
2. National ICT in Education plans and policies;
3. Complementary national ICT and education policies;
4. ICT infrastructure and resources in schools;
5. Professional development for teachers and school leaders;
6. Community/partnerships;
7. ICT in the national curriculum;
8. Teaching and learning strategies and methods;
9. Assessment;
10. Evaluation and research.

The regional consultations focus primarily on the dimensions 4-9, the national consultation's focus is on the dimensions 1-4 and 10. There is a slight overlap in dimension 3 regarding national ICT in Education plans and policies.

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[1] Report of current status of ICT in Education 4.0 (IICD)
[2] Report of current status of ICT in Education 4.0 (IICD)

The results of the consultations will be compiled, compared and cross-checked to:
- Create a consistent picture of the outcomes on the dimensions and priority-setting from different stakeholder perceptions;
- Determine validation issues for November consultations.

Key questions in the different consultations and their expected outcomes:

1. According to **you**, what are/constitutes Information and Communication Technologies (ICTs) for Education?
   Outcome: major elements of shared vision
2. How might e-Education contribute to educational outcomes, such as better learning outcomes, improved Dutch language and mathematics skills, lower drop-out rates and lower grade repetition rates?
   Outcome: Validated shared vision on e-Education according to different stakeholders.
3. What are the 3 key priorities to solve with e-education?
   Outcome: Based on shared vision, setting priorities to be taken up by National e-Education leaders, according to different stakeholders
4. What are the minimal actions **you** require to integrate ICT in the basic education system and to sustain it? (=focus on ownership, responsibility).
   Outcome: each stakeholder from his own perspective has formulated minimal actions required to integrate ICT in basic education.
5. Which elements should be included in the e-education policy?
   Outcome: validated inventory of key elements (on different levels), which should be included in the national e-education policy.
6. What could be the different roles and responsibilities in the national ICT in Education policy?
   Outcome: within their possibilities actors commit themselves to their respective roles and responsibilities in the implementation of the national ICT in Education policy.
7. Specifically at community and partnerships: How to stimulate your initiatives? How to support other local initiatives? What are you already doing and how to support you? What is the relevance of ICT in education for your children? With which partners do you want to cooperate?
   Outcome: Role of and opportunities for community participation and partnerships

Both in the regional consultations and the national consultation, video interviews were held with a mix of stakeholders. The interviews are semi-structured and include the same key questions posed in the workshops. As some of the respondents attach importance to confidentiality, the information they shared will be used in a general illustrative way.

2. Overview Stakeholders

For the National Policy and Strategy on ICT in Education we have identified stakeholders at different levels. In order to visualize them, we have used the onion model[3]. The students or learners are the core of the stakeholder model. Around them, we have positioned the school level, which consists of four key stakeholders: the teacher and school leader in the school, the parents and the community around the school. The third level is the district level. Here, we distinguish: inspectors as representatives of MOECD, the MOECD cluster chairperson, local civil society, local private sector and community leaders; they all contribute to creating a learning environment at school. At the National level, policy makers and educational leaders play a role in developing and implementing the National ICT in Education Policy. Most stakeholders are consulted in the design process of the National ICT in Education Policy.
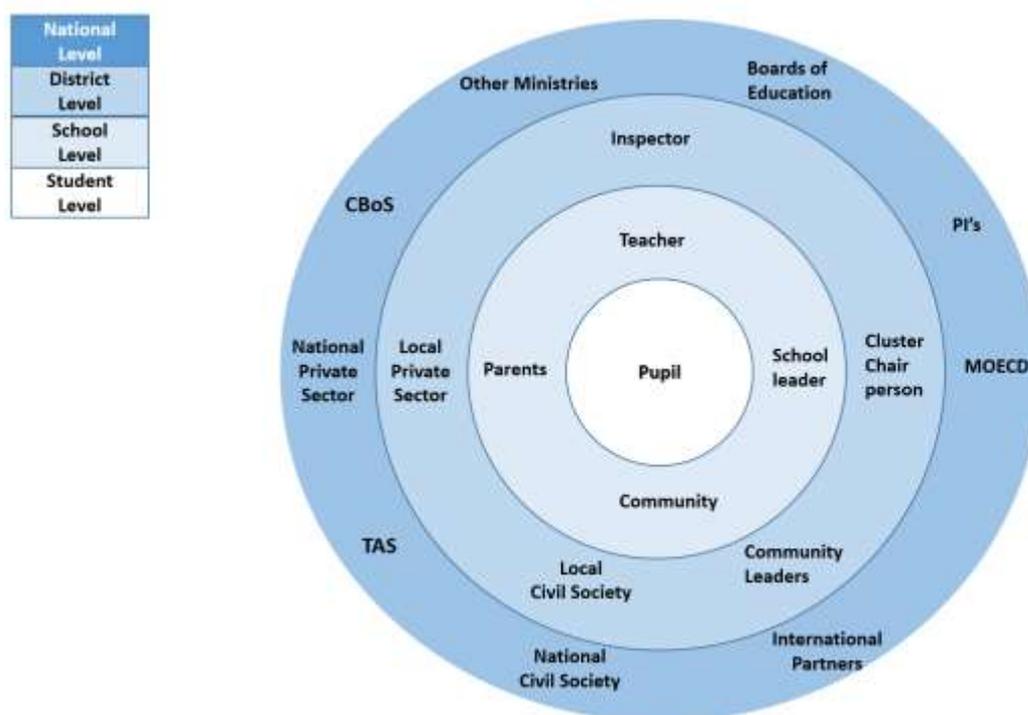

Figure 1 Overview stakeholders at different levels

2.1 Regional Consultations: student, school and district level
During the three regional consultations stakeholders from the school and district level were consulted. The students themselves, key to any educational improvement were not yet involved. This is planned for the last week of November 2013.

2.1.1 Students
The student is the central stakeholder, but in order to improve the student's learning and development (skills and attitude) the foundation for e-education should be ready. The consultations were therefore focused on the supporting stakeholders to realize improved learning outcomes.

2.1.2 Parents
The parents are key actors, both when it comes to the education of their children, as involvement in school matters. A supportive home situation is a key factor contributing to quality and relevance of education. Parents were represented in the regional consultations

2.1.3 School leaders
School leaders are responsible for delivery of quality education on school level, including linking with the parents. They are responsible for monitoring the performance of the

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[3] Stakeholder Onion Model http://tynerblain.com/blog/2007/03/13/visualize-stakeholder-analysis/. Figure 1 is an adapted version by IICD to visualize the consultation process in Suriname

students and the school as a whole (management, functioning of the teaching staff as a team).

2.1.4 Teacher
The teachers are the ones responsible for students' performance and well-being on classroom level. They are key stakeholders when it comes to integration of ICTs in teaching and learning.

2.1.5 Community
A school cannot function properly unless supported by the community and recognized by the community for its quality and relevance. However, community members and traditional leaders were not represented in the regional consultations. Separate sessions are planned to ensure input from this side.

2.1.6 Private Sector
Private sector is another key stakeholder, in offering employment opportunities and for resource mobilization. In Brokopondo and – to a lesser extend – Marowijne these are mainly the mining companies. In Nickerie it is agribusiness-and trading-related. Representatives of private sector did not take part in the regional consultations but were mentioned by the other stakeholders as contributors to local private initiatives at school level.

2.1.7 Local civil Society
With local civil society, especially registered community-based, rightholder-organizations are meant. In the interior, they are genuine mediators of the local communities' interests, especially the right to education. Local ICT initiatives are part of this group as well.

2.1.8 Inspectors
On behalf of MOECD, the inspectors are responsible for monitoring the delivery of quality education and supporting schools. As the direct link between the schools en MOECD, they are key stakeholders.

2.1.9 Cluster chairperson
Primary schools in Suriname are grouped into rayon's. The rayon's are subdivided into clusters (with a number of schools). Each cluster has a chairperson. The objective of the clusters is to provide a platform for schools to share experiences.

2.2 National level

At National level, different stakeholders were identified:

2.2.1 MOECD
The main stakeholder at National level is MOECD. Within MOECD different departments are relevant for the National ICT in Education Policy. Representatives of the different departments within MOECD participated in the stakeholder process: Bureau for Primary Education, Bureau of Education in the Interior, Directorate of Development Services, School TV, Department of Research, Planning and Monitoring, Department of Curriculum Development, Professionalization Department, 2e Basic Education Improvement Program. The Minister himself was also consulted together with two policy advisors to share their vision and needs of ICT in Education in Suriname.

2.2.2 Teacher Training Colleges (PI's)
There are five pedagogical institutes in Suriname that train people to become teachers at primary school level. One of them- CPI- participated in the consultation process. In November a focus group discussion will take place with the PI's and the ADEKUS University to deepen the information on the teacher training process and the in- service training for education professionals in Suriname and how ICT could enhance that process.

2.2.3 Other ministries
The Ministry of Transport, Communication and Tourism (MOTCT) participated in the consultation process to share its expertise in communication and connectivity plans and policies they have developed.

2.2.4 Central Bank of Suriname
The Central Bank of Suriname participated in the Kick off meeting of the consultation process. They have been consulted to share their experience with developing partnerships with potential hardware providers in China.

2.2.5 Telecom Authority Suriname (TAS)
The Telecommunication Authority of Suriname (TAS) is a key stakeholder especially in terms of connectivity to the internet.

2.2.6 International partners
MOECD has two strong partners that currently support (ICT in) Education: UNICEF (computer-aided learning in 5 pilot schools and their support to the establishment of the library ("mediatheek") at school level and VVOB that collaborates with MOECD in the PROGRESS program).

2.2.7 Boards of Education
Suriname has not only public schools; nearly half of primary schools are run by faith based organizations such as the Moravian Church (EBGS, *Stichting Onderwijs der Evangelische Broedergemeente)* the Roman Catholic Church (RKBO, *Rooms Katholiek Bijzonder Onderwijs*); Hindu (Sanathan Dharm and Arya Dewaker) and Muslim organizations. There are other types of organizations that also run schools and private schools as well. RKBO, EBGS and Sanathan Dharm participated in the stakeholder process.

2.2.8 Civil Society
The Expertise Center for Education and ICT Suriname (ECOIS) participated as representative of Civil Society to share experience on ICT in Expertise.

2.2.9 Private Sector
The most important private sector companies regarding ICT in education is Telesur. The private sector was also much mentioned as sponsor for ICT in education initiatives. They are only involved through TAS in the consultation process. They could become important in the implementation process to establish public-private partnerships between MOECD and the private sector. Another key institute in terms of private sector development is the Competitive Unit Suriname, a government body under the office of the Vice President. They also participated in consultation workshops.

2.2.10 Press
The press was invited for the kick-off meeting and was present at one of the regional meetings. It is very important in raising public awareness on the value of ICT in Education.

2.3 Roles and responsibility of the stakeholders

During the National consultation, the stakeholders together developed an overview of the roles and responsibilities of the different stakeholder in the design and implementation of the National ICT in Education Policy.

Stakeholder	Roles	Responsibilities
Other Ministries / Government	Policy makers and implementers	Develop the development policy framework, including goals for Suriname. Create environment for successful implementation of ICT4E Implement infrastructural improvements (Electricity, connectivity, maintenance structures)

MOECD	Policy maker, implementer and monitor	Create policy framework Develop Education Policies Develop ICT for Education Policy Develop Curriculum Monitor the National ICT4E Policy The National ICT in Education Policy should be developed in line with other National policies
International partners / Supporting organizations	Support and collaborate	Support MOECD in designing and implementing the policy Collaborate with MOECD Work in line with the MOECD policies
Central Bank of Suriname	Support and collaborate	Explores partnership with hardware manufacturers in China to distribute low cost devices to schools Collaborate with MOECD Work in line with the MOECD policies
TAS	Support preconditions	Develop the policy framework in line with development goals Suriname .The Telecommunication Authority of Suriname (TAS) prepared a draft "Suriname National School Connectivity Plan" in collaboration with the International Telecommunications Union (ITU).
Boards of Education	Provide Education to students and in service training to current teachers	Support MOECD in designing and implementing the National ICT in Education policy
PI's	Training of the next generation of teachers and providing of in service training	Train the teachers in the use of ICT in the classroom through an integrated approach
Civil Society	Clients of Education.	Shared responsibility with school for education of children
Inspectors	Supervise the schools	Monitor de quality of education
School leaders	Stimulate and decide on ICT in the school and classroom	ICT in school management and in teaching and learning process at classroom level
Private sector	Public Private Partnerships Training, financing/donating	Corporate Social Responsibility
Teachers	Facilitate teaching process in classroom and learning process of learners	Instructs, supervises, and Facilitates student learning.

Parents	Support students Be Involved Clients of education	Shared responsibility with school for education of children
Community	Involved	Claim making power
Students	Enjoy education Clients	Motivation and participation
Press	Create awareness	Monitor progress e-education

3. Interest of Stakeholders

During the consultations the key questions were used to identify answers for the different dimensions of the National Policy?

3.1 National ICT in education vision

Key findings consultation with the Minister of MOECD and policy advisors
- To use ICT to eliminate inequalities (distance, disability, social economics) to give all children equal opportunity to develop their individual talents (relevant market skills, as well as soft skills like self-confidence, creativity and imagination) based on the right methodology (textual, auditory or visual);
- To use ICT to improve the quality of teaching in the interior (capacity building of teachers through blended/distance education, local relevant digital learning materials to support curriculum);
- Use ICT to organize the education system (from micro level (schools) to macro level (management MOECD).

Key findings National stakeholder consultation
- All schools in Suriname should benefit from identical program at basic level with the possibility of additions to this minimum requirement in some schools.

Supporting organization: *"Everybody has a different picture of things like hardware, infrastructure, but you have to decide based on vision and objective.*
3 spear points/ interaction: teachers, curriculum, and cluster of MOECD (Department Guidance and Inspection) *in relation with the head teachers as managers of the educational process in the schools. This triangle has to be addressed and incorporated."*

Supporting organization: *"Education with ICT integrated to strengthen problem solving capacities and as a bridge to employment opportunities".*

<u>**Education provider**</u>: *"In this era, it is adamant that every child eventually has a laptop."*

Quotes from video interviews during national consultation workshop

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Key findings regional stakeholder consultations
In each region, stakeholders mentioned a list of similar ICTs, which they considered equally important to collect information and to communicate on educational matters. Across the regions, the top 3 ICTs they considered most relevant to enhance teaching and learning are:

1) computers/laptops;
2) Internet;
3) Telephones/smartphones.

A lot was shared regarding elements of a vision described by regional stakeholders in response to the key question: "what does your ideal school look like and how can ICT support it?[4] Among those elements, we can highlight the following points:

- ICT to enhance students' (independent) learning and self-discovery to improve their performances and learning outcomes;
- ICT to track students' progress, particularly through ICT-assisted school administration;
- Using ICT in the classroom and providing lessons in a digital way: this will result in higher involvement and motivation of pupils;
- Training each school teacher to use ICT and getting each pupil access to a laptop/desktop and to Internet to improve communication with teachers and other pupils;
- ICT makes teaching and learning more attractive.

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[4]As separate document the Cross-region analysis of the regional stakeholder consultations is provided

- ICT in the professional development of teachers/school leaders: ICT as subject matter and training in various ICT for effective didactics and education management);
- NB: Nickerie community-based stakeholders is the only group to mention wellbeing of their children (e.g. through sports), beyond good facilities and school maintenance. All mentioned "all for the benefits of our children." Teachers and parents displayed great affection for their learners. Their vision started right away from the learner/pupil's perspective.

Teacher: *"in 3 years' time, the whole school is digitalized and we have laptops and beamers to make learning joyful and attractive"*.

Parent:" *ICT has to be part of education from Kindergarten onwards, that children can make drawings, color pictures, Learn how to construct simple sentences, etc."*
Parent/ teacher: *"We should focus on multiple skills and this can vary per pupil, but by working together, they supplement and stimulate each other. The teacher should not be writing all the time, with his back towards the pupils".*

ICT teacher: *"ICT gives an innovative outlook. "You have to adapt constantly, and you can never be fully satisfied and sit back. Permanent adaptation is necessary to keep up with developments"*

ICT teacher: *"ICT fully integrated in teaching and learning practice. Working with ICT makes teaching a lot more fun, both for the teachers and the children."*

School inspector: *"Every child a laptop, every school at least a television. Classrooms well-equipped. Air Conditioning in the schools. "That all actors are involved, especially the communities".*

Quotes from video interviews during regional consultation workshop

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3.2 National ICT in Education plans and policies

Key findings consultation with the Minister of MOECD and policy advisors
- Include ICT in the Education Law;[5]
- The National ICT in Education policy should be a visionary document with additional working plans based on sub themes, Activity plan linked to the visionary policy document.

Key findings National stakeholder consultation
- Develop the National Policy and Strategy document for ICT in Education in Suriname together with stakeholders;
- Translate the National Policy document into an implementation plan with clearly defined activities and working groups and with guaranteed resources and communicate this clearly;
- Policy measures of the National Policy and Strategy on ICT in Education should first be piloted at small scale before implemented at national level
- MOECD should be in the driver's seat. Establish a central e-education unit within MOECD to implement, coordinate and monitor the implementation program;
- Set up a high Level committee with, among others Permanent Secretary and directors of RKBO and EBGS;
- Improve communication and administration in the education sector in Suriname (between schools, teachers, school leaders, MOECD);
- Have sustainability in mind from start, integrate ICT in budgets, and establish a telecom investment fund to have a long term commitment and not a short term project.

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[5] ICT in education will be incorporated in the new education law for primary education another deliverable of 2nd BEIP

School Guidance: *"Only in IOL there is a module on remedial teaching. Prevention of drop-out has to start as early as possible and ICT can support this. Every child has a right to education, deserves a chance".*

Supporting organization: "ICT as a means to improve education. First of all active learning and child-friendly learning. The competencies and skills of teachers".

<u>**Other supporting organization**</u>: "*All internet use, animations, simulations, educational games, tests. This can all be done in a safe way with computers. ICT stimulates creativity of children. It is astonishing what children find out by themselves."*

Quotes from video interviews during national consultation workshop

Key findings regional stakeholder consultations
- A National Policy and Strategy on ICT in Education including good internet access (e.g. in Nucleus Centers) is desired (Brokopondo). This will enable schools and the commissariat to ensure good information exchange in which learning is positively enhanced.

Content provider: "*In my dream, access to information and learning opportunities is not hampered by geographical exclusion or lack of facilities. Our next president may as easily come from Kwamalasemutu! "*

Quotes from video interviews during regional consultation workshop

3.3 Complementary national ICT and education policies

Key findings National stakeholder consultation
- Define clearly to which problem ICT is the solution within education. ICT is a tool that should support the education system. Not the end goal;
- Start at pre-school level and build from there. Prioritize primary education (including VOJ);
- Realize that education should have a role in economic development.

3.4 ICT infrastructure and resources in schools

Key findings consultation with the Minister of MOECD and policy advisors
- Improve the ICT infrastructure within MOECD (national and district: from manual to digital processes);
- Improve ICT infrastructure of the interior (hardware, electricity and connectivity).

Key findings National stakeholder consultation

Infrastructure
- Create preconditions / foundation: computers, laptops, beamers, computer labs, relevant educational software;
- Different approach of city, coast and interior, different also according to the level of ICT resources in the school and the level of ICT use at home;
- Free Access to electricity and internet for all schools;
- Teacher should be able to deliver lessons in the class room with laptop and beamer
- One-laptop-per-child is utopia but create space at all schools where students have access to computers under expert guidance;
- No more computer rooms but sets of laptops in rolling cabinets.

Digital content and educational software
- Make lesson packages with software/digital materials dedicated to specific classes (level) and the new curriculum;
- Make materials relevant for children who learn in a more visually way;
- Make lesson packages with software/digital materials dedicated to specific classes (level) and the new curriculum;
- Make materials attractive and motivating for children who are visually oriented;

- Use good digital material enabling teachers to differentiate between learning needs and styles;
- Use software apt to accommodate the different learning styles in the classroom.

Maintenance and support
- Create support structure around schools for maintenance;
- MOECD should embed investments in ICT in education in budget not only in infrastructure, but also in maintenance and capacity building of teachers;
- Make support available via chat;
- Create special trainers to train and mentor a group of schools to integrate ICT. This will also function as helpdesk or sounding board for the schools;
- Translate National ICT Policy into local ICT policies at school level;
- Digital Communication between MOECD and schools;
- Set up digital infrastructure and organize remote maintenance & support.

Preconditions for a pilot
- Energy supply in the local community;
- Internet connectivity options;
- 'Helpdesk' possibilities;
- Type of computers and services rendered relevant;
- Quality of the teachers, their experience with computers, their drive for change;
- Quality of school management, especially the head teacher;
- Options to implement it in the regular lesson program, in after-school care or a combination thereof;
- Cooperation possibilities with MOECD;
- Complexity of the project should be limited, especially for a pilot.

Key findings School survey

Infrastructure and equipment:
- Electricity is for 69% of schools no problem. For most schools electricity is not an issue. This is not for all districts the case. As expected only 5.3% of schools in Sipalwini, 55% in Marowijne and 57% in Brokopondo have electricity without a problem.
- Only 48% of all school in Suriname have access to computers. More than half of the schools don't have any computer. Sipalwini (21%) and Brokopondo (26%) score lowest, but Marowijne (40%) and surprisingly Paramaribo (48%) score below average. Highest districts are Saramaca (but only 1 school) and Para (71%).
- 66% of the schools with computers do not have a computer lab.
- Only 4 of 200 schools use computers in the classroom.
- Of the schools with computers 73% have desktop computers
- 53% of schools with computers have less than 5 computers
- Most computers are not connected to a network (73%) , but are stand alone
- Most schools (67%) are not connected to the internet. Again a big difference between districts. In Sipalwini, Brokopondo and Marowijne none of the schools have internet access, but in Nickerie (83%) and Paramaribo (50%) have internet access.

Digital content and educational software
- Only 7 % of school in Suriname has access to any form of digital content or educational software

Key findings regional stakeholder consultations

Infrastructure and equipment:
- Requesting the improvement of basic infrastructure (electricity, solutions to power failures, equipment adapted to bad weather conditions, e.g. flooding);
- Providing basic ICT infrastructure and hardware: internet access in schools (ADSL or Wi-Fi), telephone, radio/TV connection in some areas;
- Acquiring sufficient computers/laptops, beamers for the schools and learning how to use them.

Special needs for schools in the 3 regions (Brokopondo, Marowijne and Nickerie):

- Finding solutions to electricity shortage and power failures (e.g. fixed schedule for power cuts);
- ICT equipment resistant to inclement weather conditions;
- Training more teachers in the use of ICT;
- Providing technical maintenance;
- Air conditioned (class)rooms;
- Increasing government support and financial means for ICT acquisition and use;
- Organizing security of ICT equipment against theft.

Digital content and educational software
- Lack of ICT curriculum is specifically mentioned in Paramaribo workshop

    Preconditions:
- Training enough teachers across the regions (e.g. in the interior);
- Motivating teachers' openness to learn and building their ICT skills.
- Motivated teachers to prepare digital lessons

Parent: *"I introduce the computer as soon as possible. My children even assist me in writing letters. But my individual actions will not do much. Introducing ICT in education is so very important. When you go to a bank, you have to deal with ICT, at your workplace; ability to work with ICT is a requirement. So the children have to be educated in ICT a.s.a.p. and as a parent I have to do my share".*

Head teacher: Teacher training comes first. Hardware and connectivity is the next precondition.

Inspector: Classes need to have internet access available. He uses his mobile very often; this could be extended to the class room

School inspector: *"Teachers cannot even send emails and are not familiar with ICTs at all. On this very basic level, they already lacks direct contact. If basic infrastructure is not even available, how can teachers and pupils become familiar with using ICT?"*

Quotes from video interviews during regional consultation workshop

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3.5 Professional development for teachers and school leaders (and MOECD)

Key findings consultation with the Minister of MOECD
- Build capacity of teachers (basic ICT skills first and later integration of ICT; (pedagogical, content and ICT skills combined) in priority subjects (maths, Dutch language) in combination with soft skills development;
- Develop human capacities at MOECD (national & district).

Key findings National stakeholder consultation
- Focus on the teacher: build basic ICT skills, support the teacher in integrating ICT, pedagogy and content skills, show in curriculum and learning materials how ICT could be integrated in class delivery and create (e) mentor structure;
- Build the capacity of school leaders from the start to manage the change process, motivate their staff to use ICT;
- Take fear away of teachers: create a positive awareness of value of ICT;
- Training of ICT integrators to train the schools in integration ICT in the school in sustainable way;
- Prepare pedagogical institutes to create digital literate students, include new jobs like ICT coordinator or system administrator. Integrate ICT skills with pedagogical and content skills in all subjects ICT should be core competence of new teachers at Pedagogical Institutes;
- Voluntary training for teachers during their holidays.

> **Representative MOECD**: *"Strengthen teachers in their pedagogic and didactic competencies (and acting accordingly)".*
>
> *Quotes from video interviews during national consultation workshop*

Key findings school survey
- Competencies of teachers in ICT are low. Even at schools with computers most teachers are not trained in ICT skills (34%) and at 59% of these schools only a few teachers are trained. Only 6% of schools answered that all teachers are competently trained in ICT.
- The schools score the average competence of their teachers in ICT skills as low as 4.75

Key findings regional stakeholder consultations
- Teachers' attitude towards professional development: boost their openness to criticism and willingness to learn and improve their teaching capacity.
- Community-based stakeholders: Building confidence in own regional capabilities vs. external solutions
- Teachers: ICT helps to expand one's mind and development; it increases knowledge to bring pupils to a higher level (learning outcomes).
  Teacher training and upgrading: Enhance ICT knowledge & skills for teachers, e.g. through computer and Internet courses in basic schools;
- Community-based stakeholders: teacher training and refresher courses (also for maintenance); also using ICT know-how of students and parents to support teacher training.
- Developing (digital) school materials.
- Teachers: Training sufficient good and highly motivated teachers; using ICT increases their social function.
- Teachers: Use ICT to increase teacher knowledge, critical learning in order to enhance pupils' learning outcomes.
- School leaders/inspectors: Use google for information gathering during classes (e.g. through blackberry): it motivates the active participation of pupils in the classroom.

> **Teacher**: *"Train teachers in effective use of ICT to differentiate and enrich lessons and in monitoring of student's performance".*
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> **ICT tech supporter**: *"Train the whole range of local stakeholders".*
>
> **Teacher**: first of all is proper education by well-trained and motivated teachers
>
> *Quotes from video interviews during regional consultation workshop*

3.6 Community/partnerships

Key findings National stakeholder consultation
- Involve the community in use of ICT at schools. Train them also in basic ICT skills
- Start school networks to collaborate, share knowledge and experiences between schools
- Collaborate with other ministries (TCT,MONR) to influence the progress of internet connectivity and rural power supply

> **Educ. provider**: *"Communities and parents are needed to support their children."*
>
> **Supporting organization:** *"don't forget the parents. Involve them as important supporters."*
>
> **Supporting organization:** *"Starting point: local communities: Focal point for 'Connect a School, Connect a Community'.*
>
> *Quotes from video interviews during national consultation workshop*

Key findings school survey
- Partnerships important in acquisition computers. 14% received support of companies, 41% had partnerships with donors

Key findings regional stakeholder consultations
- Community-based stakeholders: Cooperate with other organizations, schools (e.g. Mulo School Moengo has ICT center), Inspection (MINOV), MINOV administrative departments, Telecom companies (e.g. Telesur), clusters.
- Getting active participation of all actors in making an ICT inventory of different schools and neighborhoods
- Collaborating with the government and businesses to get ICT infrastructure and equipment.
- Community-based stakeholders: Overcome lack of trust and confidence in own local initiatives versus initiatives from "the city". Instead: Increase communication by using faster and cheaper ICT.
- Community-based stakeholders: Taking own initiatives: e.g. In Marowijne, 'taking own initiative' to fundraise for the lacking infrastructure and ICT equipment was highlighted; own initiative to get ICT work force to train teachers and maintain hardware was purposefully mentioned.
- Community-based stakeholders support each other and share knowledge on use of ICT.
- Fundraising for ICT acquisition

ICT teacher (about involvement of parents): *"They are not organized, but generally speaking they do see the relevance of ICT. If you ask them, they respond to support. Bigger fundraising is very difficult, however."*

School inspector: *"The school has to contribute to the development of the community. Formative task of the school, in combination with the parents. Link with after school care! Education happens inside and outside the school, the whole day long".*

Quotes from video interviews during regional consultation workshop

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3.7 ICT in the national curriculum

Key findings consultation with Minister of MOECD
- Develop local relevant digital learning materials that meet experience and perception of children to support the current curriculum.

Key findings National stakeholder consultation
- Develop a software program for math and language education to support the current curriculum adapted to Suriname. Train the teachers how to use this in the class room;
- Integrate ICT not only in primary education, but also in VOJ, VOS and tertiary education;
- Digitalize all textbooks;
- Build capacity of School TV to design and produce local relevant digital learning; material (interactive and multimedia) that supports the curriculum.

Key findings regional stakeholder consultations
- School leaders/inspectors (Brokopondo): digitizing learning materials and using ICT to enhance teaching methods, through adapted software;
- School leaders/inspector (Marowijne): ICT should be taught as subject matter; ICT-assisted programs should be developed for math, language and other curriculum subjects;
- School leaders/Inspector (Nickerie): Connecting ICT use to themes, e.g. in kindergarten, children playfully learn to recognize colors on the PC, teachers using Paint with pupils in the classroom.
- School leaders/Inspector (Paramaribo) In consultation with the inspection, include ICT in the course schedule. ICT integrated in all subjects or computer education as separate subject? There is still confusion about education in ICT and ICT in education. Developing/using digital programmes for mathematics and language support. Computer training for all children.

- ICT to collect information and store presentations (Paramaribo)

> **ICT teacher**: *"Try to fit in ICT in curriculum. This is a precondition. Well-trained teachers needed".*
>
> *Quotes from video interviews during national consultation workshop*

3.8 Teaching and learning strategies and methods

Key findings National stakeholder consultation
- Step-by-step approach is needed. Use ICT to increase attractiveness of lesson delivery. Take into account that teachers are overburdened, too much innovation;
- Look at good practices: for example Gijsbertschool, Nabawi, OS Houttuin 1 en 2 have integrated ICT in the lesson plan;
- More group assignments for students with a computer;
- Use blackberry for information gathering during some classes and stimulate active learning;
- Improve learning outcomes with visual and clear educational materials for each subject;
- Give students space to repeat digital learning materials in own time;
- Reassure that it is not a problem if students know more than teachers;
- Integration in teaching: teach creative didactic skills, interaction and dialogue between teacher and student;
- Free teachers from part of their job to stimulate e-Education in their school;
- Promote self-motivation and individual assignments with students, teachers and the community;
- Prepare the student for the knowledge society.

> **Education provider**: *"Nowadays many children have a Blackberry. We have to think in a positive way on how to make integration in the lessons possible".*
>
> **Supporting organization:** *"Children are not interested in explanations and manuals, but they find out learning by doing!"*
>
> *Quotes from video interviews during national consultation workshop*

Key findings regional stakeholder consultations
- School leaders/inspectors: Helping children to acquire ICT skills as early as possible from home (key parents' role);
- School leaders/inspectors: ICT are visual and auditory tools (very illustrative and informative). They provide more opportunities for children, help them to learn independently and they support their learning outcomes at district level;
- Community-based stakeholders: searching for information through use of blackberry ('BB') in the classroom, playing DVDs and discussing content and pictures in the classroom;
- Community-based stakeholders in the 3 regions: ICTs give pupils motivation, knowledge; support them in their self-discovery learning. Similar points across the 3 regions;
- Teachers and school management referred to the benefits of ICT for multiple intelligences (mostly sensory modalities);
- Pupils and teachers can, themselves, quickly search for information (respectively for assignments or teaching);
- More child friendly and student-centered education. ICTs fit in the pupils' world!

School inspector: *"Teaching is much easier using ICTs. Students apply a lot of new learning activities thanks to wider perspective of ICT (sms, drawings etc.)"*

Head teacher: *"ICT enables child-centered teaching and learning. It triggers the curiosity and creativity of the child. The teacher will be more in coaching and guiding".*
Care coordinator*: "ICT makes it much easier to integrate life skills in the curriculum".*

Teacher: *"ICT contributes to active learning. "I see children working independently. They have a window on the world and know what is happening outside and relate it to their own reality".*

School inspector:
"Using ICT effectively means that teacher has to prepare very well in order to teach effectively with the right assignments. ICT makes education more visible, brings the world inside the classroom, give a broader perspective".
Head teacher:
"Active learning, children working on different assignments. Working with books, talking and chalking is so old-fashioned."

Quotes from video interviews during regional consultation workshop

3.9 Assessment

Key findings National stakeholder consultation
- ICT integration in primary schools should connect with requirements at secondary education
- Use ICT to support special needs groups, to increase their opportunities

Key findings regional stakeholder consultations
- Going along with new ICT developments and working on various subjects with ICT. Community based stakeholders: Pupils can gather information independently. Motivation;
- ICT can help for well-functioning educational organizations (quality of education).

3.10 Evaluation and research

Key findings consultation with the Minister of MOECD
- Build capacity of all administrators (national, district and school level) to provide real time data.

Key findings National stakeholder consultation
- Build in checks and balances for proper implementation (readiness/ willingness, responsibilities and roles of the envisaged actors, management and accountability provisions);
- Monitor result of ICT in education (collect statistics);
- Evaluate every step of implementation (with baseline measurement);
- Improve data collection and school management;
- Clear M&E structure to monitor implementation of National Policy and Strategy on ICT in Education
- Quality Control is needed to coordinate, manage and monitor progress of the implementation.

Key findings regional stakeholder consultations
- School leaders: Monitor ICT effects on quality of teaching and school administration: digitally save all data/information from teachers and pupils + working faster;
- Community-based stakeholders: Making use of the computer/Internet for distance learning (through Voice-over-IP e.g. skype) and research.

Appendix 1 - Overview of participants of different stakeholder consultations

This is a separate document:

[D3 appendix 1 participants](#)

Appendix 2 Cross regional analysis per stakeholder

This is a separate document:

[D3 Appendix 2 Cross-regional analysis per stakeholder](#)

Appendix 3 Analyses National Workshop Paramaribo

This is a separate document:

[D3 Appendix 3 Analyse National Workshop Paramaribo](#)

Appendix 4 school survey

[D3 Appendix 4 School_survey_Suriname full report 1.0](#)