

## TECHNICAL ASSISTANCE COMPLETION REPORT

Division: PARD/PAHQ

TA No. 4305-SAM: Supporting the Samoa SchoolNet and Community Access Pilot Project			Amount Approved: \$600,000	
			Revised Amount: \$655,000	
Executing Agency: Ministry of Finance (MOF)		Source of Funding TASF	Amount Undisbursed: \$31,312.73	Amount Utilized: \$623,687.27
TA Approval 19 Dec 2003	TA Signing 16 Feb 2004	Fielding of First Consultant: 14 Mar 2005	TA Completion Date Original: 31 Mar 2005 Actual: 31 Jul 2007 Account Closing Date Original: 31 Mar 2005 Actual: 21 Aug 2008	
<p><b>Description:</b> The TA supports application of information and communication technology (ICT) to improve quality of education and teacher support in Samoa. It also supports Government ICT policy to ensure access to ICT by all Samoans and improved rural access to basic services. Despite Samoa's achievements in education, the quality and efficiency of education remain wanting. Variations in student's learning achievements and opportunities remain significant, especially between urban and rural areas. Samoan children who live and work outside Apia are physically isolated from those at the capital, contributing to inequitable education outcomes. Well-trained teachers with adequate teaching skills are in very short supply in rural areas. Teachers in rural areas are often not able to travel to Apia to take advantage of ongoing in-service training and refresher courses there. Exposing ICT to students and teachers in rural areas would enable them to access the materials and resources available to their counterparts in Apia and create a better, more interactive learning environment. Employment opportunities (in Samoa and overseas) also increasingly require ICT exposure and computer literacy to be competitive and to move up the job ladder.</p> <p><b>Expected Impact, Outcome and Outputs:</b> The TA sought to contribute to social inclusion and poverty reduction, especially in the rural areas, by improving connectivity and – through it – education, governance, health, and access to the Internet. The expected outcomes were to (i) improve quality and efficiency of education in Samoa, and (ii) enable access to global information. The key intended outputs of the TA were (i) demonstrating the applicability of SchoolNet and Community Access Program (CAP) approaches for Samoa, (ii) implementing plans and policies for SchoolNet and community access facilities, and (iii) improving the teacher training curriculum and materials for distance learning. The TA intended to provide distance education facilities and curricula to teachers in remote outlying areas where they normally would not have a chance to upgrade their skills and knowledge. It also aimed to provide students with necessary skills and new access to information. Five pilot schools, including one primary, were supported under the TA.</p> <p><b>Delivery of Inputs and Conduct of Activities:</b> <i>Timeframe:</i> Closing of the TA was extended by 33 months (until 31 December 2007) from its original date. Reasons for implementation delays included (i) time taken to identify a suitable connectivity model; (ii) initial lack of Government commitment on funding recurrent costs; (iii) delays in delivery and commissioning of equipment and services; and (iv) low ICT absorption capacity and competencies among teachers and communities. <i>Formulation:</i> The TA design sensibly assumed a phased and holistic approach to adapting and demonstrating how 'SchoolNet' could work in Samoa. The one-year timeframe, however, was too short for the concept to pan out and to effectively prove and 'sell' the potential of SchoolNet to schools and communities. Although systems and models were established, and some baseline data collected, there was not enough time to 'test' and meaningfully evaluate the outcomes of the pilots on their effectiveness for scaling-up. The bulk of consultants' time and effort went into setting-up and commissioning hardware equipments/ systems, which undermined more emphasis on aspects such as training, management and sustainability models, and community buy-in which are critical to the concept of 'SchoolNet' and for its effective demonstration in Samoa. Assumptions relating to self-sufficiency were felt to be ambitious in the short-term. Some indicators from the TA design were unrealistic and required long term in nature. <i>Inputs:</i> The TA recruited 9 person-months (pm) of international and 10 pm of national inputs through a firm, covering expertise in ICT, communications engineering, training of trainers, and social development. During TA implementation, an increase of the fund from the original TA amount of \$600,000 to \$705,000 was approved; this amount was later reduced due to partial cancellation on 25 October 2007 to \$655,000. <i>Performances:</i> Performance of the <b>consultancy firm</b> was considered generally satisfactory despite the slow start. Submission of reports was timely and their quality was satisfactory. The EA appreciated the inputs and outputs by the TA team. The TA was implemented in a consultative manner with key stakeholders. <b>ADB's</b> performance was also considered satisfactory. Staff conducted timely reviews of the TA and shared lessons and accomplishments with other stakeholders, including donor partners. Recruitment of the consultancy firm could have been timelier, as the firm was fielded only a year after TA signing. Performance of the EA was also satisfactory. A counterpart Project Manager was provided for the TA. MOF and the Minister for Ministry of Education, Sports and Culture (MESC) fully supported the SchoolNet concept. Concern, however, was raised regarding lack of engagement from MESC in certain areas. The non-engagement of Curriculum Materials and Assessment Division (CMAD) at MESC during TA implementation compromised feasibility of the TA's training-of-trainer approach.</p>				

**Evaluation of Outputs and Achievement of Outcome:** The project showed that a well developed ICT network can support and enhance the quality of basic education in Samoa. However, the TA is felt to be only *partly successful* in its achievement of intended outputs and outcomes. In terms of the 3 key outputs for the TA, **(i)** the applicability of SchoolNet was demonstrated in Samoa. However, the appropriateness of the model developed for up-scaling in Samoa may be questioned. For instance, the equipment supplied need to be reviewed for their appropriateness in rural areas. The requirements for system management may be considered an over-kill or too heavy-handed. Selection of technology/equipment should have taken better account of their energy-intensiveness (e.g. schools' energy budget), additional overhead costs (e.g. for air-conditioning), and other high-standard requirements (such as for good connection standards to continually update virus software). The **connectivity model** was re-designed during implementation, following introduction of 3G and wireless broadband licenses in Samoa, to include a hybrid model with combination of wireless for 2 schools in Apia and MESC and dial-up for 3 rural/ semi-urban schools; the dialup was included as an interim solution as wireless range was not available in remote areas. Establishment of any connectivity was needed to demonstrate the potential of SchoolNet with real-time networking and information sharing. ADB review missions during school visits found that the dial-up connection in rural areas did not work. At least one of the pilot schools in Apia given wireless connectivity has also switched to dial-up connectivity due to indicated high costs and unreliability of wireless. Effective connectivity for rural areas remains an ongoing challenge. With regard to community access, development of the **CAP** aspect lagged and could not be realistically developed in parallel to the schools. At the school level, school officials tended to lock up the equipment in fear of damage or loss, which made community access difficult. Computer use by students was too restricted to achieve the purposes of the SchoolNet. **(ii)** The draft framework for management of SchoolNet and Community Learning Center (CLC) was developed, although commitment from schools and community on the CLC was limited. Only 2 out of 5 schools submitted draft management models. Relying on schools for maintenance was not realistic, and there was a need to search and build capacity within the community regarding this. **(iii)** SchoolNet pilot provided limited capacity development for MESC staff and teachers in pilot schools. The design of the training program was significantly compromised by delays in procurement and equipment commissioning. Given the limited time and scope of the project, the teachers and administrators were not fully trained in e-learning and e-training and received limited general IT support. Similarly, the systems and approaches for distance facilities were established but there had not been time to develop it further. A major issue highlighted during wrap-up was sustainability of the TA in the absence of specific earmarked resources and a strategy to sustain the SchoolNet initiative.

**Overall Assessment and Rating:** Overall, the TA is rated as *partly successful* given the above-mentioned reasons and the limited timeframe for implementation. Without further assistance, the project objectives could not be fully achieved or be sustained. The lack of appropriate solutions to connect students and teachers in rural areas undermined project's particular emphasis on social inclusion for *rural* areas and delivery of assistance to where it was needed most. However, a critical achievement under the TA was its ability to demonstrate to Government the potential of the SchoolNet concept for Samoa. Following completion of the pilot project, the Government confirmed its commitment to expand the pilot project and requested a \$5.9 million grant funding from ADB for the SchoolNet Project. The Project provides an opportunity to build on lessons learned in the pilot project and address some of the shortcomings there to expand on and realize its objectives and also improve its sustainability prospects. Under the Project, Samoa will be the first Pacific developing member country to provide universal access to ICT-based instruction and Internet access to all secondary schools.

**Major Lessons:** Major lessons learned included the following: (i) ICT projects, involving constant changes in technology should be designed incorporating a flexible approach. (ii) To successfully deliver SchoolNet, adequate time should be allocated. (iii) Effective implementation of education initiatives at the school level is of central importance and requires special attention in management, processes and overall education culture and skills. (iv) Providing only computers to schools has little impact on teachers' competencies and students' learning outcomes; this should be accompanied by well-planned short and medium term staff development plan and development of e-teaching and e-learning resources. To have impact on learning significantly more capacity development is needed at the school level. (v) Schools provide a focal point in most communities and are best location to maximize the impact of ICT interventions. (vi) Communities are reluctant to take ownership because of sustainability concerns. There is a need to provide more community awareness and management capacity support to empower schools and communities to develop and implement sustainable management models. (vii) The major issue concerning the application of ICT in rural areas is financial sustainability, where the cost of access is higher than urban areas. (viii) Effective connectivity for rural areas remains a challenge. (ix) Selection of technology should take better account of their energy-intensiveness and additional costs and other high-standard requirements. (x) SchoolNet requires specifically earmarked resources and a supporting strategy to sustain the initiative. (xi) SchoolNet is opportunity to apply Government policy commitment to integrate ICT into education. Proper integration of SchoolNet with ESP II is crucial for success and to achieve broad-based sector wide benefits.

**Recommendations and Follow-Up Actions:** The following are recommended for follow-up under the SchoolNet Grant project: (i) Reassess lessons from the SchoolNet pilot schools -- As part of groundwork under stage 1, the model developed under the SchoolNet pilot project should be revalidated and updated on lessons. School-level demand for ICT and common constraints in meeting running costs should be carefully reviewed for potential solutions. Any changes in learning outcomes in the Pilot should also be assessed. (ii) Place more emphasis on community-related aspects – There seem to be no workable model yet for community access and management. This aspect should be strengthened based on good formative research and consultations. There should be a clear and easy-to-understand framework on costs and benefits of establishing and maintaining learning centers for communicating to schools and communities. (iii) Improve rural area connectivity – Improving rural area connectivity is a challenge. SchoolNet should forge partnerships to pilot new technologies to improve rural schools' connectivity, especially with ongoing regional initiatives such as RICS (SkyNet) while also considering other options such as GPRS technology. To address lack of administrators, students and community members can also be trained as administrators to maintain computer labs (rather than relying only on teachers). MESC should work closely with Ministry of Communications, Information and Technology (MCIT) and look at existing solutions from the experience of 'telecenters' in rural areas, including strategies on cost savings and cost recovery for long-term maintenance. (iv) Ensure that training is relevant and effective – All training (including e-learning, SchoolNet management, community awareness, and for school-level technical support) should be relevant and effective. Not only should appropriate content be developed but training designs and delivery styles should also be effective, culturally-relevant, customized for the appropriate audience. (v) Forge multi-sectoral government partnerships – MCIT/ National ICT Secretariat should be a key active partner in SchoolNet. MESC's capacity could be supplement with MCIT's in management and maintenance of the SchoolNet system. Guidance from both MOF and MCIT is important to help MESC and SchoolNet keep apprised of latest technology developments as well as relevant regional/national initiatives of Development Partners.

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