ADB

Technical Assistance Report

Project Number: 47201
Capacity Development Technical Assistance (CDTA)
October 2013

Solomon Islands: Information and Communication Technology for Better Education Services

(Financed by the Republic of Korea e-Asia and Knowledge Partnership Fund)

Asian Development Bank

CURRENCY EQUIVALENTS
(as of 18 October 2013)

Currency unit	–	Solomon Islands dollars (SI$)
SI$1.00	=	$0.13630
$1.00	=	SI$7.33676

ABBREVIATIONS

ADB	–	Asian Development Bank
DFL	–	distance and flexible learning
ICT	–	information and communication technology
ICT4E	–	Information and Communication Technology for Education
MEHRD	–	Ministry of Education and Human Resource Development
NEAP	–	National Education Action Plan
SCS	–	submarine optical fiber cable system
SIEMIS	–	Solomon Islands Education Management Information System
TA	–	technical assistance
USP	–	University of the South Pacific

TECHNICAL ASSISTANCE CLASSIFICATION

Type	–	Capacity development technical assistance (CDTA)
Targeting classification	–	General intervention
Sectors (subsectors)	–	Education (education sector development, transport and information and communication technology)
Themes (subthemes)	–	**Social development** (human development), gender equity (gender equity in human capabilities), capacity development (institutional development, organizational development)
Location (impact)	–	Rural (medium), urban (medium), national (high)
Partnership	–	Republic of Korea e-Asia and Knowledge Partnership Fund

NOTE

In this report, "$" refers to US dollars.

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I. INTRODUCTION

1. The Asian Development Bank (ADB) is supporting the development of a submarine optical fiber cable system (SCS) in Solomon Islands where access to affordable telecommunications, particularly high-speed (broadband) internet, is low because of the dependence on satellite connectivity.[1] Once an SCS is established, wholesale bandwidth prices are expected to halve, leading to a conservatively estimated retail price reduction of 20%.

2. The SCS will impact most significantly the three large central island areas (Honiara, Auki, and Gizo). It is as yet unclear how the SCS will influence connectivity in the remote periphery islands. However, cell phone networks have grown rapidly following deregulation in 2010, and local practices for data dissemination have emerged. Cell phones can be an important conduit to broaden utilization of information and communication technology (ICT). The interest of cell phone companies in expanding the number of cell sites that can tap into microwave signals from an SCS presents an opportunity to increase connectivity to the outer islands.[2] Solomon Islands already has about 70% cellphone services coverage, which can provide useful lessons for the implementation of an overall ICT plan.

3. The technical assistance (TA) will examine the potential contribution of ICT to the education sector in addressing constraints to managing and delivering services to widely dispersed and isolated schools in Solomon Islands.[3] The TA activities and outputs are expected to facilitate future application of ICT to education management and service delivery. The TA will contribute to more equitable service delivery, and increase benefits of the investments made through development of the SCS. The design and monitoring framework for the TA is presented in Appendix 1.

II. ISSUES

4. **Education sector and information and communication technology.** Solomon Islands is well placed to develop an ICT for Education (ICT4E) strategy, and is finalizing an overall ICT policy and strategy. Within the education sector, a sector-wide approach supports coordination and policy dialogue between the Ministry of Education and Human Resource Development (MEHRD) and its development partners. MEHRD is also focused intensively on improvements to the Solomon Islands Education Management Information System (SIEMIS). Under the National Education Action Plan, 2013–2015 (NEAP), MEHRD will establish an ICT division in early 2014, and has engaged an on-demand advisor to analyze the requirements for SIEMIS improvement and to train staff.

5. Expansion of distance and flexible learning (DFL) will be an increased focus of the next NEAP, 2016–2018. In the current NEAP, 2013–2015, MEHRD has made a commitment to use situated (workplace or school-based) learning through DFL on a large scale for the professional development of teachers nationwide. Several pilot ICT initiatives have been undertaken in the past and are perceived to have had mixed impacts. Typically, they have been conceived and implemented as stand-alone pilot projects, often driven largely by external players and linked only tenuously to MEHRD policy and strategic planning.

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1 ADB. 2012. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Grant to Solomon Islands for the Broadband for Development Project*. Manila.

2 Two companies provide cell phone services in Solomon Islands: Solomon Telekom and Bemobile. Solomon Telekom is a local company, while Bemobile is from Papua New Guinea.

3 The TA first appeared in the business opportunities section of ADB's website on 1 October 2013.

6. At the higher education level, the University of the South Pacific (USP) plans to develop a new campus in Ndoma (with ADB support) where DFL programs will constitute an important element of the USP program, demonstrating the potential contribution of ICT to provide quality learning experiences that transcend national and geographic boundaries. USP is advanced in its distance learning strategy, and is pilot testing its second generation of tablet computing for staff and students.

7. **Technology and applications at school level—education management.** Because of the dispersed and remote islands, enhancing communication in Solomon Islands schools will necessitate addressing a wide range of schools. ICT solutions will need to be developed on a school-by-school basis. As the country moves toward planning systems for decentralization of education services (targeted for December 2015), the success of the ICT plan is critical to improving two-way communication between MEHRD and education authorities, and the schools.

8. Identification of technology and applications will require the development of new systems to ensure that the use of these technologies produces the benefits expected. New administrative systems and resources will need to be established so that education authorities and MEHRD can effectively manage and respond to improved communication with schools. Under decentralization efforts, head teachers and communities may become increasingly accountable for teacher and student attendance. Cell phone applications will need to be developed for reporting this, and education authorities will need systems to record and respond to the information. It is critical that the new systems are well thought out, thorough, and sustainable.

9. **Solomon Islands education management information system.** An SIEMIS electronic entry system at the school level will increase data accuracy and eliminate the need for data entry at the provincial education authority level and central MEHRD levels. The reduction in the need to transpose paper data into electronic form will allow SIEMIS to transition to a system in which students' names can be related to unique identifier numbers, allowing schools to track information on individual students. This will allow MEHRD to improve analysis of national data by disaggregation to identify trends and patterns that warrant further research and possible interventions. Improvements in SIEMIS will allow an interactive system for sharing information to help school and teacher performance, and guide MEHRD and education authority policy development and resource allocation.

10. **Teacher management.** MEHRD and education authority management of the teaching work force is hampered by a lack of ability to verify data accuracy easily. Use of electronic templates and new technology will allow for quick reporting of information on enrollment numbers, grade levels, and projected new enrollments at the beginning of the school year in February, which will allow more accurate staff allocation. It will also allow for better management of teacher work load and equitable teacher–student ratios; teacher salary calculations; and teachers' benefits such as accommodation allowances, leave, confirmation of progression in service, and sick leave. Technology will also allow for monitoring of education authority or MEHRD response times to teacher queries, and developing strategies to improve services.

11. **Financial management.** MEHRD is required to ensure appropriate usage of grants to schools to promote school-based management. In a largely cash economy, the risk of school grants being misappropriated or used outside policy guidelines is high. Moreover, MEHRD's ability to travel to schools to verify the use of funds is very limited because of low staff numbers and budget constraints. New technology, specifically using cell phones with built-in cameras, will

allow receipts to be scanned and digitally stored, physical evidence to be photographed, and the school grant execution form to be completed on an electronic template.

12. **Asset management.** Under the NEAP, MEHRD will improve education access by ensuring that classrooms meet minimum standards for building conditions and equipment. MEHRD has begun a survey of all schools to establish a baseline of conditions that will allow MEHRD to calculate the longer-term costs of maintaining infrastructure and new capital works. Such information will need to be updated continually under a database for asset management, and quality of information will be crucial. With limited resources to visit all schools regularly to update and verify data, technology will allow development of templates for entering data on school assets, which can then be electronically entered into the national asset management database, avoiding consuming manual data entry systems. Built-in cameras can allow schools to send photographs if required.

13. **Technology and applications at school level–teaching and learning.** The most immediate impact of the rollout of improved two-way communication between schools and education authorities will be to improve effective management of education. Technologies and applications utilized will almost certainly have synergies with the NEAP objectives of improving education access and quality. The TA will support desk studies to identify and explore currently available applications relevant to education management needs. However, a similar and integrated approach needs to be given on how to harness and build local capability to generate teaching and learning applications such as educational multimedia for transmission and transfer as podcasts.

14. An important feature of mobile devices is the integration of sound, visuals, text, and often sensory input and output in a single device. This has particular significance in Solomon Islands where there is widespread illiteracy and multiple local languages. Local repurposing of international open-source content can easily be done by replacing audio tracks with commentaries in vernacular languages. MEHRD can also benefit from programs developed elsewhere, including cell phone and short message service-based applications for literacy and numeracy development, testing, and data collection, which are increasingly likely to be released under Creative Commons licenses. Recently developed local content for curriculum and teacher education is also available for repurposing under similar license arrangements.

15. In remote communities, schools can play a role in supporting more holistic approaches to learning that look at the wider needs of children and community. The success of the schools initiative may also open up opportunities for improved communication systems for health and social protection in Solomon Islands, increased responsiveness in emergency situations, and other follow-on benefits at the local community level.

III. THE TECHNICAL ASSISTANCE

A. Impact and Outcome

16. The impact will be improved management and delivery of education services, particularly at the periphery level, due to appropriate use of ICT. The outcome will be enhanced capacity of the education sector in ICT application at subnational levels.

B. Methodology and Key Activities

17. The TA will achieve the following outputs with key activities.

18. **Output 1: Development and implementation of a gender-inclusive ICT plan linking MEHRD, provincial education authorities and schools.** MEHRD is developing and implementing an ICT plan focused on improving efficient and cost-effective links between MEHRD at the central level and at the education authority level. The next phase of expanding two-way communication between the provincial level and school level has a scope and complexity that means MEHRD will require significant support. The development of an ICT plan for two-way communication at the school level would require data gathering and field research at each educational institution to ensure that each school has a local solution based on a bottom–up approach, surveys of existing connectivity and ICT use, testing of options, development of communication templates and applications, administrative systems development, and purchasing or subsidizing the purchase or use of cell and related devices.

19. **Output 2: Identification of ICT hardware options, development of suitable applications, and piloting their use in rural or remote areas, including capacity building.** This output aims to enhance two-way communication, education management, teacher professional development support, teaching and learning resources, as well as capacity building for ICT adoption at the school and school community levels. Following consultations between MEHRD, education authorities, teaching professionals, and school communities, a consensus will be reached on priority areas where ICT can improve education management so it will have the greatest impact on improving student learning outcomes. A mix of technologies—including cell phones, tablets, and radio—will be investigated to ensure these priority applications can be implemented and are the best options for the local school context. Priority areas may include reporting upward and downward, for example on student and teacher presence, school disruptions, ministry announcements, results, managing teacher salary and entitlement requirements, SIEMIS data collection, public finance management requirements, verification of information, dissemination of teacher support resources, learning materials, and resources to promote inclusive education practices. As part of the rollout of these applications, schools will be supported to undertake a capacity analysis so school communities can take advantage of these technologies. A range of modalities will be available for capacity development on ICT applications and usage that best suits the local context and reaches all relevant stakeholders in the school community.

20. **Output 3: Comprehensive assessment study conducted on how enhanced access to ICT can add value to the DFL**. This includes identification of constraints and opportunities within the education sector. The assessment study will help prepare the groundwork for an eventual national level ICT4E strategy ready for implementation in the 2016–2018 NEAP. This will be aligned with the National ICT Strategy and National ICT Policy, which are being drafted. The study will draw on the experience of existing ICT initiatives in Solomon Islands and global best practices, as well as the sector assessment prepared for the Broadband for Development Project supported by ADB (footnote 1). The assessment will also include a gender analysis to ensure gender-inclusive considerations in its recommendations.

21. **Output 4: Convene ICT4E workshop and forum to raise awareness, identify potential and constraints, and share findings and lessons learned from the TA outputs**. Workshops and other modalities can facilitate critical discussions and make policy recommendations on the effective role of ICT4E in Solomon Islands, which will lay the groundwork and road map for a more comprehensive sector plan for ICT in education under the 2016–2018 NEAP.

C. Cost and Financing

22. The TA is estimated to cost $600,000 equivalent, of which $500,000 will be financed on a grant basis by the Republic of Korea e-Asia and Knowledge Partnership Fund and administered by ADB. The government will provide counterpart support in the form of: counterpart staff, office accommodation, office supplies, secretarial assistance, domestic transportation, and other in-kind contributions. The cost estimates and financing plan is in Appendix 2.

D. Implementation Arrangements

23. The Ministry of Finance and Treasury ICT support unit will be the executing agency. MEHRD will be the implementing agency. MEHRD will identify a responsible officer to coordinate activities with the consulting firm and consultants. Training and technical support will be implemented and administered by a consulting firm. ADB will support the selection and recruitment of the consultant firm.

24. The TA will require a total of 120 weeks of consultant services (40 weeks international and 80 weeks national). A consulting firm, in association with international and national consultants, will be engaged following the fixed budget selection process and simplified technical proposals by ADB in accordance with its Guidelines on the Use of Consultants (2013, as amended from time to time). In case of difficulty in finding a qualified firm, individual selection will apply for consulting services. Procurement will follow ADB's Procurement Guidelines (2013, as amended from time to time). The firm and consultant inputs will be on an intermittent basis, responding to government requirements and progress made during implementation. The outline terms of reference for consultants are in Appendix 3. The TA will be implemented over 24 months commencing on 1 April 2014 after MEHRD commences the first phase of the MEHRD ICT plan and terminating on 31 March 2016.

IV. THE PRESIDENT'S DECISION

25. The President, acting under the authority delegated by the Board, has approved ADB administering technical assistance not exceeding the equivalent of $500,000 to the Government of Solomon Islands to be financed on a grant basis by the Republic of Korea e-Asia and Knowledge Partnership Fund for Information and Communication Technology for Better Education Services and hereby reports this action to the Board.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators with Baselines[a]	Data Sources and Reporting Mechanisms	Assumptions and Risks
Impact Improved management and delivery of education services, particularly at the periphery level, due to appropriate use of ICT	By 2018: Increased practical usage and application of ICT in education information management and service delivery[b] at the provincial and school level	SIEMIS data ICT Support Unit reports MEHRD reports Provincial reports School reports	**Assumption** The government continues to recognize the importance of ICT in education in national development **Risks** Political and economic risks to maintaining adequate government support to the education sector Human resource staffing and capacity is weak
Outcome Enhanced capacity of the education sector in ICT application at subnational levels	By Q1 2016 Provincial education authorities and schools both use ICT applications that improve management and access to education services	SIEMIS data MEHRD reports Provincial reports School reports	**Assumption** Government support for ICT-based improvement in education sector remains a priority at the subnational level **Risk** Ongoing education service delivery challenges and constraints preoccupy ministries, and ICT-based applications are regarded as low priority
Outputs 1. Development and implementation of a gender-inclusive ICT plan linking MEHRD, provincial education authorities, and schools 2. Identification of ICT hardware options, development of suitable applications, and piloting their use in rural or remote areas, including capacity building 3. Comprehensive assessment study conducted on how enhanced access to ICT can add value to DFL	By Q2 2015 Possible constraints to gender-inclusive access and use of ICT have been identified By Q2 2015 ICT plan for ICT communications and management is used By Q3 2015 Range of ICT options is appropriate, user-friendly, and supports back-end systems to take up and act on information By Q3 2015 ICT capacity building on ICT application results in high usage By Q3 2015 Assessment is finalized and recommendations are formulated for the 2016 NEAP to be discussed at the culminating workshop	MEHRD reports Provincial reports Project progress reports	**Assumption** Schools value communication with the education authorities **Risks** Take-up of ICT among end users is low Breach of privacy and copyright laws Security breaches of education data **Assumption** Cell phone companies tap into SCS to provide more affordable cell phone usage **Risks** Development of user-friendly applications is too costly Hardware falls into disrepair with no maintenance plan or repair capacity at the local level

Design Summary	Performance Targets and Indicators with Baselines[a]	Data Sources and Reporting Mechanisms	Assumptions and Risks
4. Convene ICT4E workshop and forum to raise awareness, identify potentials and constraints, and share findings and lessons learned from the TA outputs	By Q4 2015 Identify overall recommendations and considerations that lay the groundwork for the 2016 NEAP and a gender-inclusive ICT4E plan By Q1 2016 Lessons are recorded and incorporated into future deliberations on a gender-inclusive ICT4E plan and in the 2016 NEAP		**Assumption** Affordable and appropriate ICT can increase access to information. **Assumption** Other pieces of the ICT plan for management and communications have sufficient time to develop conclusions that can inform an ICT4E
Activities with Milestones 1.1 Study on MEHRD data needs and knowledge sources at all levels (ministry, education authority, school); report summarizing requirements for SIEMIS system with identification of sources and recipients of data (Q2 2014) 1.2 Field and desk studies in at least three districts in three provinces to gain 100% samples of access and use of existing ICT, including known or anticipated future ICT developments in those districts; report containing a range of scenarios for consideration by different schools and communities (Q3 2014) 1.3 Draft national ICT plan to link schools, education authorities, and MEHRD, taking into account data requirement needs at all levels and in differing school contexts (Q1 2015) 1.4 Workshops at the district level to develop local (school or district) ICT plans compatible with the draft national plan; report on how local planning can constrain and enable factors for national planning (Q1 2015) 1.5 Redrafting and finalization of ICT plan, taking into account local planning requirements (Q2 2015) 2.1 Desk research and report to identify available technologies, relevant applications, and MEHRD requirements (see 1.1) (Q2 2014) 2.2 Field research to audit current hardware, usage, and capability (see 1.2) and to establish a baseline of existing methods and extent of data acquisition for educational management, distribution of resources for teaching and learning enabled by ICT, and interactive support for users (Q3 2014) 2.3 Specification and procurement of suitable hardware and applications to supply identified requirements for data acquisition; resource distribution; and interactive support to and between officers, teachers, and learners where appropriate (Q4 2014) 2.4 Trials of ICT hardware and applications in selected sample districts with three provincial authorities; report with recommendations for rollout to all schools in those provincial authorities (Q1 2015) 2.5 Capacity building and rollout to all schools within at least two provincial authorities; evaluate and report on rollout by comparison with baseline study (see 2.2) (Q2 and Q3 2015) 3.1 Identify ways in which existing distance learning provision from Solomon Islands National University and USP could be adapted for e-learning and cellphone learning, including requirements for institutional capacity or capability enhancements, within the constraints of known plans for ICT in those institutions (Q2 2015) 3.2 Identify available and appropriate online distance learning programs or resources from other providers in areas covered by existing DFL provision (initial teacher training and school leadership) (Q2 2015) 3.3 Adapt appropriate professional development materials from Solomon Islands		**Inputs** **ADB: $500,000** (Republic of Korea e-Asia and Knowledge Partnership Fund) Note: The government will provide counterpart support in the form of: counterpart staff, office accommodation, office supplies, secretarial assistance, domestic transportation, and other in-kind contributions

Activities with Milestones	
3.4 National University and USP for delivery to users in schools in the sample districts (see 2.3 and 2.4); acquire and install where necessary content and applications from other providers (see 3.2) (Q3 2015) 3.5 Trials of adapted and acquired learning materials to support teacher professional development activities in schools in the sample areas;[b] evaluate and report on take-up and use of e-learning components to supplement, complement, or substitute for existing distance learning programs; identify constraining and enabling factors (Q3 2015) 4.1 Identify and invite contributors to an inception workshop and showcase of technologies and applications (2014, Q2) 4.2 Conduct inception workshop drawing on outputs from activities 4.1, 1.1, and 2.1; arrange follow-up consultations with stakeholder groups, including telecommunication companies and training providers, to inform desk and field studies and drafting of ICT plan in 2014 (see 1.3) (Q3 2014) 4.3 Prepare and maintain an interactive website to keep stakeholders informed of activities and emerging findings from outputs 1, 2, and 3; website should include a private virtual workspace for content management of reports and consultations or workshops (Q3 2014 onwards) 4.4 Organize a final planning workshop to report on outputs from these studies (see 1.5, 2.5, and 3.5) and to inform shaping of the 2016 NEAP and further development of ICT4E policy and plan (Q1 2016)	

DFL = distance and flexible learning, ICT = information and communication technology, ICT4E = information and communication technology for education, MEHRD = Ministry of Education and Human Resource Development, NEAP = National Education Action Plan, Q = quarter, SCS = submarine optical fiber cable system, SIEMIS = Solomon Islands Education Management Information System, TA = technical assistance, USP = University of the South Pacific.

[a] Percentage increase will be determined during the baseline survey at the beginning of the TA.

[b] Gender-disaggregated baseline data for education will be collected at the beginning of the TA. Based on the baseline, the percentage of females targeted for components will be adjusted if necessary.

Source: Asian Development Bank.

COST ESTIMATES AND FINANCING PLAN
($'000)

Item	Amount
Republic of Korea e-Asia and Knowledge Partnership Fund[a]	
1. Consultants	
a. Remuneration and per diem	
i. International consultants	175.0
ii. National consultants	40.0
b. International and local travel	44.0
2. Equipment[b]	
a. ICT devices (hardware)	50.0
b. ICT applications and connectivity support[c]	120.0
3. Workshops	31.0
4. Contingencies	40.0
Total	**500.0**

ICT = information and communication technology.

Note: The technical assistance (TA) is estimated to cost $600,000, of which contributions from the Republic of Korea e-Asia and Knowledge Partnership Fund are presented in the table above. The Government of Solomon Islands will provide counterpart support in the form of office accommodation, transportation, staff time, per diem, and other coordination support whose value is estimated to account for 16% of the total TA cost.

[a] Administered by the Asian Development Bank.

[b] Equipment, including ICT devices and applications, will be coordinated with the executing agency and implementing agency to be turned over to schools upon TA completion because of the focus of technology utilization at the school level. Procurement will be conducted via the shopping method, in close coordination with the executing and implementing agencies.

[c] ICT applications are budgeted at $40,000 and will focus on adoption of existing open-source applications. Connectivity support is budgeted at $80,000 and will focus on supporting school user connectivity funds for 100 pilot schools in three provinces.

Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

1. The technical assistance (TA) will require a total of 120 weeks of consultant services (40 weeks international and 80 weeks national). One consultant must have gender expertise and the responsibility for gender-responsive analysis, design, and recommendations. The gender consultant must ensure a gender perspective for gender-inclusive information and communication technology (ICT) application in education. A consulting firm or institution will be engaged to provide the outputs described below. The firm and consultant inputs will be on an intermittent basis, responding to government requirements and progress made during implementation.

2. Output 1: Development and implementation of a gender-inclusive ICT plan linking MEHRD, provincial education authorities, and schools. Tasks are as follows:

(i) Study on MEHRD data needs and knowledge sources at all levels (ministry, education authority, school); report summarizing requirements for SIEMIS system with identification of sources and recipients of data (Q2 2014)
(ii) Field and desk studies in at least three districts in three provinces to gain 100% samples of access and use of existing ICT, including known or anticipated future ICT developments in those districts; report containing a range of scenarios for consideration by different schools and communities (Q3 2014)
(iii) Draft national ICT plan to link schools, education authorities, and MEHRD, taking into account data requirement needs at all levels and in differing school contexts (Q1 2015)
(iv) Workshops at the district level to develop local (school or district) ICT plans compatible with the draft national plan; report on how local planning can constrain and enable factors for national planning (Q1 2015)
(v) Redrafting and finalization of ICT plan, taking into account local planning requirements (Q2 2015)
(vi) Ensure a gender-inclusive approach in development and implementation of the ICT plan. (Q2 2015)

3. Output 2: Identification of ICT hardware options, development of suitable applications, and piloting their use in rural or remote areas, including capacity building. Tasks are as follows:

(i) Desk research and report to identify available technologies, relevant applications, and MEHRD requirements (see item (i) under output 1) (Q2 2014)
(ii) Field research to audit current hardware, usage, and capability (see (ii) under output 1) and to establish a baseline of existing methods and extent of data acquisition for educational management, distribution of resources for teaching and learning enabled by ICT, and interactive support for users (Q3 2014)
(iii) Specification and procurement of suitable hardware and applications to supply identified requirements for data acquisition; resource distribution; and interactive support to and between officers, teachers, and learners where appropriate (Q4 2014)
(iv) Trials of ICT hardware and applications in selected sample districts with three provincial authorities; report with recommendations for rollout to all schools in those provincial authorities (Q1 2015)
(v) Capacity building and rollout to all schools within at least two provincial authorities; evaluate and report on rollout by comparison with baseline study (see item (ii) under output 2) (Q2 and Q3 2015)

(vi) Ensure a gender-inclusive approach during pilot testing and trials, and during capacity building programs (Q2 and Q3 2015)

4. Output 3: Comprehensive assessment study conducted on how enhanced access to ICT can add value to DFL. Tasks are as follows:

(i) Identify ways in which existing distance learning provision from Solomon Islands National University and USP could be adapted for e-learning and cellphone learning, including requirements for institutional capacity or capability enhancements, within the constraints of known plans for ICT in those institutions (Q2 2015)
(ii) Identify available and appropriate online distance learning programs or resources from other providers in areas covered by existing DFL provision (initial teacher training and school leadership) (Q2 2015)
(iii) Adapt appropriate professional development materials from Solomon Islands National University and USP for delivery to users in schools in the sample districts (see items (iii) and (iv) under output 2); acquire and install where necessary content and applications from other providers (see item (ii) under output 3) (Q3 2015)
(iv) Trials of adapted and acquired learning materials to support teacher professional development activities in schools in the sample areas; evaluate and report on take-up and use of e-learning components to supplement, complement, or substitute for existing distance learning programs; identify constraining and enabling factors (Q3 2015)
(v) Ensure that a gender-inclusive perspective is discussed as part of the comprehensive assessment study on how enhanced access to ICT adds value to DFL (Q3 2015)

5. Output 4: Convene ICT4E workshop and forum to raise awareness, identify potentials and constraints, and share findings and lessons learned from the TA outputs. Tasks are as follows:

(i) Identify and invite contributors to an inception workshop and showcase of technologies and applications (2014, Q2)
(ii) Conduct inception workshop drawing on outputs from activities under item (i) of output 4, item (i) of output 1, and item (i) of output 2; arrange follow-up consultations with stakeholder groups, including telecommunication companies and training providers, to inform desk and field studies and drafting of ICT plan in 2014 (see item (iii) of output 1) (Q3 2014)
(iii) Prepare and maintain an interactive website to keep stakeholders informed of activities and emerging findings from outputs 1, 2, and 3; website should include a private virtual workspace for content management of reports and consultations or workshops (Q3 2014 onwards)
(iv) Organize a final planning workshop to report on outputs from these studies (see item (v) of output 1, item (v) of output 2, and item (v) of output 3) and to inform shaping of the 2016 NEAP and further development of ICT4E policy and plan (Q1 2016)
(v) Ensure that a gender-inclusive perspective is integrated into the workshop and forum. Provide recommendations on how to ensure a gender-inclusive approach in ICT application in education. Support stakeholder consultation to ensure participation of women stakeholders.