Evaluation of an Outcome

expected from the UNDP Country Programme for Turkmenistan:

"Public access to ICT and other information systems improved and expanded, particularly in educational facilities"

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December 2007

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Thanks

The evaluation team is grateful for the collaboration received from all the InfoTuk project staff and for the time and information shared with the team by staff of UNDP, the Ministry of Education and Supreme Council of Science and Technology and of international partners in Turkmenistan. Thanks are also due to all the users, managers and teachers of InfoTuk's public and school commuting centres that responded to the evaluation survey, participated in the evaluation workshop and/or otherwise spent time with or for the evaluation team.

The evaluation team is also most grateful for the generous hospitality repeatedly extended to the team by the InfoTuk staff, including Gulshirin Annadurdyyeva, Dangeldy Karayev, Aybolek Bayramuradova, Andrey Kaletinskiy, Dennis Kozinskiy and, in Mary City, Elman Tagiyev. This made our task all the more enjoyable and memorable.

Nothing in this report should be construed as implying any lack of appreciation of the progress which the project team has achieved in what at times must have been an extremely difficult operating environment. For the progress made, they merit full appreciation.

Batyr and Michael

SUMMARY

Introduction and context

1. Recognition of the potential for ICTD to compensate for some of Turkmenistan's losses in education and information systems in the last 15 years prompted the UN to prioritize ICTD in its country strategy up to 2009. In pursuit of the outcome ""Public access to ICT and other information systems improved and expanded, particularly in educational facilities", UNDP spent over US$ 1 million on the InfoTuk project since 2001. The current phase, InfoTuk 2, is scheduled to end in December 2007. UNDP initiated this outcome evaluation to input into consideration of possible follow-up.

2. The team's proposals on how it would carry out the evaluation, after their acceptance, were reflected in an Inception Report on 22 October 2007. The team met with officials and teachers of the MoE, the SCST and several development partners as well as with UN and project staff. It held two validation workshops and three surveys, respectively of InfoTuk staff, managers and users of the computing centres established by the project.

Analyses and findings

3. **Progress towards the expected outcome:** Turkmenistan lost out on the rapid global growth in public internet use in the last 15 years. The number of licensed Telecom accounts remained constant since 2004 and substantially lower than before the clampdown that followed the alleged assassination attempt on the previous President in 2002. Restrictions on information are such that Turkmenistan remains fourth from the bottom of the 2007 Press Freedom Index.

4. However, there has been a steady increase in the institutions (now 53) using the NATO installed regional network, TuRen, which is now reportedly overloaded. Also, more people access the internet through other organizations, such as the UN library, embassies, InfoTuk, IREX and private companies. Total access is probably much higher than official statistics suggest and has probably increased more rapidly in the last 12 months. However, use of the internet is still far less than in neighbouring countries while teledensity remains below the threshold required for Turkmenistan to gain from the information revolution. Within the country, there are rapidly growing digital divides between urban and rural areas and between rich and poor. Pursuit of the outcome remains critical for Turkmenistan's achievement of the MDGs.

5. National policy effectively discouraged access to the internet until late 2006. The newly elected President's promise of rapid ICTD and access to the internet to all citizens was followed by a series of actions which appear ad hoc, impulsive and lacking coherent linkage to a national strategy for ICTD. While many of the announced reforms are laudable, they focus primarily on inputs and infrastructure with less attention to human resource requirements and complete neglect of the all important policy environment where major strategic changes of direction are most needed. Given the apparent absence of open discussion on the need to privatize Telecom, to introduce competition, to abandon continuing attempts to control and monitor what people access on the internet, some doubt whether there is yet sufficient will and capability for genuine reform.

6. The internet is still viewed with suspicion. Government bureaucrats continue business as usual. Part of the problem is limited awareness of potential gains from ICTD and their continuing fear that use of the internet will lead to problems and punishment. Survey respondents also highlighted other constraints including the costs and time required to obtain cable or satellite connections, the cost of computers, slow and unreliable connectivity, weak telecommunications infrastructure, limited computer skills and the fear that internet communications are still monitored by authorities. All lamented the lack of competition and poor service from Telecom. Few thought that public access to the internet was officially encouraged. In short, an enabling environment for ICT development has yet to be created. Even so, most of those met are hopeful that the stage is being set for changes that could eventually make more of a real difference in public use of the internet and other freer information systems.

7. **Progress towards InfoTuk's four outputs:** All those with whom the team spoke, both in Government and amongst development partners, considered that InfoTuk had contributed usefully to the quest for increased public access to the internet. Particularly appreciated was the provision of internet to 20 schools. This was seen as a major breakthrough for the country. Progress towards InfoTuk's other three outputs was considerably less, as summarized below.

8. **Building awareness:** InfoTuk sought to raise awareness amongst civil servants by workshops, press releases and articles and the distribution of information posters and booklets. The numbers of the latter necessarily limited the scale of their impact. More effective in reaching more people were newspaper articles prepared by selected journalists. The 6 workshops probably contributed to increasing ICTD awareness amongst 91 teachers and other local MoE staff and strengthened their capacity to promote ICTD locally. However, there was little impact at the national level.

9. **An educational portal for the MoE:** Probably reflecting a hostile national context and disincentives caused by the failure of the four portals developed by InfoTuk 1, the preparation of an education web site for the MoE was largely postponed until 2007. The site was ready by September but the MoE wanted to review it not on line, but on a CD, necessitating use of a different programming language. Meanwhile, according to a Director, the MoE developed its own web site and is now seeking approval to go on-line from January 2008. An unresolved issue relates to where the site will be hosted. In the vacuum left by the absence of an official web site, a USAID supported NGO, IREX, established, with active input from teachers and students, Turkmenistan's Educational Portal.

10. **Public computer training and access to the internet:** 8 centres for free public training in basic computing had been established by InfoTuk 1 with only the Ashgabat centre connected to the internet. The main task for InfoTuk 2 was to connect the other 7 Velayat centres to the internet for free public access. The project connected only one centre, in Mary City, and that only in July 2007. Various explanations were given for the delay, both technical and financial. IREX was able to connect all five of its Velayat centres to the internet. The estimated cost of using dial up technologies to connect InfoTuk's Velayat centres is variously estimated at US$ 30,000 to 300,000 p.a. depending on the exchange rates used. These high costs raise major questions of sustainability. A wifi solution would probably be more cost effective, but an InfoTuk manager indicated that this would not be politically acceptable. This too raises questions of whether UNDP should subsidize the use of outdated technologies when the real need

is to change the restrictive policies which rely on the old technology.   However, there remains considerable public demand for access to the internet with all InfoTuk's access points in Ashgabat and Mary fully reserved days in advance.

11. The test taken on completion of InfoTuk's 30 hour training in basic computing is similar in scope to the ICDL, but considerably easier. The standard of the test was deliberately pitched lower than the ICDL in order to limit the course to 30 hours so that more people could be trained. The InfoTuk centres in Turkmenabat and Dashoguz train more than twice those in Serdar and Turkmenbashi through longer working hours and having two people share a computer.

12 **Computer training and internet in 20 schools:** Twenty schools (10 in Ashgabat and 10 in Mary) were connected to the internet in July 2007, enabling their teachers and students to access the internet from the start of the school year in September 2007. Each school was provided with 5-6 computers. In Ashgabat, all were placed in a "computing centre" in each school while in Mary one was assigned to each school library. InfoTuk trained one teacher from each school in basic computing and she/he manages the computing centre and teaches computing to both other teachers and to students aged 11 upwards. Of the four outputs expected from InfoTuk, this was the most fully achieved. UNDP and the InfoTuk team merit full appreciation for this success.

13. The training at this "discovery" stage is in basic computing and the use of MS Office. It does not yet include educational content and guidance on the use of ICT or computers as educational tools. At the request of the MoE, the InfoTuk trained teachers "volunteer" to supervise the computing centres on top of their other teaching responsibilities and without additional remuneration. This clearly affects the motivation of the teachers and limits the time that the centres remain open. The latter varies between the schools, ranging from 6 to 15 hours per week. The teachers complained about this voluntary assignment. Despite intense discussion with MoE officials in the evaluation workshops, a potential solution proposed by the teachers was not agreed. A solution to this issue needs to be found in order to replicate and sustain this project achievement.

14. Another challenge is networking. The schools are not yet networked but the teachers already appreciate the many potential advantages that would be gained from being connected to other schools, both amongst the 20 and with schools in other countries. The 10 computers assigned to school libraries were not connected to the internet and are used primarily for cataloguing, by teachers for lesson preparation and by students for homework, in MS office applications.

15. **Other observations on InfoTuk's structure and performance:** The InfoTuk staff work cohesively as a team. However, planning for results by project management and monitoring for results by UNDP were relatively weak. Annual targets were not always set for each output. Project progress reports generally under-stated weaknesses and constraints affecting InfoTuk, thereby limiting corrective action.

16. The 2004 evaluation proposed that an internationally recruited ICTD specialist be recruited as a technical adviser to the project. It is not clear from the UNDP and project responses to this recommendation why it was not accepted and why the technical advisory post was occupied instead by a national without specialist ICT expertise. The project has technically qualified professionals but they fully occupied at the operational level. There is clearly a need for specialist ICTD advice to be pitched at higher and more

strategic levels of Government. There is no evidence that the project provided such advice and its capacity to do so appears very limited with its current staffing.

17. With in effect two project managers, both reporting directly to the project Board, InfoTuk's organizational structure is top heavy and reflects poor managerial practice. The other three staff are clearly overburdened, especially following the abolition of two support posts in 2005. Also, while some staff received relevant formal training during the duration of InfoTuk 2, this has not been funded by the project.

18. **Partnership strategy***:* several development partners actively support ICTD in Turkmenistan but there is no apparent coordinating mechanism, with consequent risks of duplication, conflicting advice, misinformation and the development of incompatible systems. Instead of providing a coordinating framework, the Government seems to encourage a "divide and rule" approach. In short, there seems to no real partnership strategy for ICTD in Turkmenistan. Participants in the evaluation workshop called for partners to get their act together.

Recommendations

19. The MoE has requested extension of InfoTuk to provide internet to more schools in urban areas in other Velayats. UNDP should agree to the requested extension, but not to support the extension of internet to additional schools in urban areas. Instead, **UNDP should extend InfoTuk 2 by 2 years to achieve fuller delivery against its other three expected outputs and consolidate its achievement in the 20 schools already provided with the internet.** If and when political, technical and economic considerations permit, InfoTuk 2 should extend the internet to additional schools in remote rural areas. Extension to such schools would generate far more useful lessons than mere extension to other urban centres and it should point to ways of addressing growing digital divides between rural and urban areas and between the rich and the poor in Turkmenistan. Addressing rather than exacerbating such divergencies will be more consistent with the UN's approved strategy in the country.

20.   Nineteen recommendations logically flow from the evaluation findings and are summarized in the checklist on the next page. Of these, evaluation team considers three recommendations are most strategic and most likely to enable InfoTuk to make more of a difference in the next 24 months. These three "make or break" recommendations are briefly summarized below.

21. The previous evaluation recommended the international recruitment of an ICTD specialist. The project suffered as a result of no such recruitment. **This evaluation strongly recommends international recruitment of a seasoned ICTD specialist** with first hand experience in recent ICTD progress in other countries, preferably in former CIS countries and familiar with international best practices. This specialist should help elevate InfoTuk's awareness building and advice from local to more strategic national levels, through carefully orchestrated advocacy, including sponsored visits of high level "champions" of ICT from former CIS countries. The ICTD specialist should support the MoE in preparing a national action plan for using ICT in education. If funding constraints preclude the recruitment of a P5 level specialist, UNV/Bonn, with technical advice from UNDP/Bratislava, should be requested to identify a suitably experienced senior volunteer. More awareness of the potential gains from ICT amongst senior policy and

decision makers could well result in requests for further support from UNDP. In particular, subject to an official request and if funding permits, UNDP might wish to make budgetary provision in the extended InfoTuk 2 for a consultancy to prepare for a future intervention in e-governance.

22. **InfoTuk's Board should approve, by March 2008, an exit strategy for each of InfoTuk's public computing centres, including that in Ashgabat.** The strategy should indicate how the centres are to be sustained and even replicated after the withdrawal of UNDP funding, who will operate them and how. This will probably require the gradual introduction of charges, both for training and for access to the internet. It is further recommended that the exit strategy provide for UNDP's withdrawal of funding, by June 2008, of those centres which have not been connected to the internet by 31 March 2008. The withdrawal from the centres which are connected to the internet should be phased over a longer period, to allow for the gradual introduction of user charges so that each centre is put onto a commercial footing by December 2009.

23. To consolidate its achievement in providing 20 schools with the internet, **InfoTuk 2 should 1) support the MoE in arriving at a just, sustainable and replicable solution to the demand from teachers for remuneration to manage the school computing centres, and 2) establish an intranet between the 20 schools and, if possible, on-line twinning arrangements for each school with a comparable school in another country.** The teachers, clearly aware of the many advantages to be gained from such networking, are already envisioning this as the logical next steps for the 20 schools. This might also be combined with pilots to lead the gradual extension of the current basic or "discovery" training in computing to more advanced training on the use of ICTs and computing to other subjects in the curriculum and as education tools that can cost effectively address gaps and location divergencies in the education system.

The checklist below is intended to facilitate InfoTuk's management in responding to the recommendations of this evaluation and in UNDP monitoring of follow-up. The completed checklist is also intended to facilitate future audits, reviews and evaluations of InfoTuk and/or of UN/UNDP operations in Turkmenistan.

Summary checklist for follow-up to the recommendations from this evaluation

#	Summary recommendation (check text for full recommendation)	Suggested lead responsibility	Suggested Timeline (end month)	Agreed YES/NO	Results achieved by March 2008 (or reason if not agreed)
1	Initiate more open and systematic dialogue between the partners on ICTD	RC	Jan 2008		
2	UNDP continue support for ICTD in education, subject to agreement on what UNDP support would cover.	DRR	Dec 2007		
3	Rather than prepare a new InfoTuk 3 project, InfoTuk 2 should be extended by two years	DRR	Dec 2007		
4	A seasoned UNV specialist in ICT should be internationally recruited	ARR/PO	Feb 2008		
5	InfoTuk should have its own web site.	PM	Feb 2008		
6	InfoTuk work on an educational portal should cease if the existing portal is not put on-line	PM	Dec 2008		
7	InfoTuk's Board should approve an exit strategy for the public computing centres	DRR	Mar 2008		
8	InfoTuk should withdraw from those centres without internet access on 31 March 2008	DRR	June 2008		
9	Centres with internet should introduce user charges	PM	June 2008		
10	InfoTuk' to provide internet to more schools only if located in remote rural areas (when politically, technically and economically feasible-- provision in new project document for the extended InfoTuk 2	DRR	Dec 2007		
11	Teachers responsible for managing school computing centres should be properly remunerated	MoE	June 2008		
12	InfoTuk should create an intranet between the 20 schools	PM	Dec 2008		
13	The ICDL should be used to test and certify competency in computing skills	PM	Sept 2008		
14	Membership of the Project Board should include the DRR & a Director from Government.	DRR/MoE	Jan 2008		
15	One of InfoTuk's two senior posts should be abolished	PO	Dec 2008		
16	One InfoTuk support post should be reinstated.	PO	Dec 2008		
17	InfoTuk;s national professionals should upgrade their computing skills (provision in extended project document)	PM	Dec 2007		
18	Set realistic targets for each output at the beginning of each year & monitor progress against these. Constraints should be clearly stated in progress reports.	PM & PO	Jan 2008		
19	Request MFA to lift restrictions on access to officials and data	RC	Jan 2008		

1. INTRODUCTION

1.1 Why evaluate this outcome?

One of the six expected outcomes from the UNDP Country Programme (CP[1]) in Turkmenistan, January 2005 to December 2009, is: "Public access to information and communication technologies (ICT) and other information systems improved and expanded, particularly in educational facilities".[2] In pursuit of this outcome, UNDP has been implementing, since 2001, the InfoTuk project aimed at building capacity to share information for sustainable human development. InfoTuk uses ICT, particularly the internet, to create and distribute relevant electronic information on key development issues relating to the internet and education in Turkmenistan in Turkmen, Russian and English. The project also provides training to local professionals. UNDP has so far spent just over US$1 million in this area, comprising US$347,700 for initial preparatory assistance and phase 1 from April 2002 to March 2005 and US$654,500 for the current phase (2) of InfoTuk.

The current phase of InfoTuk is scheduled to end in December 2007. National stakeholders, including the Ministry of Education (MoE), the Supreme Council of Science and Technologies (SCST) and the twenty schools participating in the project are calling for its continuation and expansion. UNDP initiated this outcome evaluation to help make "strategic choices for future programme development" towards the above stated outcome, taking into account findings on the extent of progress towards the outcome, particularly that attributable to InfoTuk. In designing future support, UNDP also expects to the evaluation to draw lessons from experience to date to help improve future performance.

1.2 Purpose of and expectations from this evaluation

The objectives of and expectations from this evaluation are clearly stated in the Terms of Reference (ToR, Annex 2). Basically, the evaluation assesses the extent and quality of progress towards the above stated expected outcome. More specifically, it will:
- Evaluate the scope, relevance, efficiency and sustainability of InfoTuk's implementation, UNDP's partnership strategy and their outputs to-date and
- Assess how these contribute to achievement of the intended outcome.
- Draw lessons and other findings from experience to-date and
- Recommend ways to improve performance and to enhance prospects for achieving the outcome in the remaining 25 months of the country programme.

Subject to the evaluation findings, it will also input into the design and implementation of a follow-up project which Government and UNDP intend to begin in January 2008. Where can UNDP add most value, taking into account lessons from past experience and related interventions funded by other partners? Specifically, the ToR call for recommendations for future programme development.

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[1] All acronyms are listed in Annex 1.
[2] This aims to contribute to the achievement of UNDAF outcome 3: "By the end of 2009, inclusive, child-friendly and sustainable education services are provide at pre-primary and primary levels".

1.3 Methodology

At the outset, the evaluation team, comprising consultants Michael Constable (team leader) and Batyr Babaev, prepared an Inception Report. This described HOW the evaluation team proposed to carry out its ToR. Its purpose was to ensure that the team correctly understood expectations and that their proposed programme of work, methodology and schedule of deliverables were agreed by stakeholders. A draft Inception Report was submitted to the UNDP country office (CO) on 16 October. This was reviewed with major partners and feedback enabled the evaluation team to submit the finalized Inception Report (Annex 3) on 22 October 2007. The approach and methods described in the Inception Report were followed for the 29 day duration of the evaluation.

The evaluation team carried out three differentiated surveys: one for users of the computer centres established and managed by InfoTuk, another for the managers of those centres and the last for InfoTuk staff. For these surveys, the web based "SurveyMonkey" was used by emailing over 150 users, 27 managers and 6 staff/UNDP respectively. The email addresses for users were collected by the national consultant by pinning notices to the doors of the regional InfoTuk computing centres which requested volunteer participants in the survey. Responses were received from 55 users, 23 managers and 5 staff/UNDP as detailed in annexes 6, 7 and 8 respectively.

Because of delays arising from the requirements of the Ministry of Foreign Affaires (MFA), the team was able to visit only one of the seven regional Centres operated by InfoTuk. Also approval was received from the MoE to visit just three of the 20 schools provided with internet with the help of InfoTuk, and all in Mary Velayat. To expand its collection of data and insights from other schools and regional centres, the team facilitated two brainstorming workshops. The first, in Mary Velayat involved over 20 teachers, 4 school librarians and 8 school Directors, each actively participating by reflecting their experiences and views in a series of flip charts. The second workshop, in Ashgabat on 16 November, involved a validation module aimed at getting feedback on tentatively evolving observations and issues from other regional centre managers and a more forward looking module aimed at identifying and prioritizing needs for technical cooperation in ICT for developing Turkmenistan. It was intended that a cross section of government ministries, civil society, academia and media and development partners participate in the latter workshop, but the arrangements made effectively limited participation primarily to teachers and officials of the MoE with only a few partners. Even so, the workshop contributed usefully to the evaluation (Annex 9). This and debriefing meetings on 19 November provided feedback on tentative findings and possible recommendations.

1.4 Structure of the report

After this introduction, the report is structured to reflect a sequence flowing from the context in which InfoTuk operates (section 2), into evaluation analyses and findings relating to progress towards, first, the expected outcome (3.1), secondly, expected outputs (3.2) and thirdly, partnerships (3.3) before deriving recommendations in section 4. Reflecting the ToR and expectations from the evaluation, most emphasis is on progress towards outputs. Supporting materials and details are, where possible, placed in annexes to shorten the main text and, hopefully, make it more readable.

2. THE DEVELOPMENT CONTEXT

2.1 The rationale for this CP outcome

Globalization makes communications increasingly critical for economic development. The convergence of information and communication technologies and the explosion of the Internet in the 1990s amounted to an information revolution with the potential to reshape society and commerce. Developing countries potential to gain from this revolution largely depends on their ICT skills and infrastructure, including telecommunications networks, computing hardware and software and services required for the efficient collection, processing and transmission of information, together with related policy, legal, and institutional frameworks. While not a panacea for transition and development challenges, ICTs, used appropriately, can enrich most areas of development, by empowering people to make better choices through increased information flows and access at much reduced costs, broader education and continuous building of knowledge, facilitating planning, coordination and monitoring processes and more effective and transparent use of resources, scaling-up, outreach and delivery of services, and in catalyzing investment, trade and innovation. Thus access to ICT is not only an MDG target in its own right, but is critical to achieving all eight MDGs. Within education, ICT can provide cost effective ways to bring schooling to those who have historically been excluded, including remote rural areas and people with disabilities, especially relevant in a country in which the education system and curriculum was deliberately and systematically distorted and deprived over a 15 year period.

For such reasons, UNDP's 2005 Central Asian Human Development Report called for countries in the region to build a modern knowledge society, including support to the growth of information and Internet technology and maintaining Russian as a second language and expedited access to the Internet: "Compared with the early years of independence, today the fear of state disintegration, ethnic separatism and inter-state conflict has declined in Central Asia. …..But obstacles to further economic reform and regional cooperation and integration remain embedded in highly centralized presidential institutions, in powerful business interests linked to governments, and in the middle and lower levels of the public administrations and security services. In the long term, there is a risk of a vicious cycle, in which poor governance, limited opportunities and a lack of accountability lead to popular resentment and opposition that is crushed by the government. Worse governance and more resentment inevitably follow. Such a cycle, once unleashed, creates risks of political and economic instability in the country…"

Recognition of the potential for ICTs to compensate for some of the country's losses in education and information systems resulted in the UNDAF committing the United Nations system to assist Turkmenistan in addressing and coordinating its information and knowledge needs, including necessary strategic planning and programming in the period up to December 2009. The extension of the InfoTuk project was seen as the major component of this programme.

2.2 Key partners, stakeholders and expected beneficiaries

The general public and students at educational institutions are the intended ultimate beneficiaries of InfoTuk. The MoE is the implementing agency. Turkmenistan has two state owned Internet providers: Turkmen Telecom under the Ministry of Communications is the only commercial provider while the Supreme Council on Science

& Technology (SCST) manages the TuRen network (section 2.3). Other development partners currently providing support for access to the internet and/or for the use of ICTs include NATO, the European Union and USAID while the latter, UNICEF and UNFPA also support the development of education in Turkmenistan. The International Monetary Fund, the World Bank and the Asian Development Bank currently have only a liaison presence in the country although the World Bank is fielding a mission in December 2008 to propose a new strategy for cooperation with Turkmenistan, for submission to the Bank's Board in July 2008.

The NATO supported Silk Project connects National Research and Educations Networks (NRENs) of 8 countries in the Caucasus and Central Asia to European research networks through a "Virtual Silk Highway", established in Turkmenistan in August 2003. Turkmenistan and other participating countries gain access to modern satellite technologies and equipment for free e-communications with European researchers and networks. SCST coordinates the project in Turkmenistan. The Silk Project aims to enable the NRENs to become self-sustainable without continued large-scale external funding. The Virtual Highway has also enabled partial digitalization of Turkmenistan's telecommunication network through construction of a 645 kilometre fibre-optic cable linking the cities of Ashgabat, Balkanabat and Turkmenbashi and an additional 25 kilometre spur between Turkmenbashi and Avaza. As a result of the project, over 50 Universities and scientific institutions are now connected to each other through the Turkmen Research Educational Network Association (TuRENA) and to the internet. The project also provides access to other users, including InfoTuk and the 20 schools which now connect to the internet with InfoTuk support.

One observer guesstimated that between 10000 and 13000 people regularly access the internet through the project. This number steadily increased as more institutions were connected to the Silk Highway. However, it is unlikely to increase much further as, according to several informed sources, the Silk Highway is now overloaded. Indeed, some users told the evaluation team that average connectivity speeds had fallen in recent months and disruptions to connectivity had become steadily more frequent. It is understood that a project review in early 2007[3] raised concerns on how the network would be sustained after the withdrawal of NATO, recently postponed to September 2008.

A European Union funded programme, TACIS-TEMPUS manages the Silk Project and provides VoIP and videoconferencing tools and services. The EU provides substantial funding totaling around 4 million Euros in the last 5 years, for training in ICTD, primarily through distance learning. Almost 5000 persons have been trained in basic computing skills and in the English language. An indicator of the success of the latter is that the main language of tuition has recently changed from Russian to English. The EU is also helping to develop intranets in several more progressive ministries including Agriculture, Finance and Justice. A similar offer to the MoE was rejected, because, according to one observer, the MoE was afraid that foreigners would see the appalling 20 year intellectual gap resulting from the educational policies of the previous President.

The American Embassy and USAID manage several programmes aimed at promoting the use of computing and the internet. Of special interest are the programmes managed by a NGO, the International Research and Exchanges Board (IREX), some of which are very similar and/or potentially complementary to the activities of InfoTuk. IREX provides

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[3] Despite several attempts the evaluation team was unable to gain access to this.

free training in computing and internet access to the general public, just as InfoTuk does, in 5 similarly sized and equipped computer centres, of which 2 are in Ashgabat. There are two major differences: 1) IREX works with local NGOs whereas InfoTuk works with the MoE and 2) IREX has connected all its Velayat centres to the internet while InfoTuk has connected only that in Mary City. USAID funding for IREX is currently programmed up to December 2009.

In the course of its school visits, the children in one school in particular were able to speak with the evaluation team in excellent English. On asking how they had acquired this skill, it was indicated that the school used to have Peace Corps volunteers. There are normally around 70 such volunteers in Turkmenistan, each serving a 27 month assignments with first 3 months in training (they speak Turkmen) 60% of them serve in schools. The local Director indicated that since early this year, the demand for English teachers had increased rapidly. English language skills will enrich the gains from accessing the internet.

2.3 Major constraints and opportunities

Communication technologies including TV, newspapers and the Internet are strictly controlled by the state. Despite constitutional and legal proclamations, human rights, including the right to information, remain amongst the most serious challenges in the country. Although reliable hard data could not be accessed by the evaluation, all those met indicated that ttelecommunications infrastructure is weak, users of ICTs are few, Internet accounts are even fewer and broad-based computer literacy is very low by international standards.

A 2006 NISSI report observed that there was only 1 telephone for every 16 persons in Turkmenistan in 2001, compared to one for every two people in OECD countries and one per 15 people on average in developing countries. A 2000 UNDP Report[4] estimated that Turkmenistan had only 1 Internet user per 4,000 people, which puts it among the lowest in the world. Moreover, according to a NISSI 2006 survey, over 95 percent of registered users are in Ashgabat. There has been only one Government public internet provider since May 2000 and internet use is tightly controlled and monitored. The limits imposed on access to information continue to be criticised by successive UN resolutions such as that of 2003/11 of the UN Commission on Human Rights which expressed grave concerns at "the suppression of independent media and freedom of expression, at attempts to restrict access to the international media and at restrictions on the freedom to seek, receive and impart information and ideas of all kinds, regardless of country, either orally, in writing or in print, in the form of art, or through any other media of choice." Similar concerns were voiced in June 2006 by the UN Committee on Rights of the Child.

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[4] UNDP. Report on the State of IT Development in Turkmenistan. 2000

3. ANALYSES AND FINDINGS

3.1 Status of the outcome

The outcome to which InfoTuk is expected to contribute is: "Public access to ICT and other information systems improved and expanded, particularly in educational facilities". Notwithstanding the difficulties in accessing hard data to analyze progress, several sources provide relevant insights on likely changes in access to ICTs and information systems.

Internet usage was estimated by UNDP at 0.24 persons per 100 in May 2000. According to the InfoTuk 1 project document this increased 0.6 by 2001. The NISSI 2006 survey estimated that, at the time the survey data was collected in October 2005, 22 persons per 1000 had access to a computer and 8% of the computers were periodically connected to the internet, suggesting that around 2 persons per 1000 had access to the internet, a level similar to that in 2000. In the same period, according to the NISSI report, the number of Internet users worldwide increased sevenfold. These data suggest that the rapid growth in public access to the internet around the world in the last 5 years has not taken place in Turkmenistan and that Turkmenistan has slipped badly in comparison to most other countries.

To further support this observation, there was probably little change in licensed public internet access since 2005. Most observers confirmed that the number of licensed Telecom dial-up accounts has remained constant since 2004. Their number was substantially reduced following the alleged assassination attempt on the previous President in 2002. Indeed, there was little if any improvement in access to information systems in the crackdown that followed that allegation. Thus in June 2006, the UN Committee on the Rights of the Child expressed "concern about the fact that all sources of information - and media in particular - are subject to Government's control and do not allow for diversity. Furthermore, the Committee, sharing the concerns recently expressed by the Committee on the Elimination of Racial Discrimination, regrets that access to foreign culture and media, including the Internet, is very limited……The State party should also take steps to expand access to Internet, including by supporting and facilitating projects in this respect such as UNDP project "InfoTuk", while providing adequate protection from dissemination of illegal content on Internet." For such reasons, Turkmenistan remains fourth from the bottom of the 2007 Press Freedom Index calculated by Reporters Without Borders with a score comparable to that of Burma, Cuba and North Korea and far behind neighbouring countries.

Thus it is hardly surprising that a visiting UNDP ICT specialist in April 2007 concluded: "For ICTD in Turkmenistan, the good news is that the situation is so bad that it can only get better. The access to the internet is minimal and for the lucky ones having it is very slow. Leaving aside the institutions of higher education and research institutes that are connected to the Silk road programme, there is no legitimate way to acquire access at the moment. The only ISP is Telecom and to get internet access through them reportedly needs connections, bribes and patience"

However, access to the internet and to information is probably significantly greater than is suggested above. Firstly, according to the manager of one important survey, people are often reluctant to reveal that they have access to the internet in official surveys, fearing subsequent harassment from the security services. Secondly, there has been a

rapid increase in the number of institutions (now 53?) using the NATO regional network, TuRen. One informed observer suggested that the number of people accessing the internet through TuRen had more than doubled in the last 5 years and might now be as high as 15000. Thirdly, according to many observers, the number of people accessing internet through other organizations, such as the UN library, embassies, InfoTuk, IREX and private companies has increased rapidly in recent years. Thus, for example, the revenue records of the UN library in Ashgabat, which has charged the general public 15000 menat per hour to access the internet since 2001, suggest that the number of users has more than doubled in the last five years. The number of locations at which people can access the internet has also increased as a result of the spread of initiatives like the "American corners", projects like InfoTuk and IREX, internet provision in special schools such as the Russian and American schools and its increasing use in private companies.

Responses from the evaluation surveys of users of InfoTuk's computing centres (Annex 6) and their managers (Annex 7) also suggest that public access to the internet has increased in the last 12 months, much more so than in the last 30 months, but that it was still less than in neighbouring countries. Thus, despite the decline in licensed access, it is considered that informal public access to the internet has probably increased, most especially in the last year. Consistent with this observation, it is understood that one foreign country made it mandatory for visa applications to be made on-line from late 2006. This would have resulted in a fall in visa applications if people did not have access to the internet, but it is understood that visa applications to that country continued to increase.

Even so, teledensity remains far below the minimum threshold required for Turkmenistan to join the information revolution. There are rapidly growing digital divides between urban and rural areas, and between rich and poor which are brought out clearly by the NISSI 2006 survey. Pursuit of the outcome remains very relevant for Turkmenistan's development and for its achievement of the MDGs.

3.2 Factors affecting progress towards outcome

As part of the isolationist strategy of the previous President, national policy effectively discouraged access to the internet until his death in late 2006. These negative factors became even stronger following the alleged assassination attempt in 2002. There was a clampdown on the internet and investment in telecommunications was discouraged so that Telecom's systems became outdated and overloaded, with slower speeds and more service disruptions. But in the absence of competition, Telecom's tariffs remained high and out of reach of most people. Besides, most were afraid to use the internet. In February 2007, the newly elected President promised the population rapid ICT development and access to Internet to all citizens. This was followed by a series of actions, including:

- o Opening 10 internet cafes: 5 in Ashgabat and 5 in other regions.
- o The Government's procurement of 12,000 computers for Turkmenistan's 1750 schools
- o Telecom, which continues to have a state monopoly of internet access to the public, is reported to have invited tenders for the provision of new equipment which will increase its capacity to provide internet access.

o The government opened on 11 October 2007 an on-line facility at its web site www.turkmenistan.gov.tm inviting people to submit comments on its performance.

The new President also made fundamental changes in the educational curriculum and teaching methodologies. He restored national schooling to 10 years (the previous President had cut it to 9), abolished compulsory 2 years work experience for University entrants and increased the salaries of teachers by 40%.

However, these and other actions appear to have been taken in a rather ad hoc and impulsive manner, taking even middle levels of government by surprise, and without systematic consideration of their logical sequencing and implications and not yet coordinated in any national strategy for ICT development in Turkmenistan. Indeed the evaluation team was told that the SCST is receiving support from the EU to prepare such a strategy. InfoTuk 1 provided such support from 2002 to 2005, but with no tangible result….Turkmenistan still lacks coherent strategies both for ICT development and for the educational sector. Moreover, so far the reforms appear to have focused primarily on inputs and infrastructure with less attention to requirements for the required accompanying human resource development and complete neglect of the all important policy environment where substantive and strategic changes of direction are most required to bring Turkmenistan into the 21st century. Given the apparent absence of open discussion on the need to privatize Telecom, to introduce competition, to abandon continuing attempts to control and monitor what people access on the internet, one can only wonder if there is yet the political will and capability for reform. Ambiguities remain.

In this fluid and uncertain situation, some of the new reforms announced, and the actions which they triggered, are not yet making much difference in increasing public access to the internet. For example, all but one of the six internet cafes visited by the team, were empty despite the recent 33% reduction in their charges. The evaluation team failed to access the BBC news site in three of the centres; too many sites are prohibited, and speeds are very slow. Participants in the evaluation workshop pointed out that the reduced price at over $2.50 per hour was still far too high for most people. They also drew attention to the fact that users have to provide full ID information before using the café and fear that this will be used by the still powerful KGB to harass them. None of the managers of the 6 internet cafes visited were willing to answer questions without formal approval from MFA. One centre was closed on Saturday when most employed people, who might be better able to afford the cafes, would be free to go. Another café in Ashgabat was permanently closed "for repairs". In short, Telecom's internet cafes have probably done more harm than good by giving the misleading impression that there is public access to the internet. There is not.

The internet is still clearly viewed with suspicion by many civil servants and access to it in Government is still limited (a dial up connection for maximum 2 hours per day) to a few selected departments within each Ministry and within those departments, to selected officials. Thus in the MoE, only two departments concerned respectively with international relations and study work experience overseas, have internet access. Similarly, although most universities are connected are now connected to the internet, some university officials are still afraid that "forbidden sites will be accessed and restrict access accordingly. All are aware that although the president has changed, security services have remained the same powerful, watchful and intrusive entities. It is hardly surprising that the on-line facility for the public to post comments on the government was

closed within a few days, reportedly after negative comments were posted. The media remains wholly controlled by and laudatory of the Government. Despite a request to meet with Telecom and the Ministry of Communications, the evaluation team was not able to do so because all foreigners continue to require the approval of the Ministry of Foreign Affaires to meet any government official, and this approval was not forthcoming. In short, while the new President is announcing what amount to potentially dramatic changes, these are not yet making much difference; for many, it seems that government bureaucrats continue their business as usual. Part of the problem is their very limited awareness of the potential advantages of ICTD; policy and decision makers still view it with suspicion if not fear.

Other important constraints limiting public access to ICTs which were highlighted by the evaluation surveys (Annexes 6 to 8) include the cost of obtaining cable or satellite connections in schools, offices or homes, the processing time required to obtain satellite or cable services, the cost of computers, poor and/or unreliable connectivity, official policy with respect to making internet services available to all, weak telecommunications infrastructure, limited computer skills and the risk that internet communications are monitored by authorities. They and the workshop participants (Annex 9) lamented the lack of competition and the poor service from Telecom. Few thought that public access to the internet was officially encouraged.

An enabling environment for ICT development has yet to be created in Turkmenistan. Notwithstanding this, almost all the persons met by the evaluation team, both nationals and foreigners, remained hopeful that the stage is being set for changes that could eventually make more of a real difference in public access to the internet and other freer information systems.

3.3 Project contributions to the outcome

3.3.1   Project outputs and the outcome

InfoTuk contributes to the outcome through its outputs. The signed project document specified six outputs expected from InfoTuk, as shown in the left hand column of Table 1. However, the Country Programme Action Plan (CPAP), signed by the Government and UNDP in April 2005, listed just four outputs for the same outcome, as indicated in the right column of Table 1. With the exception of the fifth output listed from the project document (20 schools provided with the internet), the project document's other five outputs are not fully reflected in the other three outputs subsequently used by both the project and UNDP for managing, reporting and monitoring project performance. Although the reasons for reducing the six outputs to four is not clear from the CPAP or other documents and those interviewed could not remember why this was done, the latter outputs are more tangible, more easily monitorable and thus more results orientated than those originally articulated in the project document. Each of the four outputs is directly relevant to the outcome. Even so, the CPAP should have provided some explanation for the changes and these should have been formalized in a signed revision to the project document. That explanation could also have indicated how the sixth output in the project document, not directly covered by the four outputs was to be achieved, perhaps by the EU/Tacis project.

All those with whom the team spoke, both in Government and amongst development partners, considered that InfoTuk had contributed usefully to the quest for increased

public access to the internet. Particularly appreciated by all is the provision of internet to 20 schools: this was seen as a major breakthrough for the country. The MoE requested extension of the project to provide internet to more schools.

Table 1 Comparison of six outputs specified in InfoTuk project document with the four outputs against which all progress was assessed

Intended outputs by 31 March 2007 as specified in Project Document, signed on x March, 2005	Outputs used by all project monitoring and reporting tools
Enhanced national capacity to plan, manage and extend the benefits of ICT and networking to the primary beneficiaries and users of the InfoTuk project	The national and regional civil servants and CSOs are equipped to promote ICT as a tool for national development
Awareness and acceptance of ICT as tools for national development increased	
More content of local interest available on the Turkmen Research and Education Network (TuREN) and beyond in Turkmen and Russian languages	An education web portal offering information in Turkmen and Russian is launched
Increased capacity for computer assisted learning and for learning about ICT in Turkmenistan	Computer Training Centers with internet connection offer free access to the general public
Computer and Networking Training Centers (CNTC) created in 20 secondary schools in Ashgabat and Mary and connected to the Turkmen Research and Education Network (TuREN)	Computer and networking training centers are established in twenty secondary schools
Turkmen Research and Education Network (TuREN) extended to the project beneficiaries	

Sources: Signed Project Document and project progress, AWP and monitoring reports.

To assess InfoTuk's contribution to the outcome, its progress towards each of the four expected outputs is assessed in the following four sections respectively. Key milestones in this progress, as quoted in project progress or monitoring reports, are summarized for each of the four outputs by year in Table 2.

3.3.2   Building awareness

InfoTuk sought to raise awareness amongst civil servants by workshops, by media including sponsored newspaper articles and press releases and by the design and development of information/training materials and the publication of posters and booklets in both Turkmen and Russian languages. Most of the posters and booklets (Annex 11 table 4) were aimed at providing information on the uses of computing and internet to the general public. The numbers which were published (maximum 1400) necessarily limited the scale of their impact. More effective in reaching more people were the newspaper articles prepared by invited journalists.

InfoTuk 2 organized 6 workshops (2 in 2005 and 4 in 2007) for a total of 91 civil servants, usually teachers and local officials of Velayat Education offices.   Three workshops were held in Ashgabat and the other three in Mary City. These workshops generally briefed participants on the practical uses of the internet and email and of the activities of InfoTuk 2. Generally, if more senior civil servants came to such workshops, it was only to open them rather than to actively participate. The most senior active

Table 2: InfoTuk: key progress reported in Annual Work Plans & Monitoring Matrices

Expected CP outputs and indicators including annual targets	Key 2005 Results	Key 2006 Results	Key 2007 Results	Constraints identified by project management
OUTPUT 1: The national and regional civil servants and CSOs are equipped to promote ICT as a tool for national development INDICATOR 1.1 : WITH TARGET FOR THE YEAR: 2 ICT conferences, meetings	Conducted two workshop on ICT for specialists from education sector in Ashgabat (20 participants) and Mary (26 participants), that is contributed to increasing knowledge on ICT, as well as awareness of the project activity for ICT Development in the country	Dissemination the booklets and posters" (see annex for list). Workshops for teachers selected under output 4. Formal opening ceremonies for school centres, with media publicity.	Several productive meetings with local authorities of Education Departments of Balkan and Lebap Velayats with the aim to advocate the activity of the project on ICT for Development, workshops on Internet usage for specialists of the Ministry of Education 4) disseminating publicity materials as the booklets (1400 units)	None
Output 2: An education web portal offering information in Turkmen and Russian is launched	1) brief review on contents of the Education portal & 2) identify the key specialists to work with the Education portal	No tangible progress newly reported although it was noted that "Assigned specialists from the MoE are finalising the portal layout"	1) Draft Turkmen content of the portal contains information on the education system in Turkmenistan, institutes, schools, international relationships, publications 2) technical work on updating completed (but not yet submitted to MoE).	None
Output 3: Computer Training Centers with internet connection offer free access to the general public INDICATOR 3.1 : WITH TARGET FOR THE YEAR: 7 computer centres operational INDICATOR 3.2 : WITH TARGET FOR THE YEAR: - 100 users/month	1) Published the training material on Computer User Training in Russian, Turkmen languages, 2) 7 training centres operational with 659 persons trained.3) access to the Internet was provided for public: 3371	1) Increased technical capacity of Computer Training Centers in velayats (digital cameras) 2) 1138 persons trained, 65% women 3) Internet access 5008	Re- establishment of the center in Dashoguz for public access Developed draft CD for user friendly, interactive audio visual tool for self-paced learning of Microsoft Office both in Turkmen and Russian 2) Total trainees up to 31 July = 973 with 60% women 3) CTC in Mary connected to Internet in June, 4) Number of Internet users up to 31 July = 2881.	"Providing Internet connectivity in other centres is severely constrained by administrative, local market and import restrictions factors. ......The major implementation constraint is procurement and legal restrictions applied to import of specialised radio equipment required for Internet connection." (2006 progress report)
Output 4: Computer and networking training centers are established in twenty secondary schools	1) Developed technical criteria for selecting schools, visited schools, finalized selection of 5 schools in Asgabat and 5 in Mary, with GoT 2) Purchased computer equipment and software, 3) teachers for training identified 4) Training of ICT Trainers conducted (28.11 – 9.12.2005). 4) 10 school centres opened	1)Selected additional 5 schools in Ashgabat and 5 in Mary with centres opening September – November 2)additional ten school teachers on ICT trained for ten days	1) Twenty school CNTCs connected to Internet in June, 2) additional training provided to CNTCs instructors .... Upon the request of the Ministry of Education, the project training material "Computer User Training" in Russian and Turkmen will be republished and distributed to the schools as an additional training material for the teachers and for self learning	2 constraints identified in 2005: 1) Equipment delivery by the company "Sullivan Systems Inc." was delayed by more than a month 2) The project could not connect schools to internet because of delay the equipment delivery

Source: Actual quotations InfoTuk's Annual Work Plans & Monitoring Matrices with some clarification in discussions with Project Manager & UNDP Programme Officer

participants were at the operational level including the Directors and Deputies of Velayat Education Departments.

The workshops and the posters and booklets produced by the project probably contributed to increasing the awareness of ICTD amongst teachers and the other local MoE staff, and strengthened their capacity to promote ICTD at local levels. However the project document calls for "strengthening the capacity to use ICT at the national and local levels….. The project will develop a strong awareness raising and building programme. The means to support this, including provision of more assistance, will come through the use of local consultants and with the support of the International ICTD Resident Project Management and Technical Advisor." No international advisor was recruited and the awareness creating workshops and materials prepared by the project were pitched at relatively low level and local civil servants. No CSOs were involved as confirmed by InfoTuks's comments on follow-up to the 2004 evaluation (Annex 12). Perhaps this was the most that could reasonably be expected from the project in the hostile environment towards the internet that prevailed up to the end of 2006. As a result, the most important "national" dimension of awareness building remains to be completed with the meaningful involvement of senior policy and decision makers and respected leaders in civil society. Even so, participants in the evaluation workshop criticized InfoTuk for not explaining the advantages of ICTD to "managements".

3.3.3 Preparation of an educational portal

Perhaps least progress was made towards InfoTuk's second output, to prepare an education portal for the MoE. From project progress reports (Table 2) for both 2005 and 2006, it appears that portal development activities were given lower priority with action being postponed largely to 2007. For example the 2006 AWP monitoring report indicates "The activity planned to implement after proving Internet connectivity to schools next year". One reason for attaching lower priority for this activity might have been the disincentive provided by past reactions to the portal development work completed by InfoTuk 1. Of the four portals developed (see next page), only one was ever put on-line, that of the Ministry of Health, in December 2002. However, the MoH site was only operative for 14 months as the MoH staff who were trained in maintaining and updating the site were transferred. Successive training of additional MoH staff by the project failed to salvage the web portal, which was closed in February 2004 and remains inaccessible to this day.

In 2007, the project developed a draft portal, with the help of three consultants, in both Turkmen and Russian. This was updated to reflect the new educational reforms announced by the President and was ready to be piloted on line by September 2007. However, the MoE asked to see the portal on a CD first and as a result, project staff now have to use a different programme language to prepare a CD. When asked about the progress of InfoTuk in this area, the MoE's Director of International Relations was only aware of the draft portal prepared by InfoTuk 1 in 2004. He informed the team that the MoE had already developed the content of a draft web site after comparison of similar web sites in other countries and that the MoE was now making final revisions to this before seeking Cabinet approval to put it on-line from January 2008.

An issue raised by the MoE relates to the hosting of a site. Telecom can only host very basic sites for which even the smallest update has to be done manually by Telecom itself and for this they require the information on a floppy disc at least two weeks in advance. For this service, Telecom presently charges US$976 per month (calculated at official exchange rate). Telecom reportedly offers only minimal support by phone (some ten or so phone calls are required to get even a minimal response within a week of any difficulty), connections are slow and subject to frequent disruptions. Many sites and links to them are censored (e.g. even educational sites in Europe or America which might have critical remarks relating to Turkmenistan: for example, while visiting a

school in Mary region, the evaluators observed that the web site of the State University of New York came up as a "prohibited site" when searched by one student who was looking for further educational opportunities.   A second hosting option considered by the project is the TuRen network. While connectivity is generally better,

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http://www.gcetm.net/ "Turkmenistan's Educational Portal"

Türkmenistanyň Bilim Portaly | Образовательный портал Туркменистана

TEACHERS

This website intends to serve the IT-related educational needs of teachers and students in Turkmenistan. As content is created by and for the thousands of great teachers and students in Turkmenistan, this website will expand into an educational portal. Click on the links below to view the resources available:

- o   Online projects
- o   Teacher's blogs
- o   Lesson plan contest
- o   Winners of the Lesson Plan Contest
- o   Lesson plan database</à>
- o   Recommended websites for teachers

STUDENTS

If you are studying in grade school, click on the links below to view the resources available:

- o   Online projects
- o   Tech Age Girls
- o   Tech Age Girls blogs
- o   Earth Day Celebration
- o   Turkmen students abroad
- o   Recommended websites for learning

As content is created by and for the thousands of great teachers and students in Turkmenistan, this website will expand into an educational portal.

Bureau of Educational and Cultural Affairs (ECA), US Department of State., International Research & Exchanges Board (IREX)

Health Portal "LUKMAN"

Put on-line: December 2002
Date closed: February 2004
Current status: closed by MoH, staff trained to update site left; New staff subsequently also left….and MoH could not afford to host the site, which up to February 2004 was subsidized by InfoTuk.
Web-address: http://www.lukman.gov.tm but now no longer accessible
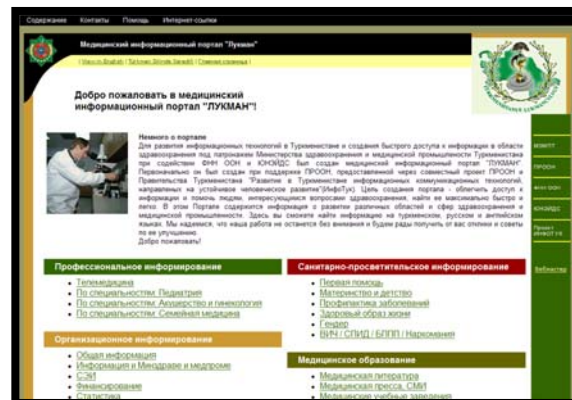
Social and Economic Development Portal

Never hosted on-line, but put on CDs in March 2002 for submission to Government in 2004
Current status: shared on CD, no response ever received from Government, although NISSI (Turkmenmillihasabat) confirmed in writing its intention to update the material.
Web-address: no address
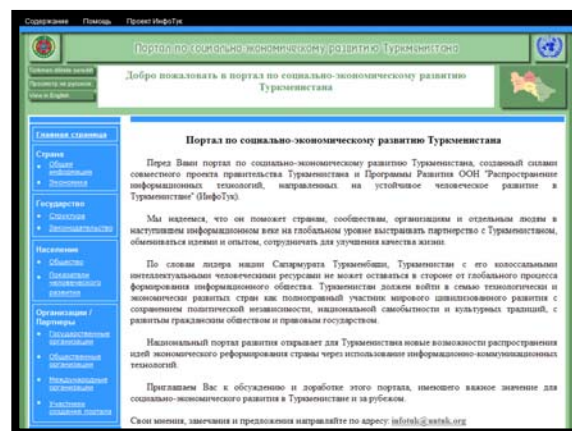
Science Portal "YLYM"

Never hosted on-line, but submitted to SCST in CD form in October 2003. InfoTuk 1's Terminal Report noted "The SCST is officially committed to update it twice a month and it will be placed on the SCST's own Website". This was not done. SCST used parts of the portal for their own web site (without any explicit feedback to or acknowledgement of InfoTuk.
Web-address: no address
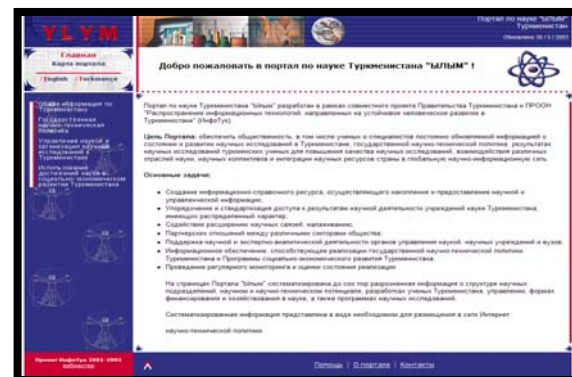
Educational Portal "BILIM"

An on-line version prepared, but not yet hosted on the internet because the government requested InfoTuk to view the draft portal on CDs. If and when the portal is approved (see text), the problems of hosting and sustaining MoE capacity to update and manage the site will still need to be addressed. InfoTuk 1 prepared a similar portal in February 2004 and the Terminal Report noted that "the Ministry is formally committed to updating the content." That never happened.
Current status: preparation of the CD version, no web address yet.
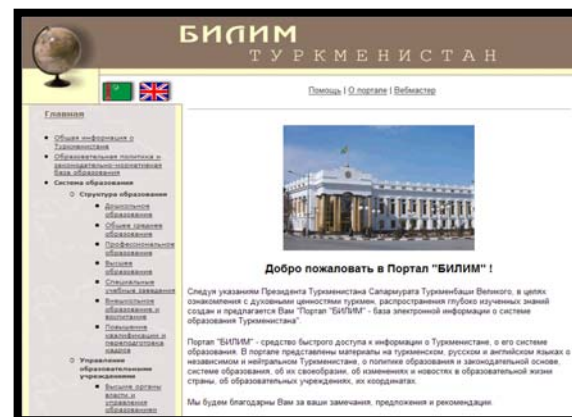
the network is under the management of the SCST which has indicated that any updates to the web portal would have to be made by the SCST itself, again by receiving the required update on a CD or flash drive at least one week in advance. Also, InfoTuk's connectivity with TuRen has been unstable with a down time of at least 20%. The SCST offers no help facility. The technical internet infrastructure of both Telecom and the SCST is already over stretched with frequent down time and painfully slow speeds at times, as the evaluation team experienced first hand in carrying out the three web based surveys. A third possibility might be to use the UNDP site for hosting. A precedent has already been created by an environmental project. The MoE Director indicated that the MoE would prefer this option and that if UNDP agreed to host the MoE site, the logos of both the Government and UNDP could be displayed. However, the UNDP site is already over loaded and uploading is very slow.

Because of the disadvantages of the above hosting options, InfoTuk prefers to use a professional hosting site which would charge around US$ 110 per year. Several such commercial sites are compared by price and technical characteristics in Annex 11 table 8. Such sites offer several advantages: technical capacity that enables more than just basic designs, for example on-line discussion forums, access to immediate on-line updating, 24/7 help, access to simpler domain names[5] and more email addresses.

In the obvious vacuum left by no official on-line web site relating to education in Turkmenistan, IREX established a web site, in early 2007, entitled Turkmenistan's Educational Portal. This site indicates that its "content is created by and for the thousands of great teachers and students in Turkmenistan…. this website will expand into an educational portal". The site contains discussion forums, links to educational resources for teachers and students, blogs, competitions such as lesson plan contests (see box on next page). The site had 5140 hits/visitors as at 19 November 2007. Despite the apparent potential for InfoTuk and IREX to collaborate, there has been only one meeting between the managers concerned on 3 May 2007, arranged at the request of IREX. However, there has as yet been no follow-up.

3.3.4   Public computer training and access to the internet

The third output expected from InfoTuk relates to training of the general public in computing and giving them free access to the internet. For this InfoTuk 1 established 8 ccomputer training centres in the cities of Ashgabat, Turkmenbashi, Balkanabat, Serdar, Tejen, Mary, Turkmenabat and Dashoguz (see map). Each centre offered free courses in basic computing and in the use of MS office software. The main expectation from InfoTuk 2 was to provide free public access to the internet at all centres for up to then only the centre in Ashgabat had access to the internet. Thus the 2004 Terminal Report of InfoTuk 1 concluded that "InfoTuk 2 must be based on ever widening networking, interaction and use. Full access to the Internet will be central to this, including extending access deeper into the community in support of its social, economic and cultural aspirations. The InfoTuk Team must be prepared to exploit this to the full."

InfoTuk purchased and installed the equipment required to connect each centre to the internet by the end of 2005. But since then, only one additional centre was connected, that in Mary City, and that only in 1 July 2007. Various explanations were given for the delay in connecting the other centres to the internet, both technical and financial. On the technical side, it was indicated that connecting the centres to the internet requires the extension of optic cabling provided by NATO under the TuRen project. The project's senior technical adviser informed the team that this would be completed to Turkmenabat, Balkanabat and Turkmenbashi by January 2008 as these three

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[5] Such sites offer the possibility to open a "2nd level" domain name such as bilim-tm.org while under hosting by either of the two Government entities, the domain name would be significantly longer and more complex, with consequent longer and more complex school web and email addresses.

cities had research or scientific institutions which were included under SCST's TuRen programme. He indicated that optic cabling to Serdar, Tedjen and Dashoguz would take far longer as they had no centres covered by the TuRen programme and the InfoTuk centres will therefore have to rely on Telecom's dial up service using existing phone lines. The quality of phone lines is likely to render this both very slow and subject to frequent disruption. Despite sharing the same locations, IREX has been able to provide internet to all its centres. The manager of the InfoTuk centre in Dashoguz went to the IREX centre in Dashoguz to complete evaluation survey on the internet. The other explanation for the delayed connection is the estimated cost of using these (outdated) technologies, estimated by InfoTuk at over US$2500 per month (Annex 11 Table 7). This raises major questions of sustainability, more so if the considerably higher UNDP estimates (calculated using the official exchange rate) are applied. A wifi solution would seem to be a much more cost effective option but in the view of InfoTuk's senior technical advisor, this would probably not be politically acceptable. But this too raises questions of why UNDP should subsidize the use of outdated and inefficient technologies when the main obstacle standing in the way of using modern wifi technology is political.

Clearly there remains considerable public demand for access to the internet, so much so that InfoTuk had to introduce limits of 2 hours per week on users. The centres in both Ashgabat and Mary City are open from 9 to 6, 5 days a week. However, half the 10 computers in Ashgabat and all 5 computers in Mary are used fro training in the mornings. All the computers were observed to be fully occupied during the times that the centres were open to the public for accessing the internet. Before using a computer to access the internet, users have to register. For this they have to give their name, address and ID or passport number. The number of registrations has consistently increased since the opening of the centres and reached 1183 for Ashgabat in November 2007.

In total, InfoTuk provided the public with over 14644 hours of access between April 2006 and October 2007. About 73 % of visitors are female, 41% are 20 or under and a further 34% are aged between 21 and 30. Internet access averaged 144.8 Mg per day or an average per user session of 8.2Mg. From a brief analysis of the sites visited (Annex 11 table 5), it appears that most visitors to the InfoTuk centre in Ashgabat used their time on the internet for study (28% of volume), for email (24%) and for news (22% of volume). Consistent with the relative importance of using the centre's internet for study, it is noticeable that new registrations peaked at the beginning of the school years in 2006 and 2007. Only 28% of the visitors were employed and 27% were students, according to a survey completed by InfoTuk in 2006 (see figure below).

Number of registered visitors per month

Number of visitors by occupation

- 195 / 16% — Government sector (GV)
- 145 / 12% — Non government sector (NG)
- 321 / 27% — Students/Pupiles (ST)
- 535 / 45% — Unemployed (UN)
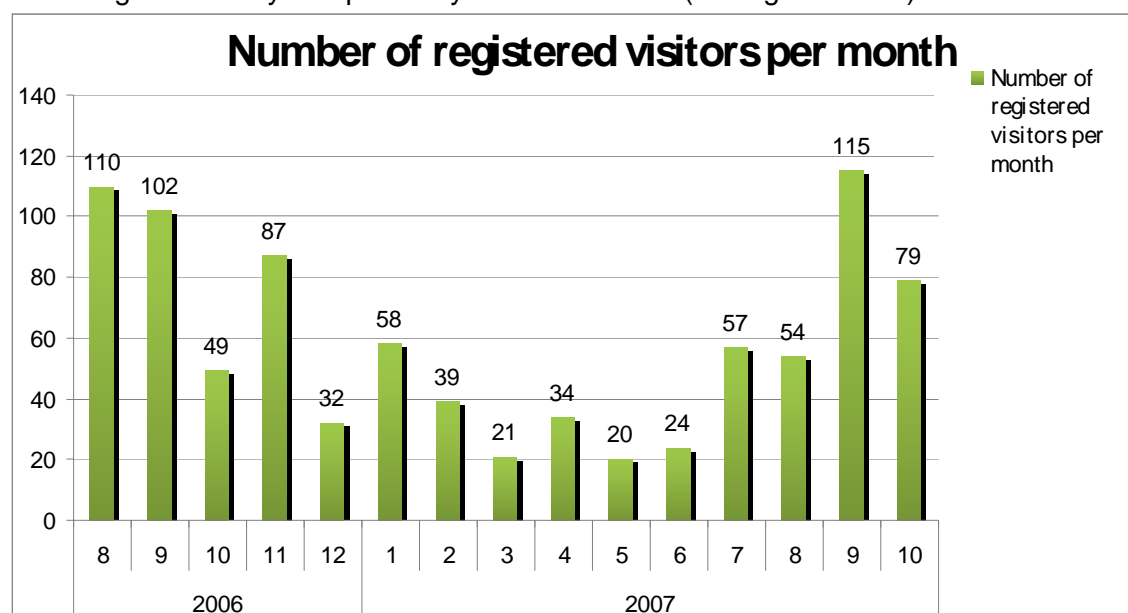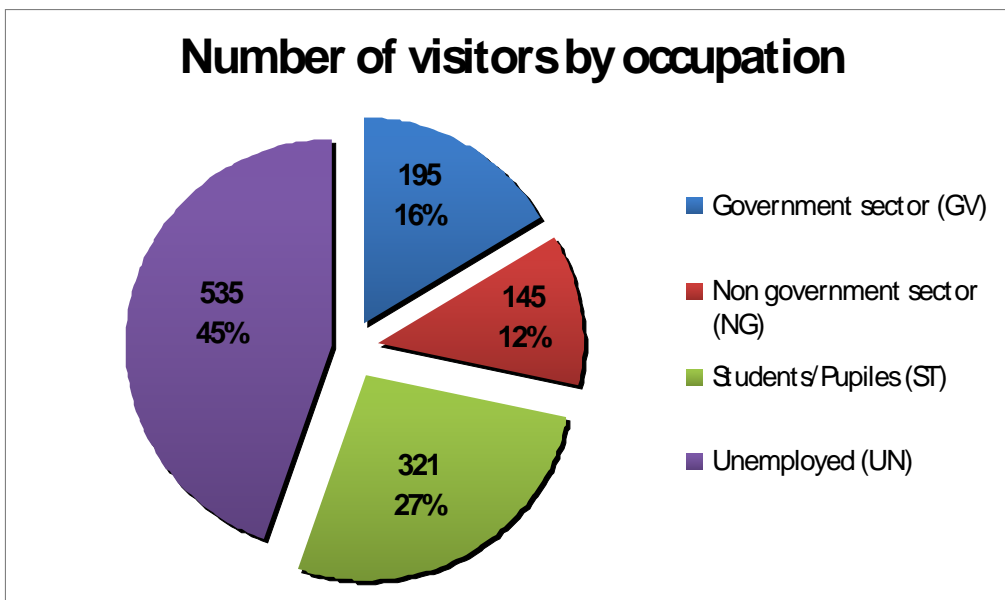
The other 6 centres have continued providing free training in basic computing. In total, InfoTuk 2's 8 centres trained 3583 persons between April 2005 and November 2007 (Annex 11 Table 1). Two thirds of the trainees are women and 85% are aged 35 or under. From the survey of managers (Annex 7), an average of 80 persons per week visits each computing centre.

The survey of users (Annex 6) was heavily influenced by students (47% respondents and by government employees (29% respondents), They used their time on computers, which averaged between 1 and 2 hours daily, more or less evenly between emailing and accessing the www. Over half had never owned a computer and over 40% had been accessing the internet for less than a year. They claimed that they used the internet mostly for their studies with emailing coming a close second. They had on the whole used computers fro learning only in computer classes and for learning Russian. Most used just the same centre to access the internet. Their reason for preferring to use InfoTuk was that internet is quicker, with fewer service disruptions. With InfoTuk's system of advance telephone reservations, most users indicated that they had to wait less than 5 minutes for a computer.

The training comprises 30 hours, split evenly between theory and practice, in MS Windows and Office and the internet (Annex 11 Table 3). The course content and duration do not vary substantially by centre. It is therefore surprising that the average number of trainees per month is more than double at the Turkmenabat and Dashoguz centres than it is in Serdar and Turkmenbashi. On further inquiry, the managers of the former centres have two people sharing a computer and work longer hours than the other managers. Some managers indicated that trainees resisted sharing computers but given that 95% trainees pass InfoTuk's completion test on their first attempt, irrespective of sharing, maybe this resistance should be routinely over-ruled. The centres also have long waiting lists of people waiting to be trained.

At the request of the MoE, the centres were used for training teachers during the summer school vacation, in preparation for the installation of the 12000 computers which the MoE has procured for schools. It is understood that the MoE also requested other teaching centres in addition to InfoTuk to undertake this training. At this stage, one teacher is being trained from each school in basic computing. The teachers selected by each school are usually teaching science, ICT or moths. Of the 72 teachers sent for training to InfoTuk's Mary Centre from June to August 2007, all but 3 were teachers in moths, ICT and physics. The three exceptions related to two officials from

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the Velayat Department of Education and one History teacher. InfoTuk used its basic 30 hour course for this training.

InfoTuk courses have very low drop out rate, perhaps averaging only 1 out of every 20 persons trained. At the Mary computing centre, in the afternoons of the 30 work days up to 9 November 2007, all five computers were used to access the internet during four one hour sessions by almost 600 users. The registration records of the centre show that out of the 600 hourly sessions, less than 30 were not filled. Moreover, according to the manager of the centre, these vacancies usually arose because someone who had made the appointment fell sick and the manager was not always able to phone someone else on the waiting list at short notice.

The test taken by trainees on completion of their 30 hour course is similar in scope as the ICDL, but considerably easier than the ICDL. The use of the ICDL was proposed by the 2004 evaluation. From discussions with project staff, it was a deliberate decision to pitch the standard lower than the ICDL on grounds that to achieve the ICDL standard would require more than 30 hours training. It was decided to limit the training duration to 30 hours so that more people could be accommodated given the high demand for training.

The most serious constraints according to managers of the centres (Annex 7) were the limited number of computers and the limited period for which the centre was open.

3.3.5   Computer training and internet in 20 schools

Activity in pursuit of this expected output was initiated early. The selection of the 20 schools was approved by the Cabinet of Ministers by October 2005. The criteria on the whole were technical and economic, reflecting primarily the ease of connecting the schools, but also school performance was taken into account with better performing schools more likely to be selected. The final selection was made by the MoE. The project purchased and installed six computers in each of 20 schools, ten by the end of 2005 and the other ten in early 2006. Five computers were allocated for teachers and students in a room, designated by each school, as the computing centre, and one computer was assigned to the school library or bookroom for Internet access and for library management in the future. In some schools all six PC were installed only in the computing centres. A local area network (LAN) connected the computers within each school. A teacher/trainer, to be responsible for the management and operation of the computing centre was identified by each school (usually an ICT, moths or physics teacher) and trained by InfoTuk using its basic 30 hours computing course (Annex 11 table 3).

The MoE indicated that schoolchildren and other teachers will receive from their respective teacher/trainer practical training in computing as part of the core Informatics curriculum in a 30 hours course similar to the basic course provided by InfoTuk (Annex 11 table 3). For this, the project provided training materials in Russian and Turkmen to each school. From discussion with the teachers and observations, it appears that computing is being introduced for "discovery" to 8 year olds with formal classes in computing from ages 11 or 12 upwards. The training at this stage is confined to basic computing and the use of MS Office. It does not yet include educational content and guidance on the use of ICT or computers as educational tools. The latter is an obvious next step, but was not intended in this initial "discovery" stage.

The public computer training centres established by InfoTuk

The data in each box relates to:
1) Date opened
2) Average number of trainees
   per month since opened
3) Date of Internet connection

The evaluation team considers that of the four outputs expected from InfoTuk, this one has been the most fully achieved. Twenty schools (10 in Ashgabat City and 10 within or next to Mary City were connected to the internet in July 2007 so that since the start of the school year in September 2007, teachers and students in these 20 schools have been able to access the internet. This is the major achievement of InfoTuk 2. Considerable use is already being made of the centres, not just for training but to access the internet. From the survey of teacher/managers (Annex 7), the times spent on each computer are short, averaging 24 minutes per visit for students and 14 minutes fro teachers, perhaps indicating the high demand for access. In the schools visited by the evaluation, there were usually two or three students around each computer and others waiting or coming in/out all the time. The survey showed that by far the most common educational use of the computers by teachers was for teaching computing in the ICT class: 81% teacher/managers used

them every day for this purpose. The next most frequent educational use by teachers, but far behind at less than once weekly on average, was for science subjects and for teaching moths and English. The students used the computers most for surfing the internet to "learn new things" and for emailing. There was very little use of the computers for reporting, assessing, monitoring performance and in school administration and management.

At the request of the MoE, the InfoTuk trained teachers have to "volunteer" to teach computing and supervise the computer rooms on top of their other teaching responsibilities and without additional remuneration. This means that the 20 teachers concerned are each responsible both for giving the 30 hour courses in computing and for supervision of the computing centres, on top of their normal duties. This clearly affects the motivation of the teachers and limits the time that the centres remain open. Already, there are large differences in the total hours that each of the school centres is open each week, ranging from just 6 hours to 15 hours (Annex 11 table 9). The voluntary nature of their additional work is clearly resented by the teachers concerned. At both the workshops, they complained strongly and this aroused intense discussion with MoE officials in the workshops. Operating the school computing centres on the basis of voluntary work by the teachers concerned is unlikely to be either sustainable or replicable. A suggestion from the teachers that the schools train parents outside school hours for a fee in order to generate revenue which could permit overtime payments to the teachers as well as replacement of computers etc met with resistance from the MoE at the workshop. A solution to this issue needs to be found in order to replicate and sustain this project achievement.

Another challenge is networking. The schools are not yet networked so that they are regularly learning from each other as well as from schools elsewhere in the world. In the workshop (Annex 9), teachers requested that the schools be connected to each other so that they could hold open lessons, shared across the schools, They pointed out that such networking would encourage mutual support and professional growth amongst the teachers, and could be used to facilitate competitions between schools.

In Mary Velayat, one computer was provided to the library in each school. In the three schools visited, this was not connected to the internet and the computer was used basically for cataloguing books and by teachers for preparing lesson notes in MSWord or by students using MS Office applications. It looked as if the library computer was not being used by as many students or teachers as those in the computing centre.

In Mary Velayat, the manager of the InfoTuk public computing centre checks and carries out routine maintenance on each of the school computers every Saturday. Teachers indicated that the schools so far not had problems with computers. However, several teachers pointed out that the computing room became very hot and dusty (with open windows) during summer months. They requested air-conditioners.

Overall, the evaluation considers that the provision of internet to 20 schools represents a significant milestone for Turkmenistan. InfoTuk staff merit full credit for this.

3.3.6 Other observations on InfoTuk's structure and performance

Work planning and monitoring: The InfoTuk staff work cohesively as a team. However, some weaknesses were noted in the way in which project planning was undertaken both by project staff and by UNDP in 2005 and 2006. In UNDP's results based system for work planning and monitoring, project managers and programme officers are required to agree with counterparts annual targets which will help achieve the expected outputs and are reasonable for the year in question given resource and other constraints. Annual targets were not always set for each output, e.g. only two were set for 2005. This is important because both results driven management and monitoring of the project are facilitated by setting such targets. The targets

should relate directly to the outputs and outcome so that there is a robust chain of results developed logically from the outcome down to annual targets for InfoTuk for each year. However, this weakness was addressed by 2007.

Another weakness, perhaps reflecting cultural norms in Turkmenistan, is the very limited extent to which people are willing and able to recognize weaknesses and constraints. In reviewing project progress reports, it was observed that the constraints faced by the project were generally either not recognized at all (unlikely) or if recognized, not articulated in the reports concerned. Thus in the 2005 annual progress report of InfoTuk 2, only 2 relatively insignificant negative points were listed, both relating to delayed delivery of equipment, contrasting with 28 positive or facilitating factors. Neither of the negative points was described in as much detail as the facilitating factors. More importantly, the highly negative policy environment was not mentioned, nor was the lack of support from the MoE which came out strongly in the staff survey (Annex 8) and which according to the responses, had deteriorated in the last 12 months. Thus the delay in "connecting schools to the Internet" should not have been attributed to the delayed delivery of the equipment, as was clearly implied by the 2005 progress report, but should have more accurately been attributed to the lack of effective support from the MoE in resolving the policy and other issues that stood in the way and were not resolved until two years later. More generally in reporting on the project, positives are frequently repeated and sometimes exaggerated (as was clearly the case in the MoE's presentation to the evaluation workshop) and aptly summarized by the following often repeated quote from project progress reports: "There were no negative findings. The project is successful and well-received in the country." In short, there is a strong tendency to gloss over weaknesses and to emphasize the positives in reporting. This is unfortunate for it is the constraints which usually require corrective action more than the facilitating factors.

The 2004 evaluation proposed that an internationally recruited specialist in ICTD be recruited as a technical adviser to the project. It is not clear from the UNDP and project responses to this recommendation (Annex 11) why it was not accepted and the technical advisory post occupied instead by a national without specialist ICT expertise. The project has technically qualified professionals but these at the operational level. There is clearly a need for specialist technical advice, which can draw on first hand experience of international good practices, at a more strategic level. There is no evidence that the project provided such advice and its capacity to do so appears very limited with its current staffing.

Currently InfoTuk 2's organigram (Annex 10) and managerial arrangements involve two senior staff (both are at the same remuneration level) both reporting directly to the project steering committee or "Board" and three lower level professional technical staff. The latter are clearly overloaded while the team has, in effect, two relatively high level project managers. This structure is clearly top heavy and unbalanced and reflects poor managerial practice. While there probably was some justification for the present arrangement in a past transitional phase, the evaluation considers that this is no longer justified. Moreover, the project manager, two technical staff and trainer are clearly overburdened by clerical and translation tasks. For such tasks the project was supported, up to 2005, by two support staff. It is understood that one of these posts was abolished because of repeated personality clashes and while the other was considered redundant for project operations at the time. Staff in the evaluation survey called strongly for support staff, a call supported by the evaluation.

Another area requiring improvement is UNDP/project policy with respect to professional learning by the project staff. From the evaluation survey of project staff (Annex 9), 80% of staff indicated that the most important way that they had learnt computer skills was from the actual use of computers, with self tuition from the internet and CDs being the next most important use. While this should continue, it should also be supplemented by more formal training. Those staff that had received formal training in the last three years did not receive funding for this from the project.

3.4 Partnership strategy

As summarized in section 2.2, several development partners are actively supporting ICTD in Turkmenistan but there is no apparent coordinating mechanism. Moreover, in the absence of any overall national ICTD strategy and the continuing unlikelihood that any such strategy, if and when prepared, will be shared with development partners, there are obvious risks of duplication and the development of incompatible systems. While the evaluation team met with some partners concerned, hard data relating to their respective programmes was not obtained. It is difficult to envisage a coherent picture of how their programmes fit together. In short, there seems to no real partnership strategy for ICTD in Turkmenistan. The government seems even to encourage a "divide and rule" type approach with each partner doing its own thing more or less in isolation. In this situation, if there is an exchange of information, it is informal, perhaps more through casual encounters in the local cocktail circuit than in any formal meetings. It is hardly surprising that this gives rise to misinformation and/or misunderstandings of respective roles. Thus for example, the 20 October 2007 quarterly report of the EU/TACIS-TEMPUS funded "Occasion" project complains that "Internet connectivity to Dashoguz still not at maximum speed <u>due to retarded financing from co-sponsors like UNDP </u>(Tempus rules do not allow for communication costs), slower Internet connectivity operative". Clearly there is a major misunderstanding by the author(s) of this report of UNDP's global mandate as well as the local specifics of what UNDP/InfoTuk is trying to achieve in Turkmenistan. It is hardly surprising that participants in the evaluation workshop (Annex 9) called for the partners concerned to get their act together. One specific suggestion was for regular meetings to exchange experiences.

In such circumstances, it was rather unusual, but nevertheless commendable, that one partner, namely IREX, took the initiative to seek some collaboration from UNDP by requesting a meeting. IREX, UNDP and InfoTuk managers met on 3 May 2007 and exchanged information on what each was doing in ICTD for education. While this was a potentially useful step, it has yet to be followed up with any tangible action, let alone result. Probably all partners would gain from periodic meetings to exchange information and views on what each are doing, progress, constraints etc.

Within the UN, there already exists a coordinating mechanism. However, there does not yet appear to be much concrete coordination in the education sector between UNDP and other UN agencies, especially UNICEF, UNFPA and UNESCO. A visiting UNESCO officer met with the evaluation team and was clearly intent on finding out what InfoTuk was doing and how UNESCO might (source UNDP funding to?) help its future evolution. UNICEF's programme in education is undergoing major revision as a result of its mid term review, ongoing at the time of this evaluation. This could provide opportunities for closer collaboration with UNDP in the future.

4. RECOMMENDATIONS

The partners supporting ICTD in Turkemenstan would probably all gain from periodic meetings to exchange information and views on what each are doing, progress, constraints etc. ***Recommendation 1: The UN should initiate more open and systematic dialogue between partners by inviting them to discuss the potential and need for periodic exchanges and, if agreed, to designate a focal point(s) to regularly convene and support such meetings.***

All those with whom the team spoke, both in Government and amongst development partners, considered that InfoTuk had contributed usefully to the quest for increased public access to the internet. Particularly appreciated by all is the provision of internet to 20 schools: this was seen as a major breakthrough for the country. Given the hope that now prevails following the announcements of educational and ICT policy reforms by the new President in the last 9 months, there is obvious potential for ICTD to help recover from the distortion and decline of the education system in the previous 15 years and to narrow gaps in access to education between different groups within the country. The MoE is requesting the continuation of InfoTuk. ***Recommendation 2: UNDP should confirm its willingness to continue support for ICTD in education, subject to agreement on what UNDP support would cover.***

It is difficult to identify the shape and direction of a new InfoTuk project in the current fluid situation in Turkmenistan. New high level announcements on major reforms in the education sector are taking most, even high level civil servants, by surprise. Moreover, implementation of some of the announcements already made has yet to begin while the full implications of most of these major policy reforms have still to be worked out, preferably within the context of a coherent strategy for ICT development in Turkmenistan, which it is understood the SCST is preparing with EU support. Some lessons from other countries experience in preparing and implementing such strategies are quoted in the box on the next page. If and when such a strategy is agreed (earlier UNDP/InfoTuk 1 support to SCST for a national strategy led to nothing), it could have a major bearing on what and how UNDP and other partners support the use of ICT in education. Until then and in the continuing expectation of further, as yet unannounced, reforms in the education and ICT sectors, a flexible and time buying approach should be pursued by UNDP. There are, however, some obvious first steps that need to be taken. Drawing from UNESCO's indicators for ICT in education, essential starting points are the presence of a national policy for ICT in education and an agreed time-bound action plan of deliverables clearly indicating who is responsible for doing what and with what resources and when. As these do not yet exist, at least in the public domain, an obvious and critical role for any extension of InfoTuk is to support their preparation.[6] ***Recommendation 3: rather than prepare a new InfoTuk 3 project, the current InfoTuk 2 project should be extended by two years, to deliver more fully against its existing outputs and to prepare a national action plan for using ICT in education.***

To more fully achieve its outputs and to elevate project work to a more strategic level, most especially in building national awareness, the InfoTuk 2 extension should provide for the international recruitment of an ICT specialist, with first hand experience of international best practices. The 2004 evaluation proposed that an internationally recruited specialist in ICTD be recruited as a technical adviser to the project. In commenting on follow up to this recommendation (Annex 12) UNDP indicated the MoE was not responsive. It is also understood that UNDP faces major budgetary constraints. In any case, the technical advisory post was occupied instead by a national without specialist ICT expertise. This, in the view of the evaluation, negatively affected project performance. To overcome the budgetary constraint, it is proposed that UNV be requested to identify, with technical help from the ICT adviser in UNDP/Bratislava, a suitably experienced and preferably Russian and English speaking ICTD specialist. ***Recommendation 4: a seasoned UNV specialist in ICT should be internationally recruited with specific responsibility to help***

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[6] Use could be made of the UNESCO indicators and other tools on the linked UNESCO web sites on ICT in Education in preparing, implementing and monitoring such an action plan.

prepare a national action plan for using ICT in education and to help build national awareness of the potential for ICTD to accelerate Turkmenistan's development.

Recommendation 5: As part of building national awareness and to practice what it preaches, InfoTuk should quickly put on line and professionally manage its own web site.
This should set a good example in both content and its management, e.g. by frequent and relevant updating. Amongst its content should be links to the ICTD programmes of other partners. Indeed, until a coordinating mechanism is effectively operating, an InfoTuk web site could usefully summarize which partners are doing what, where and how etc and invite, and/or assist, the partners concerned to post corrections and updates.

Some lessons from the experience of other countries

In considering next steps, the Government might be well advised to take stock of lessons learnt from the experience of other countries in their ICT development. The following list draws on some of the lessons elaborated upon in NISSI's 2006 report on "Main Priorities for Development of the Information Services Market in Turkmenistan" and the World Bank's 2001 "Information Infrastructure; an Operations Evaluation Group Review":

Rapid advances can be achieved in partnership with world class companies using international best practices in areas such as internet supply.

A limited period of exclusivity or duopoly may encourage heavy investment and mitigate risks.
Even partial competition brings increased investments and human skills, lowers prices, improves quality of service and broadens user choice.

Attract private companies, including multinationals, to invest, for example, by issuing licenses to companies to provide internet services. The licenses could more than compensate for any lost revenue by Telecom.

Transparency in licensing (commercial basis, balanced, reasonable and realistic) and tariff setting as well as clarity about the continuing role of Telecom, the incumbent operator, is critical to attracting private investment.

There is often merit in privatizing the incumbent state provider to avoid unfair competitive practices

A capable and independent state telecommunications regulator, committed to privatization, is important for successful private sector participation. This should be separate from Telecom to avoid conflict of interest.

An integrated and mutually reinforcing package of privatization, competition and regulation for fair competition at affordable prices for universal service has worked well elsewhere

Laying down rules for ICT provisions and/or setting up a regulatory body does not obviate the need for a well articulated Government strategy for ICTD.

Key dimensions of a national strategy include: policy and legal issues, e.g. rule making processes, regulatory and implementing agencies, competition policy, tariff regimes, universality, taxation, intellectual property rights, content regulation, privacy, encryption, and security …..… telecommunications infrastructure e.g. network expansion, standards, compatibility… end uses for ICT including tele-medicine, education and research, distance learning, e-governance, e-commerce, rural services delivery, citizen participation… the IT industry including hardware, software, production, trade and purchase incentives and human resources including technical training, scientific education, organizational learning. …. All logically linked and sequences with the country's poverty reduction strategy

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InfoTuk's previous work in developing portals, despite requiring considerable effort and expenditure, has so far not had any tangible result. The current work on developing an education web portal should either be brought quickly to fruition or, if the MoE is unwilling or unable to officially approve the draft web site by 31 December 2007, abandoned. The proposed extension of InfoTuk 2 should only provide for further work in developing an educational portal and in building MoE capacity to manage and update this if the portal as currently developed by the project is officially approved by the MoE and put on-line before 31 December 2007. This will require quick resolution of the current hosting dilemma as described. Hosting by Telecom or the SCST would lead to delays in updating (7 days notice), lack of 24/7 help and severe capacity limitations. These limitations ultimately result from current policy deficiencies rather than technical constraints. The

UN/UNDP might only delay the required policy reform if it agrees to an MoE request to co-host the education portal. It would be better for UNDP to subsidize, for a limited period, the commercial hosting of such a site so that the portal can be established and the Ministry's capacity to manage it built. ***Recommendation 6: InfoTuk 2's work on an educational portal should only continue in the extended project if the portal, as already developed, is officially approved by the MoE and put on-line by 31 December 2007.*** If not on-line by that date, the MoE should be left to freely develop its portal in its own time and without further UNDP support.

Another incomplete output from InfoTuk 2 relates to the provision of free public access to the internet at the 8 computing centres established by InfoTuk 1. The internet was only extended to one additional centre during InfoTuk 2 and that only in July 2007. While the six centres without internet connection are still providing free training to the public, this is at considerable cost to UNDP. Moreover, connecting the internet to these centres, if politically and technically feasible, will add significantly to these recurrent costs, raising concerns about their sustainability and replicability. Given the CO's resource constraints and the other high potential requests being made from Government, InfoTuk should quickly develop an exit strategy for handing over the centres to national counterparts, either the MoE or to local NGOs/private entities. This will likely require the introduction of user charges for access to the internet and payment for the training provided at the centres. ***Recommendation 7: InfoTuk's project Board should approve, by 31 March 2008 a strategy for handing over the public computing centres to either the MoE or to a local NGO/private entity. Recommendation 8: Those centres without internet access on 31 March 2008 should be handed over by 30 June 2008. Recommendation 9: Centres with internet as at March 2008, including that in Ashgabat, should introduce user charges in graduated steps so that they are fully self funding by 31 December 2009.***

The MOE is requesting that InfoTuk extend the provision of the internet to additional schools in urban areas in other regions. This would no longer be a pilot activity as 20 such schools have already been provided with the internet. The extension to similar schools would merely subsidize MoE activities. There are better uses for UNDP resources and UNDP should not support such an extension. Instead, the pilot could be more usefully extended by providing the internet to schools in remote and poorer areas. The infrastructural and human skill capacities in such areas would pose additional challenges along with the added policy, technical and financial constraints. Piloting internet connections to schools in the poorest and most remote areas of Turkmenistan would provide more useful lessons for the future of the education system in the country than a mere extension to schools in other urban locations. Moreover, if the internet is confined to schools in urban areas, as it is at present, it will exacerbate the significant urban-rural divide, a rapidly growing problem highlighted by the 2006 NISSI survey. This would directly contradict the UNDAF's stated aim of the UN system in Turkmenistan to work to reduce such inequities. Before firming up a recommendation along these lines, the evaluation team sought advice from UNDP/Bratislava on its technical feasibility and likely costs. This advice was not forthcoming by the time of completion of this report. Therefore, given the CO's stated resource constraints, it is considered that the extended InfoTuk 2 should only pilot the provision of the internet to schools in poorer and remote areas if and when the national context changes to make this politically technically and economically feasible. This could well happen with further ICT reforms and developments in the next few months, especially if recommendations (e.g. a "quick fix" wireless solution coupled with a "tiger leap" for access and training[7]) like those proposed by Ivar Tallo in his April 2007 report are implemented. In this respect, it is understood that a World bank mission will visit Turkmenistan in January to, amongst other things, review a government request for WB support in providing internet to its schools. ***Recommendation 10: InfoTuk's provision of internet to schools should only be extended to schools posing a more difficult challenge such as those in remote rural areas when politically, technically and economically feasible with UNDP's resources.*** Until then, InfoTuk should consolidate its achievement in the initial 20 schools by helping the MoE make computer training and internet access more sustainable by

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[7] Ivar Tallo's April 2007 report refers to Macedonia which was covered by wireless internet in the course of one year. The 'Tiger leap" refers to a successful programme pioneered in Estonia for integrating internet use into schooling. The programme has been recently adapted by Georgia.

addressing issues relating to the remuneration of teachers responsible for ICT training and managing the computer centres and by connecting the 20 schools through a local intranet. ***Recommendation 11: The MoE should properly remunerate the teachers responsible for managing the 20 school computing centres. Recommendation 12: InfoTuk should create an intranet between the 10 schools in Mary and the 10 schools in Ashgabat*** for reasons summarized in section 3.

Another step, but one which has necessarily to involve the schooling system as a whole relates to the future use of ICT as tools in teaching subjects over and above ICT and computing skills. This will involve, amongst other things, fuller integration of the teaching of ICT skills into the national school curriculum. This and the eventual extension of the pilot to schools serving the poorest children and/or in more remote areas will probably call for a multi-faceted and broadly supported approach which might involve collaboration between UNDP, UNICEF and other interested UN agencies with significant funds available to support education in Turkmenistan, possibly including the World Bank. This could be explored as part of the preparation of the next UNDAF.

The test of competency in basic computing skills used by InfoTuk at the end of its training should be credibly aligned to international standards. The present home grown test falls short of international standards with 95% passing on the first attempt and the other 5% on their second attempt. ***Recommendation 13: The ICDL should be used to test and certify competency in computing skills both for the public computing centres and for teachers and students in the 20 schools provided with internet.***

Notwithstanding the "outcome" nature of this evaluation, during its work, the evaluation team identified some weaknesses in the design, organization and performance of the InfoTuk project. These prompt the following additional recommendations. ***Recommendation 14:*** Given the critical importance of InfoTuk 2 operating at a substantially higher level amongst civil servants, ***membership of the Project Board should be elevated to include the Deputy Resident Representative from UNDP and a Director from the Government.*** As analyzed in section xx, InfoTuk's organization is top heavy with, in effect, two project managers both reporting directly to the Board and staff capacity at lower levels overstretched. ***Recommendation 15: one of InfoTuk's two senior posts should be abolished with effect from 1 January 2008.*** As the incumbents of both the senior posts have exposure to e-governance and have strong connections with senior levels of government, if either are interested, they might be considered for the national consultancy in e-governance suggested in the next paragraph if and when this is advertized by UNDP. ***Recommendation 16: One InfoTuk support post should be reinstated.*** InfoTuk's staff need to keep abreast of new technical developments and to upgrade their skills to support ICTD in Turkmenistan. ***Recommendation 17: the national professionals on the project should be encouraged to upgrade their own computing skills in specific areas agreed by the Project Manager on emailed technical advice from UNDP's regional ICT advisor in Bratislava.*** The full costs of approved InfoTuk staff training, DSA as appropriate and the time of the staff member concerned should be charged to the project account, consistent with UNDP's corporate learning policy of allocating 5% of staff time and budget to staff learning. ***Recommendation 18: realistic annual targets, logically derived from the expected outcome and outputs should be set for each output at the beginning of each year by project management and progress monitored against these targets by both project management and UNDP. There should also be more frank recognition and statement of constraints in project progress reports.***

Notwithstanding the call in the ToR to explore options for supporting ICTD outside education and despite advance requests for meetings with other Ministries (Inception report on 22 October), no such meetings took place as approval was only given (and even that right at the end of the evaluation) for meeting the MoE and the SCST. Given the lack of both contact with officials outside the education sector and the lack of data relating to other potential areas for ICTD such as e-governance, the team does not consider that it has a sufficient basis to make firm recommendations for extending UNDP support into such areas. However, properly used, ICTs could substantially enhance transparency and help build capacities in other areas of responsive

democratic governance in Turkmenistan. Initiatives in e-governance would valuably draw on UNDP's comparative advantages and proven international track record of such assistance. If the CO considers that it could have resources for a possible intervention in e-governance (this seemed uncertain in the evaluation debriefing), then the proposed extension of InfoTuk 2 might provide for an international e-governance expert and a national consultant (1 month each) and an e-governance champion, of high stature, probably from a former CIS country (3 or 4 days) to work in a carefully sequenced manner to prepare a specific project document for initiating e-governance.

The evaluation was severely handicapped by lack of access to relevant officials and data. The current Government requirement for all foreigners to obtain the formal approval of the Ministry of Foreign Affaires (MFA) before meeting officials in different ministries clearly clogs up the MFA as it is unable or unwilling to give the requested approvals in a timely manner. As a result, visiting development assistance missions have to operate either informally or are denied access to relevant officials and data. The ultimate loser is Turkmenistan as national development is short changed by consequent deficiencies in the reports of persons who come to Turkmenistan to try to help. ***Recommendation 19: On behalf of the development community, the UN Resident Coordinator should formally request that restrictions on access to officials and data be lifted as soon as possible.***

Annex 1
Acronyms and abbreviations

ADB – Asian Development Bank
AWP- Annual Work Plan
CNTC- Computer and Networking Training Centers
CO – Country Office of UNDP in Turkmenistan
CP- Country Programme of UNDP in Turkmenistan
CIS- Commonwealth of Independent States
CPAP- Country Programme Action Plan
DRR – Deputy Resident Representative of UNDP
EU – European Union
Infotuk- Information Sharing in Turkmenistan for Sustainable Human Development
ICT - Information and Communications Technology
IREX- International Research and Exchanges, a US based NGO.
MDG - Millennium Development Goal
MFA –Ministry of Foreign Affairs
MoE-Ministry of education
NGO – Non Government Organization
NISSI - National Institute of State Statistics and Information
NPC – National Project Coordinator
RC – Resident Coordinator of the UN System in Turkmenistan
SCST- Supreme Council on Science and Technology under the President of Turkmenistan
TACIS-Technical assistance to CIS countries (EU-programme)
ToR –Terms of Reference
TuREN-Turkmen Research and Education Network
UNCT- United Nations Country Team
UNDAF United Nations Development Assistance Framework
UNDP- United Nations Development Programme
UNESCO- United Nations Education and Scientific Organization
UNFPA- United Nations Population Fund
UNICEF- United Nations Children's Fund
USAID- United States Agency for International Development
WB- World Bank

Annex 2 Terms of Reference

A. STATEMENT OF WORK

Introduction

According to evaluation plan of the UNDP County Office in Turkmenistan (hereinafter UNDP Turkmenistan), outcome evaluation is to be conducted in the third quarter of 2007 for the following Country Programme outcome - **"Public access to ICT and other information systems improved and expanded, particularly in educational facilities".** This Country Programme outcome aims to contribute to the achievement of UNDAF outcome 3 "By the end of 2009, inclusive, child-friendly and sustainable education services are provide at pre-primary and primary levels". UNDP intends to further its activities under this outcome till the end of the current Programming Cycle. Findings and recommendations of the outcome evaluation will feed the design of further programme interventions under this outcome.

2007 is the third year of UNDP Turkmenistan Country Programme cycle. UNDP has been funding one project "Information sharing for sustainable human development in Turkmenistan – Infotuk" aimed at support of the abovementioned outcome.

The current phase of Infotuk project started in March 2005 will be completed in December 2007. The project is implemented in the capital and all five provinces of the country including twenty secondary schools in two cities. There are indications from the key national stakeholders – Ministry of Education, Supreme Council of Science and Technologies and twenty schools participating in the projects - to expand and continue the project. The findings of the outcome of evaluation will provide a basis to understand to what extent UNDP has contributed towards the outcome with a special emphasis on the achievements from this particular project.

The outcome evaluation and its recommendations for future programming are of paramount importance both for UNDP Turkmenistan, the Government of Turkmenistan and the people of Turkmenistan. This outcome evaluation will provide timely and valuable information to support UNDP Turkmenistan in furthering dialogue with national counterparts on how to proceed further in this particular area of work and to make strategic choices for future programme development around this outcome.

Description of the country context

Currently the ICT availability is at a low level and mainly localized in Ashgabat, the capital of the country. Communication technologies including the Internet are strictly controlled by the state. Limited penetration of ICT in Turkmenistan and resultant scarce capacity to use ICT particularly at the provincial level prevents to fully utilize significant potentials of IT for economic progress and human development of the country.

However, there are some positive trends. NATO has been funding a regional project aimed building an Internet network infrastructure and creating the Virtual Silk Highway which provides access to Internet in higher educational and research institutions of Turkmenistan. UNDP Turkmenistan cooperates with the NATO project to extend access to Internet to twenty secondary schools participating in the project.

In February 2007 the newly elected President of Turkmenistan promised the population rapid ICT development and access to Internet to all citizens. One of the first presidential decrees was about opening first two state owned Internet cafes in Ashgabat with some more to follow in other cities.

However, where exists, Internet service is expensive and not affordable to ordinary people who have to pay about $2 an hour.

In 2006 UNDP supported National Institute of Statistics in conducting sample survey on access to ICT including Internet. The survey findings show that 69% of the surveyed enterprises have computers; yet there were only four computers per 100 employees. Moreover, on average only 5 per cent of the employees and members of the households were computer literate. Access to Internet was available in 9% of the surveyed enterprises and 8% in the households[8].

In order to build basic Internet infrastructure especially in provinces and tackle poor basic computer skills the Ministry of communication lately announced a tender for specialized equipment and its installation; and the Ministry of education has been tasked with procurement of 12 thousand computers for secondary schools in provinces both in rural and urban areas.

Despite the emerging positive trends, an enabling environment of ICT development is yet to be created. At this juncture there are two state owned Internet providers: the Ministry of communication and the Supreme Council on Science & Technologies (SCST). The SCST reports directly to the President of Turkmenistan. The SCST implements the Turkmen segment of the Regional Virtual Silk Highway and provides access to Internet to higher educational and research institutions. UNDP is partnering with SCST to bring Internet to twenty secondary schools ten in Ashgabat, the capital and ten in Mary city (of the same name province) covering nearly 22,000 schoolchildren.

UNDP's Intervention Associated with the Outcome

UNDP has been working in ICT area since 2000. In 2004 a preparatory assistance and subsequent two years project has been evaluated by an independent evaluator. The evaluation report is available both in hard and electronic version. Recommendations from the evaluation laid a basis for a new phase of the development intervention. Details of the on-going project are in the below table:

Project ID	Project Title	Total Budget (in US$)	Source of funding	Project Duration	Implementing partner
00043908	Information Sharing for Sustainable Human Development in Turkmenistan (Infotuk 2)	654,535	UNDP	01.04.2005 – 31.12.2007	Ministry of education

The Project's intended outputs are as follows:
1. *Enhanced national capacity to plan, manage and extend the benefits of ICT and networking to the primary beneficiaries and users of the InfoTuk project*. This includes provision of in service-training, study tour for national specialists and decision makers from the government, research and education sectors and preparation of recommendations on further improvement of the use ICT for development.
2. *Awareness and acceptance of ICT as tools for national development increased* by producing and disseminating publicity materials and conducting ICT awareness events.

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[8] Assessment of Access to ICT, Turkmenimillikhasabat (National Institute of Statistics), 2006

3. *Turkmen Research and Education Network (TuREN) extended to the project beneficiaries.* The main objective of this output is to connect to the Internet twenty secondary schools in two cities and local centres on computer trainings created by the Project.

4. *Computer and Networking Training Centers (CNTC) created in 20 secondary schools in Ashgabat and Mary and connected to the Turkmen Research and Education Network (TuREN). .*

5. *Increased capacity for computer assisted learning and for learning about ICT in Turkmenistan.* This output includes strengthening the curriculum on computer assisted learning, enhancing existing teaching and training programmes in collaboration with the Ministry of education, adapting the International Computer Driving License training programme for teaching basic computing skills in local languages.

6. *More content of local interest available on the Turkmen Research and Education Network (TuREN) and beyond in Turkmen and Russian languages.* An education portal is to be developed with key documents relevant to education in local languages.

Outcome Indicator: Number of ICT users, particularly the Internet, increased by 70% (0.40 per 1000)

Output Indicator: Number of people trained in UNDP supported computer training centres

Implementation arrangements: The project is executed under the National Execution Modality (NEX). Main implementing partner is the Ministry of education which provides general coordination of the project implementation. Supreme Council on science and technologies under the President of Turkmenistan is responsible for Internet connectivity. UNDP's role is to ensure effective monitoring over the project implementation and provide technical and advisory services.

Monitoring and Evaluation: The assigned National Project Coordinator and independently recruited Project Manager are responsible for the development of the annual progress report in accordance with UNDP guidelines. Technical and financial reporting is done on a quarterly basis. The project has been audited as per UNDP's criteria.

Objectives and Scope of the Evaluation

The objective of this outcome evaluation is to assess whether the outcome is being achieved or not, assessment of UNDP's contributions and partnership strategy in pursuit of the outcome to generate lessons and make recommendations for future programme development.
.
The scope includes findings, recommendations and lessons learnt in the following areas:

+ Whether the outcome has been achieved and if not, has there been progress made towards its achievement;
+ An analysis of the underlying factors beyond UNDP's control that influence the outcome (including opportunities and threats affecting the achievement of the outcome);
+ What role UNDP has played towards the achievement of the outcome and whether UNDP's intervention has been appropriate and effective;
+ Review of UNDP partnership strategy and assess if the chosen partnership strategy was best to achieve the outcome.

This outcome evaluation will also help to clarify underlying factors affecting the situation, highlight unintended consequences (positive and negative), recommend actions to improve performance in future programming and partnership building and generate lessons learned

Products Expected from Evaluation

The key product expected is a comprehensive analytical report that includes, but is not limited to, the following components: (see the UNDP Guidelines for outcome evaluators for detailed information):

- Executive summary

- Introduction

- Description of the evaluation methodology

- Development context

- Key findings in line with the underlying evaluation questions

- Lessons learned

- Recommendations for the future (including viable project ideas and recommendations)

- Annexes: ToRs, field visits, people interviewed, documents reviewed, etc.[9]

An outline strategy and guidance for future UNDP intervention in the respective area (if still deemed relevant) based on the recommendations of the mission is to be produced. The format of the outline will be agreed between UNDP and the evaluators prior to the start of this evaluation.

- Strategies for continuing or concluding UNDP assistance towards the outcome;
  - Recommendations for future assistance in the outcome if warranted;
  - Lessons learnt concerning the best and work practices in producing outputs, linking them to outcomes and using partnerships strategically;
  - A rating on progress towards the outcome and progress towards the outputs;
  - A rating on the relevance of the outcome.

Evaluation questions
The key evaluation questions include:

Outcome analysis

- What is the current situation and possible trend in the near future with regard to the outcome?
- Whether sufficient progress has been achieved vis-à-vis the outcome as measured by the outcome indicator(s)?
- What are the main factors (positive and negative) that affect the achievement of the outcome?
- Whether the outcome formulation itself can be improved in terms of conceptual clarity, credibility of association with UNDP and prospects for gathering of evidence?
- Whether the outcome indicators chosen are sufficient to measure the outcomes?
- What unintended (positive/negative) changes have resulted from UNDP contribution?

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[9] See the ***UNDP Guidelines for Outcome Evaluators*** for a detailed guidance on the preparation of an outcome evaluation report.

Output analysis

- Are the UNDP outputs relevant to the outcome?
- Are individual outputs effective in contributing to the outcome and the national needs as reflected in the national development strategy?
- Has sufficient progress been made in relation to the UNDP outputs?
- What are the factors (positive and negative) that affect the accomplishment of the outputs?

Output-outcome link

- Whether UNDP's outputs or other interventions can be credibly linked to the achievement of the outcome (including the key outputs, projects, and soft assistance);
- What are the key contributions that UNDP has made/is making to the outcome?
- With the current planned interventions in partnership with other actors and stakeholders, will UNDP be able to achieve the outcome within the set timeframe and inputs – or whether additional resources are required and new or changed interventions are needed?
- Whether UNDP's partnership strategy has been appropriate and effective. Has UNDP been able to bring together various partners across sectoral lines to address relevant concerns in a holistic manner?
- Assess UNDP's ability to develop national capacity in a sustainable manner. Has UNDP been able to respond to changing circumstances and requirements in capacity development around the outcome in review?
- What is the prospect of the sustainability of UNDP interventions related to the outcome?

Methodological Framework
Information on the methodologies is given in Guidelines for Evaluators, issued by Evaluation Office, UNDP. The evaluators are expected to use all relevant methods to obtain data and information for their analysis and drawing up of findings, conclusions, lessons learn and recommendations. These include:

a) Documentation review: Begin with the Common Country Assessment/ United Nations Development Assistance Framework (CCA/UNDAF) for a description of the intended outcome, the baseline for the outcome and the indicators and benchmarks used. Examine contextual information and baselines contained in corresponding project documents, their evaluation reports and other sources;

b) Use interviews, field visits, questionnaires and meetings to validate information about the status of the outcome; also use to the extent possible and appropriate the data collected and analysis undertaken by the country office prior to the outcome evaluation; and examine local sources of knowledge about factors influencing the outcome; The methodology will be further refined by the Evaluation Team.

c) Identify the major contributing factors that "drive" change. Do not identify or elaborate all conceivable factors;

d) Probe the pre-selected outcome indicators, go beyond these to explore other possible outcome indicators, and determine whether the indicators have actually been continuously tracked;

e) Analysis of intended or unintended effects of the interventions.

f) Determine whether or not the UNDP strategy and management of overall country operations appears to be coherently focused on change at the outcome level. Examine whether UNDP's in-house planning and management of different interventions has been aligned to exploit synergies in contributing to outcomes.

g) Determine whether or not there is consensus among UNDP actors, stakeholders and partners that the partnership strategy designed was the best one to achieve the outcome; Look at how the partnerships were formed and how they performed; Look at how the partnership strategy affected the achievement of or progress towards the outcome.

B. MANAGEMENT, STAFFING, SCHEDULING AND BUDGET

Composition and skills for evaluation team

The evaluation mission will comprise of one international and one national consultant.

Team Leader

An international consultant should have masters' degree or higher level relevant academic training, extensive hands-on experience in the evaluation and management of complex programmes in relevant field; have a demonstrated capacity for strategic thinking, and a good knowledge of transition economies. S/he should be aware of results-oriented evaluation principles and methodology. The consultant should also be familiar with UNDP operations and knowledge of relevant UNDP policies. The international consultant will be the Team Leader and have overall responsibility for undertaking the evaluation, drafting the report and coordinating the various inputs and thus be responsible for formulating the findings of the evaluation. Specifically, the Team Leader will perform the following tasks:

- Lead and manage the evaluation mission;
- Design the detailed evaluation scope and methodology and approach;
- Ensure efficient division of tasks between the mission members;
- Conduct the mid-term evaluation in accordance with the proposed objective and scope of the evaluation;
- Draft and communicate the evaluation report;
- Finalize the evaluation report in English and submit it to UNDP.

National Consultant (Team Member)

A national consultant should have relevant academic training, and at least 3 years of relevant experience (preferably in ICT). A national consultant, as an evaluation team member will provide all necessary support to an international consultant, including translation and other secretarial support as necessary.

The Evaluation Team will submit an Inception Report outlining evaluation design and methodology, detailed work plan with roles and responsibilities to UNDP, as per the following Evaluation Schedule.

Timeframe & Evaluation Schedule

The mission will commence on September 2007. The duration of the mission is three weeks.

Activity	Timeframe	Place	Responsible Party
Evaluation design, methodology and detailed work plan (inception report)	Week 1: 2.5 days	UNDP Office	Evaluation mission team leader
Desk review	Week 1: 2 days	UNDP Office	Evaluation team
Field visits, interviews, consultations	Week 1 & 2: 9 days	Project's sites in Ashgabat and Mary city	UNDP, Project management
Outline of preliminary findings to senior management of UNDP	Week 2: 0.5 days	UNDP Office	Evaluation mission team leader
Submission of DRAFT evaluation report for debriefing	Week 3: 3.5 days	UNDP Office	Evaluation mission team leader
Debriefing with UNDP and key stakeholders	Week 3: 0.5 day	UNDP Office	Evaluation mission team leader
Finalization/ submission of Full evaluation report	Week 3: 3 days	UNDP Office	Evaluation mission team leader

Budget: The estimated total cost of the evaluation mission is USD 20,000.

C. UNDP REQUIREMENTS

UNDP management arrangements
To facilitate the outcome evaluation process, UNDP Turkmenistan will set up an Evaluation Working Group (EWG). The team shall consist of relevant UNDP staff and focal points from the Ministry of Education and Supreme Council on Science and Technology. The EWG will assist in connecting the evaluation mission with UNDP Programme Unit, senior management, and key stakeholders. In addition, the EWG will provide both substantive and logistical support to the evaluation team, ensure participatory evaluation process, and comment on the draft evaluation report. During the evaluation, EWG will help identify the key partners for interviews by the evaluation mission. The evaluation will retain its full integrity and flexibility to determine the best approach to collecting and analyzing data for the outcome evaluation.

At the end of the mission period, the draft evaluation report and draft project document will be shared with UNDP Country Office, the Ministry of Education and Supreme Council on Science and Technology, and other key stakeholders for comments. The UNDP Country Office will provide logistical support; organize meetings and interactions with relevant stakeholders; comment on the draft report and project document; and follow up on recommendations.

A draft report comprising especially the findings, outline lessons, conclusions and recommendations and a draft project document should be made available one working week prior to the scheduled completion date of the evaluation mission. This draft report will be discussed with stakeholders and UNDP management to validate findings, lessons and recommendations. A wrap

up meeting will be held two working days prior to the scheduled completion date of the evaluation mission.

Final Evaluation Report and any other associated documents should be submitted to the Resident Representative, UNDP Turkmenistan within two weeks of completion of the evaluation mission.

UNDP Office in Turkmenistan will disseminate the evaluation report relevant partners and stakeholders and upload the report into Evaluation Resource Centre (ERC). UNDP Turkmenistan will prepare management response and follow up to evaluation and ensure timely implementation of the agreed evaluation recommendations.

Deadline to receive proposals
The deadline to receive proposals is July 31, 2006

D. Annexes

SELECTED DOCUMENTS TO BE STUDIED BY THE EVALUATORS

- UNDP Handbook on Monitoring and Evaluating for Results
- UNDP Guidelines for Outcome Evaluators
- United Nations Development Assistance Framework (UNDAF) for Turkmenistan
- UNDP Country Programme Document (CPD) for Turkmenistan
- UNDP Country Programme Action Plan (CPAP) for Turkmenistan
- UNDP Central Asia Human Development Report (2005)
- UNDP related project document, project monitoring reports, and project evaluation reports
- Turkmenistan MDG Report (2003)
- Assessment of Access to ICT (2006)
- Other documents and materials related to the outcome (e.g. government, donors)

Annex 3

Inception Report[10]

For an

Outcome Evaluation:

"Public access to ICT and other information systems improved and expanded, particularly in educational facilities"

Batyr Babaev and Michael Constable

20 October 2007

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[10] The annexes of the Inception Report are not reproduced here as they have been supersede by the corresponding annexes of this report and by is Table of Contents.

Introduction

This Inception Report briefly describes HOW the evaluation team intends to carry out its terms of reference (ToR) for evaluation of the outcome to which the Infotuk project is expected to contribute. Its purpose is to ensure that the team, comprising Michael Constable (Team Leader) and Batyr Babaev, has correctly understood expectations from the evaluation and that their proposed programme of work, methodology and schedule of deliverables are agreed by all stakeholders. For this purpose, a draft Inception Report was submitted to the UNDP Country Office (CO) so that it may proceed, with other stakeholders, to review the proposals and provide feedback to the evaluation team before the outset of their assignment. After sharing the draft with stakeholders, the CO approved the Inception Report.

Objectives

The objectives of and expectations from the evaluation are clearly stated in the ToR. Basically, the evaluation team will assess the extent and quality of progress towards the outcome: **"Public access to ICT and other information systems improved and expanded, particularly in educational facilities".** In doing so, the evaluation will attempt to identify the extent to which UNDP contributed to progress through the Infotuk project and its partnership strategy. The evaluation team will draw lessons from experience to date and present findings and options for follow up to the current project which ends in December 2007. For this, the team will also offer suggestions aimed at improving performance in any follow up project, thereby facilitating strategic decisions by UNDP and national authorities on future programmes in pursuit of this outcome.

The ToR emphasize the need for the evaluation team to assess the sustainability of project achievements and the effectiveness of UNDP and the project in building national capacity. As an input into strategic decision making, the evaluation team will review the Government's intended exit strategy from the project and offer suggestions for taking it forward.

In pursuit of these objectives, the evaluation team will attempt to address each of the key questions listed on pages 6-7 of the ToR. The team will be guided by the other details of the ToR, the briefings given to the team by email, phone and in its introductory discussions as well as any feedback on this draft Inception Report received by 20 October 2007.

How we propose to carry out the evaluation

The evaluation methodology will draw from UNDP's "Guidelines for Outcome Evaluations" (2002). These guidelines envisage four inter-connecting analyses starting with 1) ascertaining the extent to which the outcome has been achieved and continuing with 2) identifying influencing factors, 3) assessing project contributions to the outcome, and 4) reviewing partnership strategy. Relating this approach to the Infotuk project, the team will:
   a) ascertain changes in public access to ICT and information systems, particularly in educational institutions, since the beginning of the programme in March 2005,
   b) identify underlying factors causing, influencing and/or constraining those changes and associated opportunities,
   c) review results (outputs) from the project and how those outputs link to the intended outcome (e.g. the extent to which there is a logical results chain from micro level outputs contributing to progress at the mezzo level and whether the latter contributes to macro changes in advancing a culture and climate for public access to ICT and information in Turkmenistan.
   d) review overall project design and performance, including its management and its organizational and operational effectiveness and the extent to which the vision foreseen in the 2004 evaluation has materialized, and
   e) Review how the project team and UNDP interacted with stakeholders and partners.

Reflecting the ToR and drawing on UNDP's evaluation guidelines, the major criteria that the team will use in these assessments will include relevance, efficiency, effectiveness, impact and sustainability. Also reflecting the primary expectations from and likely uses of this particular evaluation as detailed in the ToR, the evaluation team proposes to add a forward looking dimension to the evaluation. This will result in an annex which will provide more detailed options and recommendations for follow up to the current project. To support this, throughout all the analyses, an attempt will be made to draw lessons from UNDP's experience and good or interesting practices both in Turkmenistan and elsewhere.

In collecting evaluative evidence for these analyses, whenever possible, the evaluation team will triangulate. This involves obtaining information and perceptions from different sources and by varying methods to corroborate reliability. Sources will include both written documentation and discussions with stakeholders, users and others as detailed below. Quantitative data and analyses will be supplemented by qualitative data and analyses and anecdotal evidence both to increase the reliability of the findings and to provide a broader framework for their interpretation.

The evaluation team will gain insights and data from its review of background documentation including the Turkmenistan MDG Report (2003), the UN's CCA and UNDAF and UNDP"s programme and project documentation including progress reports, the 2004 evaluation of the Infotuk project, relevant reports of the Ministry of Education and Supreme Council on Science and Technology, official statements of national policy, planning and progress relevant to ICT and access to information in Turkmenistan, documents relating to the NATO Virtual Silk Highway Programme and any other relevant information assembled by the Country Office and/or Infotuk project team and emailed to the evaluators prior to field work. These and the other documents and data likely to be used by the team are listed in Annex 1.[11] This Annex also flags *(in red italics)* the additional documentation and data that the CO/project is requested to assemble prior to the arrival of the evaluation team. Additional documentation and data requirements will inevitably arise as the evaluation proceeds. In addition to these sources, the team will use websites and more informal (e-)correspondence where relevant

The team will use interviews, field visits, questionnaires and meetings to validate information. For this, the team will approach a representative cross section of users including those in civil society as well as in official educational establishments. The team will attempt to meet with persons from poorer communities and more vulnerable groups as well as project stakeholders and UNDP's partners. The team will also meet with some of the 20 head teachers and 20 librarians hosting ICT equipment provided by the project and with students and other community members using that equipment. A list of persons whom it is intended to interview is attached as Annex 2. The team may also seek to initiate discussions focussing on particular issues with selected groups such as some students and non-student users, teachers, librarians and other UNDP partners in pursuit of this outcome. Thus for example early responses to the surveys proposed below may point to recurring issues in particular areas which merit focus group discussions. Additional meetings are likely to be prompted as the evaluation proceeds.

Some meetings will be more formally structured with the use of a questionnaire while others are likely to be more conversational in format. The team will not normally be accompanied by UNDP or project staff in its meetings and site visits.

Recurring themes in these discussions will relate to how access to and use of ICT and information have changed since March 2005, identifying major causes, influences and opportunities associated with these changes and discerning any role(s) of the Infotuk project and UNDP, in contributing to the changes. This will involve identifying what aspects of the project went well and what could have been done better or differently for greater relevance, efficiency, effectiveness,

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[11] The annexes of the Inception Report are not reproduced here as they have been superseded by the corresponding annexes of this report and its table of contents.

impact and sustainability, what opportunities were taken and/or not taken, what challenges emerged as the situation changed and how these were (not) addressed or/and could have been addressed. The team will draw and discuss lessons from these experiences for future performance in any follow-up project and for any planned exit strategy. Other issues will be discussed and probed as they arise during the course of the evaluation.

The team is also exploring the feasibility of initiating one or more web based surveys to enable users, both students and others, to input anonymously observations on their experience in using the ICT centres equipped by the project and their suggestions for follow-up to the project, as well as observations on public access to ICT and information. For this, the team is designing one or more purposively structured questionnaires using Zoomerang (or a similar mechanism). This survey would also include the 20 teachers directly responsible for managing the ICT equipment supplied by the project as well as project trainees. However, these surveys will only be feasible if it is confirmed, within the next few days, that a reasonable proportion of users can be accessed by email within the next week or so. Speed is critical here as such surveys will only be useful for the evaluation if the team can access the results by 5 November 2007. If this proves feasible, the questionnaire(s) would be annexed to the full evaluation report.

It is proposed to schedule an informal workshop towards the end of the team's interviews, discussions and field visits. The half day workshop will seek to assess the extent of agreement across different groups on how access to ICT and information systems, especially in education, has changed in recent years, the major reasons for the changes, the contribution of UNDP, what the project achieved, what worked particularly well, what could have been done better, lessons for the future, exit strategy and any other specific issues that the evaluation team sees as emerging from its early work and more generally how more of a difference might be made in the future. The workshop would also serve to help interpret emerging observations and/or validate some of the team's initial observations, pinpoint gaps and/or new directions that will need to be filled in the remainder of the evaluation and assess likely reactions and implications to potential recommendations. Such validation workshops can help make an evaluation more constructive and useful as implementers and other stakeholders have the opportunity for facilitated reflection. This usually helps build ownership and involvement in the evaluation findings and recommendations. A tentative workshop agenda and list of participants is attached as Annex 3.

To provide for quality control and local ownership, the evaluation team has built into the schedule (Annex 5) three checkpoints for the EWG (and possibly other partners who can provide methodological guidance such as the Bratislava based UNDP Evaluation Adviser) to provide feedback on the evaluation's direction and content. These relate respectively to the provision of feedback on this draft Inception Report before it is finalised on 20 October, debriefing before the Team Leader leaves Turkmenistan on 20 November and on the draft evaluation report. Additionally, given the sensitivity of the evaluation, the team will try to keep UNDP informed of its progress so that there should be "no surprises" when the evaluation findings are presented more formally as key results would ideally have been communicated informally, and certainly before the final report is completed.

Team deliverables and schedule

The ToR envisage two deliverables:
- An evaluation report, and
- A draft project document for a follow-up project if considered appropriate. .

It is proposed that the latter take the form of an annex of the evaluation report which outlines strategy and provides guidance for future UNDP interventions. It is unlikely that these proposals will be costed or detailed, but they should facilitate discussion between UNDP, Government and

other stakeholders on follow up to the current phase of Infotuk. They should also be subjected to review by the CO's project appraisal committee.

The team leader is responsible for completing the final evaluation report. The report will have an executive summary of around 5 pages followed by a main text of up to 30 pages with supporting data and analyses in the annexes. Recommendations will be prioritized in the form of a proposed Action List. A very tentative draft table of contents of the report is attached as Annex 4.   The proposed work schedule and timing of major activities and deliverables is shown schematically in the time chart in Annex 5. The team leader will share a draft evaluation report for inputs and review by the other team member by 28 November and submit the final draft report to the CO by 1 December.

Annex 4

Persons met, phoned or emailed

Government

Ms.Akjeren Allanurova, Deputy Chairman of SCST

Mr.Orazmamed Vasov, Head of Department, SCST

Mr. Chary Amansahatov, Specialist of Department of Department of Forecasting, SCST

Mr.Nursahet Bayramov, Head of Department of International Cooperation, Ministry of Education

Ms.Maral Kakabayeva, Head of Department of Statistics of State Statistics Institute of Turkmenistan

Ms.Marina Hamraeva, "Infotuk" National project coordinator and specialist of the International Relation Department, Ministry of Educational of Turkmenistan

Mr.Bekmurad Annanurov, Specialist of Education department of Mary Velayat

Other officials of the Education Departments in Ashgabat and Mary cities, teachers, librarians and Directors and Deputy Directors of the 20 schools provided with the internet by InfoTuk

Project staff

Ms. Gulshirin Annadurdiyeva, "InfoTuk" Project Manager

Mr.Dangeldy Karaev, Technical Advisor on ICTD

Ms.Aybolek Bayrammuradova, Trainer

Mr.Andrey Kaletinskiy, Webmaster

Mr. Denis Kozinskiy, Network Administrator

Ms. Zemfira Eyvazova, Computer Training Center Manager in Turkmenbashi

Ms. Ogulnabat Gullarova, Computer Training Center Manager in Balkanabat

Ms. Nartach Ataliyeva, Computer Training Center Manager in Tejen

Ms. Gulshat Azimova, Computer Training Center Manager in Turkmenabat

Mr. Elman Aga-Tagiyev, Computer Training Center Manager in Mary

Mr. Igdirov Rovshen, Computer Training Center Manager in Serdar

Mr. Hemra Halliyev, Computer Training Center Manager in Dashoguz

Development partners

Mr. Ashley Moretz, USAID

Mr. Gaurev Raina-Thapan, OSCE

Mr. Serdar Jepbarov, World Bank

Mr. Osman Seyidov, Country manager international research and exchanges board, (IREX)

Mr. Eythan Schiller, Country representative education programs manager (IREX)

Mr. Aman Amansahatov, Internet Access and training program (IATP)

Mr. Michael Wilson, Advisor the European Union's Tacis Programme

Ms. Elena Kosovo, Project coordinator, Internet Access and Training program (IATP-IREX)

Ms.Jennet Oreeva, IATP program assistant, Internet Access and Training program (IATP-IREX)

Mr.Serdar Jorayev IATP Education Specialist

Mr. Stephen Kutzy, Country Director, Peace Corps

Mr. Juri Aronski, the President Union of Economists of Turkmenistan

UN partners and UNDP

Mr. Richard Young, UN RC and UNDP RR.

Ms. Inita Paulovica, Deputy Resident Representative, UNDP

Ms. Mary Rizaeva, Head of Programme Support Unit, UNDP

Ms.Shemshat Redjepova, Communications Associate, UNDP

Mr. Abdul Alim, Deputy Representative, UNICEF

Ms. Liva Bisenciece, Communications Consultant (UNDP)

Ms. Jemal Purlieva, UN Receptionist (former librarian)

Mr.G.Reza Samarbakhsh, Education Programme Officer UNESCO Tehran Cluster Office

Mr. Albert Ishmukhamedov, UNDP LAN Manager/IT Support Specialist

Annex 5
Documents consulted

European Union- Occasion Project: project document and progress reports
François Fortier & Yevgeny Korneev How to Build Open Information Societies: A Collection of Best Practices and Know-How, Ashgabat, 2003
InfoTuk project work plans, progress reports, terms of reference and other documents prepared by the project and press/media cuttings and correspondence relating to the project
NISSI- Assessment of Access to Information and Communication Technologies in Turkmenistan, Progress Report of NISSI for reporting period 1October 2005-31 December 2005
NISSI- Assessment of Access to Information and Communication Technologies in Turkmenistan, Progress Report of NISSI for reporting period April-June 2006
NISSI - Main Priorities for Development of the Information Services Market in Turkmenistan, M.A. Kakabayeva, 2006

SCST- Educational Network of Turkmenistan (PowerPoint, 2005)
United Nations Development Assistance Framework (UNDAF) for Turkmenistan
UNDP Second country cooperation framework for Turkmenistan (2000- 2004), Executive Board of the United Nations
UNDP. Report on the State of IT Development in Turkmenistan. 2000
UNDP, project document for InfoTuk
UNDP Country Programme Document for Turkmenistan
UNDP Country Programme Action Plan for Turkmenistan
UNDP Central Asia Human Development Report (2005)
UNDP Turkmenistan MDG Report (2003)
UNDP/Ivar Tallo, Mission report, Ashgabat, 16-21 April 2007
UNICEF Concluding Observations, Forty-second Session: Turkmenistan. Consideration of reports submitted by States parties under article 44 of the Convention, unedited version, 2006
UN CRC/C/TKM/CO/1 (2006).COMMITTEE ON THE RIGHTS OF THE CHILD Forty-second session adopted at the 1157th meeting, held on 2 June 2006
World Bank: INFORMATION INFRASTRUCTURE, A Joint Operations Evaluation Department—Operations Evaluation Group Review by Alain Barbu, Rafael Dominguez, William Melody, 2001

Annex 6
Evaluation Survey of Users of InfoTuk public computing centres, November 2007[12]

1 Sex	%	Responses
Male	21	12
Female	78	43
2. Age group (years)		
Up to 15	18	10
16-20	32	18
21-30	25	14
31-40	10	6
41-50	12	7
51-60	0	0
61 and above	0	0
3. In this last year what have you been doing?		
student	47	26
unemployed	23	13
employed by government	29	16
employed outside government	0	0
retired	0	0
4. For how many years have you been using a computer?		
Less than 1	7	3
1-2	39	15
3-4	26	10
More than 5	26	10
5. How many hours a day on average do you use a computer?		
Less than 1	31	12
1-2	44	17
3-4	13	5
More than 5	10	4
6. How many of those hours a day on average do/did you use a computer for your studies/work?		
Less than 1	31	12
1-2	44	17
3-4	13	5
More than 5	10	4

7. Please state how many hours per week you spend accessing	Response (total)	Responses (#)
www	287	32
email	242	28

8. For how many years have you owned a computer?	%	Responses
Never	51	19
Less than 1	5	2
1-2	18	7
3-4	5	2
More than 4	18	7
9. For how many years have been accessing the internet?		
Never	7	3
Less than 1	34	13
1-2	23	9
3-4	23	9
More than 4	10	4

10. I use the internet mainly for:	Most important for me	2nd most important for me	3rd most important for me	4th most important for me
My school studies	62 (10)	12(2)	6 (1)	6 (1)
Other study	15 (3)	63 (12)	15 (3)	0
My work	25 (3)	16 (2)	16 (2)	25 (3)
For personal communications	53 (14)	19 (5)	19(5)	3 (1)
Other (please specify)	1)To be more advanced, 2) for 3D graphics, 3)To read news			

11. Have you any experience of using a computer for learning (select any that apply)?	%	Responses
None	29	10
Hard drive	23	8
CD	29	10
www/internet	58	20

12. If you have used a computer for learning, for which subjects do you use it most?	Most use %	Second use %	Third use %
computer class	92(12)	7 (1)	0

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[12] The web based "Survey Monkey" was used by emailing a hyperlinked invitation to 157 users of InfoTuk's public computing centres. User email addresses were collected by the national evaluator pinning a notice, to the door of each computing centres, which requested volunteer participants in the survey. The emails and the survey questionnaire were in 3 languages: Turkmen, Russian and English. Responses were received from 55 users as tabulated in this annex.

mathematics	40.0% (2)	60.0% (3)	0
science	33 (1)	33 (1)	33 (1)
social sciences	33 (1)	33 (1)	33 (1)
Turkmen	0	50 (1)	50 (1)
Russian	87 (7)	0	12 (1)
English	42(3)	14 (1)	42 (3)
art	0	50 (1)	50 (1)
music	33 (1)	33(1)	33 (1)
other (please specify in the box below)	100.0% (2)	0.0% (0)	0.0% (0)

1) For learning history, 2) Web-design.

13. How would you describe your computer skills	%	Responses
Basic (can use word processing, spreadsheets, database & presentation software with some help)	36	13
Intermediate skills (regularly use the above mentioned software without help for doing assignments, lessons, presentations, collaborative projects, searching for information, emailing assignments)	58	21
Advanced skills (can create or develop new software and ICT-based materials, participate in ICT discussion groups, develop dynamic websites)	5	2

14. Where did you learn your computer skills	Most frequent %	Second most frequent %	Third most frequent %
Taught self from actual use of computers	73 (11)	20 (3)	6(1)
Taught self from books	0	80 (4)	20 (1)
Learnt from Infotuk project	75 (12)	6 (1)	18 (3)
Learnt from a friend or colleague	66 (2)	33(1)	0
Learnt from a teacher in formal class/instruction	88 (8)	11 (1)	0
other (please specify in the box below)	0	0	100 (1)

1) InfoTuk project courses

15. I access the internet:	%	Responses
always at the same center/	69	25
usually at the same center	25	9
usually at different centres	5	2
Other	0	0

16. I can also access the internet at:		
My work	5	2
My home/	8	3
My school (if different from this centre)	17	6
Internet café	25	9
Infotuk Internet-Training Centre	80	28
Other	2	1

17. Please indicate the reasons why you prefer to access the internet at the centre:	Most important %	2nd most important%	3rd most important %
It is quicker	83 (26)	9 (3)	6 (2)
There are fewer technical disruptions	14 (2)	42(6)	42 (6)
There are additional facilities such as printers at the center	22 (2)	33 (3)	44(4)
Other (please specify in the box below)	0	57 (4)	42 (3)

1) Benevolence, comfort. 2) It's free. 3) Very good manager. 4) There is a teacher who can explain anything.5) Very good trainer explaining understandable. 6) Opportunity of consulting.

18. When I go to a centre to use the internet, I usually have to wait for a computer to become free		
	%	Responses
1 to 5 min	74	26
6-15 min	11	4
16-25	0	0
More than 25 min	11	4
This has improved in recent months	8	3

19. When I go to a centre to use the internet, my time on the computer is interrupted by breaks in connections averaging for each session		
never	33.3%	12
1-2 times	41.7%	15
3-5 times	11.1%	4
More than 5 times	5.6%	2
This has improved in recent months	8.3%	3

20. When I go to a centre to use the internet, I experience other problems (please specify)

1) Most frequent because of bad speed. 2) No electricity. 3) No electricity. 4) No electricity. 5) Connection interruptions. 6) Disconnects. 7) The reason is that I'm not much familiar with it. 8) No access to the internet.

21. At the computer centre that I use,	yes %	no %
Computers are mostly old and outdated	50 (13)	50(13)
Can you access computers at the centre without difficulty outside school hours?	75(18)	25 (6)

22. State the extent to which you agree with the following statements:	Fully agree %	Partially agree %	Don't know %	Partially disagree %	Fully disagree %
a)Public access to the internet in Turkmenistan is less than public access in neighbouring countries	22 (6)	33(9)	37 (10)	7(2)	0

b) Public access to the internet in Turkmenistan has increased in the last 12 months	22 (6)	51 (14)	22 (6)	3 (1)	0
c) Public access to the internet in Turkmenistan has increased in the last 30 months	26 (7)	23 (6)	38 (10)	7 (2)	3 (1)
d) Public access to the internet has increased especially rapidly in educational institutions in the last 30 months	24 (7)	41 (12)	27 (8)	6 (2)	0)
e) Public access to the internet is officially encouraged/	24 (6)	40 (10)	28(7)	4 (1)	4 (1)
f) Public access to the internet is too expensive for most people	29 (8)	44 (12)	22 (6)	3 (1)	0
g) Public use of the internet is strictly monitored by authorities	7 (2)	38 (10)	53 (14)	0	0
h) The telecommunications sector is a state-owned monopoly; there are no regulatory provisions for universal access and no plans exist to open services to competition.	22(6)	25 (7)	48(13)	3 (1)	0
i) The majority of schools use radio and television for education	14(4)	33 (9)	29 (8)	22(6)	0
j) In most schools the ratio of computers to students is very low (e.g. 1 computer for 50 students)	16 (4)	44(11)	28 (7)	12 (3)	0
k) The majority of schools have computers that are old (with old software)	25 (7)	33 (9)	29 (8)	7 (2)	3 (1)
m) The few schools that have access to the internet rely on dial-up connections that are either unavailable or support only simple text and graphics	19 (5)	23 (6)	53. (14)	3 (1)	0
n) Training courses for ICT technicians are multiplying but courses for high-level personnel (software developers, programmers, experts in new languages etc) are still rare	7 (2)	48 (13)	37 (10)	7 (2)	0

23. Select the best description of how ICTs (radio, TV , computers, internet) are used in most schools in Turkmenistan	%	Responses
Most schools do not use ICTs or use ICTs for rudimentary instructional and managerial purposes. Technical support is not available/	39	11
Schools make limited use of ICTs for enhancing core-content teaching and learning, and for storing school data. Technical support is moderately available. For example, ICTs are regularly used by teachers to supplement conventional classroom teaching	42	12
Schools use ICTs to make associations across school subjects and topics, and to analyze school data for decisions. Technical support is available on an ongoing basis	10	3
Schools use ICTs to tap external resources and participate in national and international projects, & to manage the leaching/learning process. Technical support is available as needed. E.g. students regularly use ICTs to participate in national or international projects and competitions	7	2

24. For each of the statements below, please indicate your opinion about that statement	Strongly Disagree %	Disagree %	Agree %	Strongly Agree %
a) Books have all the information that children and teachers need; the rest is a luxury	28 (7)	36 (9)	36 (9)	0)
b) Low technology projects, such as radio, are outdated and unnecessary	19 (5)	42 (11)	30 (8)	7 (2)
c) Put a computer in the classroom and soon the children will know what to do with it	8 (2)	24 (6)	48 (12)	20 (5)
d) Using television or computers to support a lesson may increase students' motivation	3 (1)	14 (4)	48 (13)	33 (9)
e) Children need to have computers in school to be prepared for the marketplace	3 (1)	22 (6)	44 (12)	29 (8)
f) With supervision, children may learn much from surfing the Internet	0	20 (5)	56 (14)	24 (6)
g) Girls can profit from the use of technology as much as boys	3 (1)	26 (7)	42 (11)	26 (7)
h) Television or computers in the classroom help teachers to enhance their lessons	3 (1)	15 (4)	46 (12)	34 (9)
i) Parents will support technology projects if well informed of the project's objectives	0	16 (4)	48 (12)	36 (9)
j) I think that technology can help a school administrator or a teacher become a better educator	7 (2)	11 (3)	46 (12)	34 (9)

25. Indicate the importance (high/medium/low) of factors that you think most limit public access to ICTs in Turkmenistan	high %	medium %	low %
The cost of television	24 (6)	40 (10)	36(9)
The cost of computers	60 (15)	36 (9)	4 (1)
The availability of computers to purchase	34 (9)	53 (14)	11(3)
The cost of obtaining cable or satellite connections for internet in schools, offices and private homes	57(15)	19 (5)	23(6)
The processing time required to obtain connecting cable or satellite services	36(9)	44 (11)	20(5)
The risk that communications over the internet will be monitored by authorities	41 (10)	41 (10)	16 (4)
The cost of using internet centres or cafes	57 (15)	30 (8)	11 (3)
Poor and/or unreliable connectivity to the internet	45 (11)	37 (9)	16 (4)
Official policy with respect to making the internet available to all	38 (7)	45 (10)	22(5)
Limited computer skills	36 (9)	44 (11)	20 (5)
Weak telecommunications infrastructure and poor telephone service	40(10)	44 (11)	16 (4)
Lack of educational programmes on television	33(8)	41 (10)	25 (6)
Other	20 (1)	60 (3)	20 (1)

26. My suggestions for increasing public access to ICTs in Turkmenistan are:	20 Responses

1) To enlarge the InfoTuk project. 2) Depends on people needs. 3) In my opinion there should be internet cafes in every school and they shall be accessible. 4) All schools should have internet connections and needed relative writings. 5) Make prices lower. 6) Make prices lower. 7) The present ICT access is suitable for me. 8) First of all internet should be accessible to everyone, then make the mobile internet connection and give it a good advertisement. After this a web-site with e-mail, forums, chats and ability to out there advertisements and vacancy announcements can be done. But before creating such web site the price for internet traffic should be lowered and the site must have good advertisements. 9) Make more computers. 10) Enlarge the number of computers. 11) I would like the project to continue its existence. Because this is very suitable, quick and great. It will be appreciated if the center would get new computers, confirming the modern standards. 12) Make it possible to have connection in each house. 13) Enlarge the number of computers. 14) I wish there would be more of such free of charge centers with such good trainers. There people can learn to work with computers for free. I'm very glad that I have had studied in this center and I wish my children could study here too but they are too small yet. Good luck in your work! 15) Make free access to the internet; this should be done by people who know their jobs. 16) Make lower prices. 17) We need private sector in this sphere. 18) More computers in secondary schools. 19) Lower prices for connection and internet using. 20) Development of the national Turkmen segment/part of Internet (Turkmennet), free access and low prices.

28. Any other comments or suggestions relating to public access to ICTs in Turkmenistan, especially by educational institutions (12 usable replies)

1) To break the outdated principles. 2) Programming. It would be good if students were sent to study abroad for creating Turkmen internet. 3) Put more computers. 4) Enlarge the number of computers. 6) Its very good that the project is developing in educational institutions. It will be great if the project could envelop as much educational institutions as possible. 7) There should be more people like Elman. 8) Thanks to all of you! 9) Once again thanks to all of you. Very good center. Here we can get education and it's free, this is not the last point. I wish this center could work for a long time and give deeper education. Thank you very much! 10) To provide wide access to ICT for all institutions. 11) More schools shall have internet connection. In our school #3 in Mary we have such center but we don't have a trainer. We would be glad to use internet there. 12) With supporting of Government of Turkmenistan to organize the fist national competition of web-sites of Turkmenistan (Turkmen & Russian languages). Trainings and master-class of high specialist for local community (governmental and non-governmental).

Annex 7
Evaluation Survey of Managers of InfoTuk's computing centres, November 2007[13]

	%	Responses (#)
1. Sex Male	42	9
Female	57	12
2. Age Up to 25	9	2
26-30	28	6
31-35	23	5
36-40	23	5
41-50	4	1
51-60	4	1
61 and above	4	1
3. For how long have you managed a Computer Centre?		
Less than 6 months/	**33**	7
7-12 months	14	3
13-24 months	23	5
2-3 years	9	2
4-5 years	14	3
More than 5 years	4	1
3. For how long have you managed a Computer Centre?		
Less than 6 months/	33	7
7-12 months	14	3
13-24 months	23	5
2-3 years	9	2
4-5 years	14	3
More than 5 years	4	1

4. Please rate your skills in using the following:	NONE %	BASIC %	GOOD %	ADVANCED %
A Email	5 (1)	5(1)	66 (12)	22 (4)
B A web browser e.g. Netscape	27 (5)	11 (2)	38 (7)	22 (4)
C A web authoring package e.g. Dreamweaver.	82 (14)	11 (2)	5 (1)	0
D Windows & file management	5 (1)	11 (2)	66(12)	16 (3)
E A word processing package e.g. Word	5. (1)	5(1)	52(9)	35 (6)
F A spreadsheet package e.g. Excel	5 (1)	11 (2)	72(13)	11 (2)
G A presentation package e.g. PowerPoint	5 (1)	23 (4)	47 (8)	23 (4)
H A database package e.g. Access	33 (6)	44 (8)	22(4)	0
I A programming language e.g. HTML, Fortran, C, Java	58 (10)	35 (6)	5 (1)	0
J A statistical package e.g. SPSS, Excel	25 (4)	56 (9)	18 (3)	0
K A graphical package e.g. Fireworks, Photoshop	23 (4)	52 (9)	17 (3)	5 (1)
L An animation package e.g. Flash	72 (13)	22(4)	5 (1)	0
M Computer games	56 (9)	25 (4)	12 (2)	6. (1)

5. If you have an IT qualification (e.g. GCSE, A Level/Highers), please select the box(es) that best describe this	%	Responses (#)
GCSE (O level)	27	4
A Level/Higher	27	4
Key Skills I	27	4
Key Skills II	13	2
Key Skills III	0	0
Other	7	1

6. Indicate the top three ways that you learnt your computer skills:	Most important %	2nd most important %	3rd most important %
Taught self from actual use of computers	46 (6)	15 (2)	38 (5)
Taught self from books	36 (4)	63 (7)	0
Taught self from internet and/or CDs	0	20 (1)	80(4)
Learnt from a friend or/and colleague	25 (2)	12 (1)	62(5)
Learnt from a teacher in formal class/instruction	50 (5)	40 (4)	10 (1)

7. Did you participate in any ICT training in the last 3 years?	%	Responses (#)
Yes	59	10
No	41	7

8. Please state up to three IT skill areas that you most want to develop in the next year	Most important %	2nd most important %	3rd most important %
Email and WWW	80 (8)	20 (2)	0
Windows	0	0	0
Other operating system	100 (1)	0	0
Computer software and file management	25 (1)	50 (2)	25.0% (1)

[13] The web based "Survey Monkey" was used by emailing a hyperlinked invitation to 27 managers of InfoTuk's public computing centres (7) and the managers of the 20 school computing centres. The emails and the survey questionnaire were in 3 languages: Turkmen, Russian and English. Responses were received from 21 managers as tabulated in this annex.

Presentation (e.g. PowerPoint	100 (1)	0	0
Word processing (e.g. Word)	0	0	0
Graphics (e.g. Fireworks)	0	75 (3)	25 (1)
Web site design and authoring/	25 (3)	33 (4)	41 (5)
Spreadsheets (e.g. Excel)	0	50 (1)	50 (1)
Data base	60 (3)	40 (2)	0
Computer hardware repair	16 (1)	33 (2)	50 (3)
Other (please specify in box below)	0	0	100 (1)

1) Programs for animation, 2) Dreamweaver 3) c++, visual c++ 4) IT qualification

9. In your computer centre, indicate the number of: — Response Average

	Response Average
a) computer work stations available for use	9.55
b) computers with access to the internet	8.91
c) computers with a CD Drive	9.73
d) students using the computers each week on average	38.55
e) teachers using the computers each week on average	15.73
f) other community members using the computers each week on average	**80.36**

10. How have these numbers changed in the last 12 months?	Increased by more than 25%	Increased by 1-25%	no significant change	Decreased by 1-25%	Decreased by more than 25%
a) computer work stations are available for use	90 (9)	10 (1)	0	0	0
b) computers with access to the internet	44 (4)	33 (3)	22 (2)	0	0
c) computers with a CD Drive	20 (2)	30 (3)	50 (5)	0	0
d) students using the computers each week on average	80 (8)	10 (1)	10 (1)	0	0
e) teachers using the computers each week on average	50 (5)	30 (3)	10 (1)	10 (1)	0)
f) other community members using the computers each week on average	80 (8)	10 (1)	0	0	10 (1)

11. On average, how many minutes do users stay at a work station for one session?	Average	# responses
Students	24.36	11
Teachers	14.09	11
Other community members	44.82	11

12. Please indicate how most computers in your centre connect to the internet	%	# responses
A. Modem-dial up over normal telephone lines	27	3
b. ISDN (Integrated Services Digital Network) – digital connection using fiber optic lines	9	1
c. Via cable modem	0	0
d.DSL (Digital Subscriber Line) – operates on normal telephone line but can be used simultaneously with telephone	0	0
e. Broadband cable – uses cable TV and connected all the time	0	0
f.Satellite broadband – uses satellite dish	45	5
g. satellite access without access to uploading	0	0
g. Wireless (Wi-Fi, infrared, VSAT, etc.	18	2

13. How often are computers used for teaching in your school?	Every day %	1-4 times per week %	1-3 times per month %	4-8 times per year %	1-3 times per year %	Never %
ICT/computer class	81(9)	9 (1)	9 (1)	0	0)	0
Mathematics	18 (2)	9 (1)	45 (5)	0	0	27 (3)
Science	27(3)	18 (2)	36 (4)	0	0	18 (2)
Social sciences	27 (3)	0	36 (4)	9 (1)	0	27 (3)
Turkmen	18 (2)	0	18(2)	18 (2)	9 (1)	36 (4)
Russian	18 (2)	9 (1)	27 (3)	9 (1)	0	36 (4)
English	18 (2)	18 (2)	36 (4)	0	0	27 (3)
Art	10 (1)	0	0	10 (1)	0	80 (8)
Music	10 (1)	0	0	10 (1)	10 (1)	70 (7)
Other	16 (1)	16 (1)	16 (1)	0	0	50 (3)

14. Please estimate the frequency of use of the computers in your centre for:	Every day %	1-4 times per week %	1-3 times per month %	4-8 times per year %	1-3 times per year %	Never %
preparing lessons	55 (5)	22 (2)	22 (2)	0	0	0
reporting	33 (3)	33 (3)	33 (3)	0	0	0
assessing	25 (2)	0	50 (4)	0	0	25 (2)
monitoring performance	22 (2)	11(1)	11 (1)	33 (3)	0	22 (2)
learning new things	80 (8)	20 (2)	0	0	0	0
remedial learning	60 (6)	10 (1)	30 (3)	0	0	0
researching and accessing information	11 (1)	22 (2)	11 (1)	22 (2)	0	33 (3)
communicating with others	60(6)	30 (3)	10 (1)	0	0	0
developing logic and	50 (5)	10 (1)	0	20(2)	0	20(2)
playing games and fun	0	0	11 (1)	0	0	88 (8)
school administration and management	12 (1)	12 (1)	25 (2)	12 (1)	25(2)	12 (1)
other	50 (1)	0	50 (1)	0	0	0

15. How is ICT taught in your school/centre?	%	Responses (#)
as a separate subject	45	5
integrated in all subjects	0	0
integrated in some subjects	0	0
as a voluntary option	45	5
not at all	0	0
other	9	1

16. At what grade levels is ICT taught in your school? (8 responses)

1) high, 2) medium, 3) basic, 4) high, 5) basic, 6) medium, 7) medium, 8) high

17. Where were most software used for teaching developed?	%	Responses

In the school		60	6
by central or regional education authorities		20	2
by a private company or non-government organization in Turkmenistan		0	0
Outside Turkmenistan?		10	1
Other		10	1

18. What are major benefits of the Centre that you manage?	Most important %	2nd most important %	3rd most important %	Also important %
It provides users with access to the internet	81 (9)	0	9 (1)	9 (1)
It increases the computer skills of users	0	80 (8)	10 (1)	10 (1)
It provides computers for learning	12 (1)	12. (1)	75 (6)	0
It provides me with a job	0	0	0	100 (2)
It facilitates communications	0	0	0	100 (2)
It facilitates sharing of knowledge	14 (1)	14 (1)	0	71 (5)
Other	0	0	50 (1)	50 (1)

19. What are the main constraints faced by your Centre?	Most important %	2nd most important %	3rd most important %	Also important %
a)the number of computer work stations	62 (5)	0	25 (2)	12 (1)
b) computers broken or not functioning	0	60 (3)	20 (1)	20 (1)
c) outdated or old computers	20 (1)	60 (3)	0	20 (1)
d) slow internet connectivity	0	0	33 (1)	66 (2)
e) unreliable internet connectivity	0	0	16 (1)	83 (5)
f) outdated software	0	0	0	100 (1)
g) software is not fully functional	0	0	0	100 (1)
h) limited range of software	20 (1)	20 (1)	20 (1)	40 (2)
i) software is difficult for most users to use	0	0	50 (1)	50 (1)
j) too many demands for assistance from Centre Staff	0	0	0	100(1)
k) fees paid by users are too high	0	0	0	0
l) fees paid by users are too low	0	0	0	0
m) Centre is open for too few hours each day	33 (1)	33 (1)	0	33 (1)
n) Users are too computer illiterate	0	40 (2)	20 (1)	40 (2)
o) There are too many users	33 (1)	0	33 (1)	33 (1)
p) There are too few users	0	0	0	0
r) Other equipment such as printers, scanners are old	0	0	0	0
s) Other equipment such as printers, scanners are not available	0	0	0	100 (1)
t) Other problems (please specify in box below)	0	0	0	100 (1)
1) Too many users, computers are not enough. 2) The working schedule of InfoTuk project does not match the free time of users.				

20. Users usually have to wait for a computer to become free :		%	Responses (#)
Not at all		45	5
1 to 5 minutes/		36	4
6-10 minutes		18	2
11-15 minutes		0	0
More than 15 min		0	0

21. The time of users on the computer is interrupted by breaks in connections averaging for each session:			
None		36	4
1-2 times		36	4
3-5 times		18	2
More than 5 times		9	1

22. Other problems typically experienced by users at the centre are:	Largest number of users %	2nd largest number of users %	3rd largest number of users %	Also a significant number of users %
a) They request help in operating the computer hardware	75(6)	12 (1)	0	12 (1)
b) They request help in operating a printer	16 (1)	33 (2)	16 (1)	33 (2)
c) They request help in operating other hardware (please specify in box below)	0	50 (1)	0	50(1)
d) They request help in using Windows or other operating software	33 (2)	16 (1)	33 (2)	16 (1)
e) They request help in using word processing software	0	60 (3)	20 (1)	20 (1)
f) They request help in using spreadsheet software	0	33 (1)	33 (1)	33 (1)
g) They request help in presentations software	0	0	0	100 (3)
h) They request help in database software	25 (1)	0	0	75(3)
i) They request help in accessing the internet	20 (1)	20 (1)	0	60 (3)
j) They request help in emailing	0	33 (1)	33 (1)	33 (1)
k) They complain about user charges	0	0	0	100(1)
l) They complain about waiting times	0	0	0	100 (2)
m) They complain about the quality of the hardware	0.	0	0	100 (2)
n) They complain about internet connectivity	0	0)	60 (3)	40 (2)
k) They request other help	0	0	0	100 (1)

23. How have these problems changed in the last 12 months?	Dramatic improvement %	Improved %	Slightly	No significant Change %	Slightly worse %	Much worse %
User waiting times for a computer work station	42(3)	0	14 (1)	42 (3)	0	0
Interruptions during a users time on a	33 (1)	0	0	0	33 (1)	33 (1)
Computer	30 (3)	10 (1)	0	10 (1)	40 (4)	10 (1)
Internet connectivity speeds	33 (3)	0	11 (1)	11 (1)	44 (4)	0
Number of requests for assistance	50 (4)	12 (1)	0	37 (3)	0	0

Number of complaints	33 (2)	0	0	50 (3)	0	16 (1)

24. If you received US$20000 to develop your Centre in the next 6 months, on what would you spend it?	%	Responses (#)
Most important	90	9
Next most important	70	7
Also important	50	5

25. What do see as the most important functions of your Centre in the next five years?		
Most important	100	10
Next most important	60	6
Also important	50	5

26. Does your school or Centre have a plan for the technology development that outlines ICT hardware and software build-up, staff development and curricular offerings, among others?		
Yes	54	6
No	46	5
2 comments: 1) Maybe there is in the center but we don't know yet. 2) It would be good if everybody knew the new technologies.		

27. How are ICTs (radio, TV, computers, internet) used for learning in most schools that you are familiar with?		
a) Most schools do not use ICTs	44	4
b) ICTs are used by teachers to supplement conventional classroom teaching	22	2
c) In addition to b), ICTs are used by students to learn certain parts of the curriculum	33	3
d) In addition to c), students use ICTs to participate in national or international projects and competitions.	0	0

28. How are ICTs used to facilitate management in most schools that you are familiar with?		
a) Schools do not use technology to manage their personnel or student data	44	4
b) Schools store their data electronically but have no capability to analyze them	22	2
c) Schools store and analyze the data electronically to inform decisions about academic programs or personnel	22	2
d) Schools store, analyze and share data electronically with other schools and central offices (local, states or national)	0	0
e) In addition to d), a central office maintains a database for all schools in the region for decision-making and monitoring	11	1

29. What technical support is available for ICTs in most schools?		
a) Technical support is not available because of lack of skilled personnel in the region	11	1
b) Technical support is available through contracts between the schools and private providers	33	3
c) Technical support is available from a central office or vendor but only when a problem arises; schools normally wait more than one week before support is provided	0	0
d) Technical support is available from the central office or vendor on an ongoing basis (e.g. once a month); if any emergencies occur, support is provided within a week	0	0
e) Technical support is available on an as-needed-basis all working days and hours; most troubleshooting can occur promptly through conversation with the technician (over the phone, e-mail etc); in person support takes no more than 1 or 2 days to be obtained	44	4
Other (optional) comment 1) If it is regarding our centers then technical problems are solved immediately, but in normal schools with that kind of equipment problems are very frequent due to shortage of qualified specialists.	11	1

30. State the extent to which you agree with the following statements:	Fully agree %	Partly agree %	Don't know %	Partly disagree %	Fully disagree %
a) Public access to the internet in Turkmenistan is less than public access in neighbouring countries	50 (4)	12 (1)	25 (2)	12 (1)	0
b) Public access to the internet in Turkmenistan has increased in the last 12 months	77 (7)	22 (2)	0	0	0
c) Public access to the internet in Turkmenistan has increased in the last 30 months	25 (2)	25 (2)	37 (3)	12 (1)	0
d) Public access to the internet has increased especially rapidly in educational institutions in the last 30 months	44 (4)	11 (1)	33 (3)	0	11 (1)
e) Public access to the internet is officially encouraged	0	22 (2)	66 (6)	11 (1)	0
f) Public access to the internet is too expensive for most people	66 (6)	33 (3)	0	0	0
g) Public use of the internet is strictly monitored by authorities	22 (2)	0	66 (6)	11 (1)	0
h) The telecommunications sector is a state-owned monopoly; there are no regulatory provisions for universal access and no plans exist to open services to competition	37 (3)	12 (1)	50 (4)	0	0
i) The majority of schools use radio and television for education	11 (1)	33 (3)	11 (1)	11 (1)	33 (3)
j) In most schools the ratio of computers to students is very low (e.g. 1 for 50 students)	66 (6)	22 (2)	11 (1)	0	0
k) The majority of schools have computers that are old (with old software)	44 (4)	22 (2)	11 (1)	11 (1)	11 (1)
m) The few schools that have access to the internet rely on dial-up connections that are either unavailable or support only simple text and graphics	0	11 (1)	55 (5)	22 (2)	11 (1)
n) Training courses for ICT technicians are multiplying but courses for high-level personnel (software developers, programmers, experts in new languages etc) are still rare	88 (8)	0	0	0	11 (1)

31. Please indicate your opinion on the following statements:	Strongly Disagree %	Disagree %	Agree %	Strongly Agree %
a) Books have all the information that children and teachers need; the rest is a luxury	55 (5)	22 (2)	11 (1)	11 (1)
b) Low technology projects, such as radio, are outdated and unnecessary	11 (1)	33 (3)	55 (5)	0
c) Put a computer in the classroom and soon the children will know what to do with it	12 (1)	0	25 (2)	62 (5)
d) Using television or computers to support a lesson may increase students' motivation	11 (1)	0	0	88 (8)
e) Children need to have computers in school to be prepared for the marketplace	11 (1)	11 (1)	11 (1)	66 (6)
f) With supervision, children may learn much from surfing the Internet	11 (1)	0	11 (1)	77 (7)
g) Girls can profit from the use of technology as much as boys	11 (1)	0	0	88 (8)
h) Television or computers in the classroom help teachers to enhance their lessons	11 (1)	0	0	88 (8)
i) Parents will support technology projects if well informed of the project's objectives	11 (1)	0	11 (1)	77 (7)
j) I think that technology can help a school administrator or a teacher become a better educator	11 (1)	0	11 (1)	77 (7)
k) The internet increases teachers ability to connect students with the world	11 (1)	0	0	88 (8)

32. Please indicate the importance of the factors that most limit public access to the ICTs in Turkmenistan	High %	Medium %	Low %
a) The cost of television	37 (3)	25 (2)	37 (3)

b) The cost of computers	87 (7)	12 (1)	0
c) The availability of computers to purchase	83 (5)	16 (1)	0
d) The cost of obtaining cable or satellite connections for internet in schools, offices and private homes	100 (9)	0	0
e) The processing time required to obtain connecting cable or satellite services	66 (6)	33. (3)	0
f) The risk that communications over the internet will be monitored by authorities	50 (4)	37 (3)	12 (1)
g) The cost of using internet centres or cafes	88 (8)	11 (1)	0
h) Poor and/or unreliable connectivity to the internet	66 (6)	33 (3)	0.
i) Official policy with respect to making the internet available to all	14. (1)	71 (5)	14 (1)
j) Limited computer skills	44 (4)	44. (4)	11 (1)
k) Weak telecommunications infrastructure and poor telephone service	75 (6)	12 (1)	12 (1)
m) Lack of educational programmes on television	44 (4)	44 (4)	11 (1)
n) Other	0	0	0

33. My suggestions for increasing public access to ICT (the internet, computers, etc) are:

Ist (8 replies): 1) Price availability of computer means 2) increase in access to the free-of-charge centers the Internet educational institutions 3) To open everywhere the Internet -cafe, 4) I do not know 5) the Internet freely 6) Less Restriction and more Computers 7) increase in number of computers in the center 8) we need low price for communication services

2nd (4 replies): 1) development of InfoTuk centers in regions 2) I do not know 3) more computers 4) to educate it is not dependent on a material condition

3rd (3 replies1) availability in training it is not dependent on a material condition 2) I do not know, 3) an opportunity of free-of-charge access to the Internet for pupils and its use for education

34. The InfoTuk project, funded by the United Nations Development Programme, has tried to help increase public access to ICTs. If you are familiar with the project, please state three of its achievements in the last two years:

Ist (8 replies): 1) Expansion of the general outlook, 2) FREE-OF-CHARGE access the Internet, 3) was trained by many pupils at my school, 4) has got access to the Internet, 5) Has received good skills of work on a computer 6) computer knowledge will be improved, 7) I do not know, 8) the number trained in educational sector has increased

2nd (4 replies): 1) Increase of a professional level, 2) Intensive computer rates, 3) has trained teachers of school, 4) has improved the knowledge of a computer, 5) has got access to the Internet 6) use ICT raises my intellectual level, 7) has appeared a lot of wishing to work on the Internet

3rd (5 replies): 1) Increase of interest to self-development, 2) necessity of the center for my school, 3) has had an opportunity dialogue, 4) the level of opportunities in teaching Has raised, 5) more increasing wishing to be trained among the population

35. Is there something specific that you think the InfoTuk project could have done differently or better in the last two years?

Ist (7 replies): 1) it is Completely satisfied by services InfoTuk, 2) the latest models of computers, 3) be continue of the project, 4) I do not know, 5) It is happy with partnership of project Info Tuk, 6) I do not know, 7) have given to schools the good equipment for training

2nd (4 replies): 1) access to the Internet, 2) is not present, 3) very good personnel, 4) to prepare is more IT teachers for schools

3rd (5 replies): 1) training also other programs, 2) I do not know, 3) free use Internet at schools

36. My suggestions to make the InfoTuk project more effective in the future are:

Ist (5 replies): 1) To open more centers with access to the Internet, 2) creation of electronic books and presentations, 3) to increase number of the centers, 4) more schools with the project centre, 5) study different computers programs

2nd (3 replies): 1) an exchange of experience on a network between teachers and pupils, 2) to improve quality of connection, 3) to emphasize on development ICT at rural schools

3rd (3 replies): 1) availability to the Internet, 2) a level of courses, 3) to connect to a network and rural schools

37. Please indicate how UNDP and the Infotuk project performed up to October 2007 in:	Very much progress %	A little progress %	Don't Know %	No progress at all %
a) Advancing national goals and development plans for ICTs	75 (6)	12 (1)	12 (1)	0
b) reaching schools in poorer areas or/and with poorer students	42 (3)	14 (1)	42 (3)	0
c) supporting school head teachers to increase access to ICTs	50 (4)	37 (3)	12 (1)	0
d) gaining effective cooperation from school head teachers	50 (4)	37 (3)	12 (1)	0
e) helping policy decision makers increase access to ICTs	87 (7)	12 (1)	0	0
f) gaining effective cooperation with policy decision makers	28	0	71 (5)	0
g) Increasing socio-economic equity in educational opportunities and quality of learning?	71 (5)	28 (2)	0	0
h) increasing gender equity	57 (4)	14 (1)	28 (2)	0
i) increasing ethnic equity	57 (4)	14 (1)	28 (2)	0
j) increasing regional equity	57 (4)	0	42 (3)	0
k) increasing rural/urban equity/	14 (1)	28 (2)	57 (4)	0
l) Requiring skills that school personnel did not generally have?	33 (2)	16 (1)	33 (2)	16 (1)
m) Requiring levels of technical support greater than those available at the schools?	28 (2)	14 (1)	57 (4)	0
n) Changing the structure of education?	25 (2)	37 (3)	37 (3)	0
o) increasing investment in ICT infrastructure beyond what would have been done without InfoTuk	50 (4)	0	50 (4)	0
p) Increasing investment in ICT instructional materials and equipment beyond what would have been available without InfoTuk?	50 (4)	0	50 (4)	0
r) ensuring that the achievements of InfoTuk will be sustainable over a sufficient period of time to reach fruition, financially	62 (5)	12.5% (1)	25 (2)	0
s) ensuring intuitional sustainability	57 (4)	0 (0)	42 (3)	0 (0)

38. You are welcome to make any other comments or suggestions relating to increasing public access to ICTs in Turkmenistan, especially by educational institutions

3 replies: 1) Thanks the project would be desirable for more cooperation with it and would be desirable to be trained more on the Internet and most to train 2) increase in number of educational establishments connected to the Internet, 3) Many thanks UNDP. Certainly role InfoTuk it is huge both for schools and for the centers. It would be desirable that for it as proceeded and developed. For many people InfoTuk it is the center where it is possible to receive that that in the real world will not give simply so. To us many people of any age come to the centers here it interestingly. I would like that ICT developed at schools more actively. Because at schools there are our new generations. And we can though hardly, but to prepare children for a severe reality. All the best to you of health and all blessings.

Annex 8 - Evaluation Survey of InfoTuk Staff, November 2007[14]

				Responses (#)
b) computers broken or not functioning	0	50.0 (1)	0	
c) outdated or old computers	50 (1)	50 (1)	0	3
Q1. Sex			60	
d) slow internet connectivity	0	66 (2)	40	33 (1)
Male	50(2)	0	0	50(2)
Female	50 (1)	0	0	50 (1)
f) the national operating environment is difficult	0	0	0	0
Q2. Age Up to 25				
g) software is not fully functional	0	0	0	0
h) the building used to host InfoTuk could be improved	0	0	60	100 (1)
i) software is difficult for most users to use	0	0	0	0
j) too many demands for assistance from users of the Centres	0	0	50(1)	50(1)
k) fees are paid by users	0	0	20	0
l) fees paid by users are too low	0	0	0	0
Q3. For how long have you worked with InfoTuk? Less than 6 months	0	0	0	0
m) Users are too computer illiterate	0	0	100 (1)	0
n) there are too many users	0	100(1)	0	0
o) there are too few users	0	0	20	0
p) other equipment such as printers, scanners are old	0	0	0	0
q) other equipment such as printers, scanners are not available	0	0	80	4
t) UNDP is not sufficiently supportive	0	0	0	0

	Most important %	2nd most important%	3rd most important %
Q4. Indicate the top three ways that you learnt your computer skills:			
Taught self from actual use of computers	80 (4)	20 (1)	
Taught self from books			100 (2)
Taught self from internet and/or CDs			
Learnt from a friend or/and colleague			100 (1)
Learnt from a teacher in formal class/instruction	0	50 (1)	50 (1)

	Dramatic improvement %	Improved slightly %	No significant change %	Slightly worse %	Much worse
Q5. How have these top three constraints changed in the last 12 months?					
1st problem	20(1)	40(2)	20.0 (1)	20 (1)	0
2nd problem	0	60 (3)	20	40 (1)	0
3rd problem	0	60 (3)	0	0	0

	Most important %	2nd most important %	3rd most important %
Q6. Please state up to three IT skill areas that you most want to develop in the next year:			
Email and WWW		50 (1)	
Windows	0	0	0
Computer software and file management	100 (2)	0	0
Presentation (e.g. PowerPoint)	0	0	0
Word processing (e.g. Word)	0	100(1)	0
Graphic/Art/Fireworks	0	100(1)	0
Web site design and authoring	0	0	0
Spreadsheets (e.g. Excel)	0	0	100 (2)
Data base	0	0	0
Computers hardware repair	0	0	0
Other	0	100(1)	0

	Most important %	2nd most important %	3rd most important %	Also important %
Q12. State the extent to which you agree with the following statements.	Fully agree %	Partly agree %	Don't know	Partly disagree %	Fully disagree %

Q13. Please indicate your opinion on the following statements:

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[14] The web based "Survey Monkey" was used by emailing a hyperlinked invitation to 5 InfoTuk staff and 1 UNDP Programme Officer, The emails and the survey questionnaire were in 2 languages: Russian and English. Responses were received from 5 persons as tabulated in this annex.

b) Low technology projects, such as radio, are outdated and unnecessary	0	60 (3)	40(2)	0	0
c) Put a computer in the classroom and soon the children will know what to do with it	0	40 (2)	0	40 (2)	20 (1)
d) Using television or computers to support a lesson may increase students' motivation	0	0	0	60 (3)	40 (2)
e) Children need to have computers in school to be prepared for the marketplace	0	0	0	60 (3)	40 (2)
f) With supervision, children may learn much from surfing the Internet	0	0	0	60 (3)	40 (2)
g) Girls can profit from the use of technology as much as boys	0	0	0	40 (2)	60 (3)
h) Television or computers in the classroom help teachers to enhance their lessons	0	0	0	40 (2)	60 (3)
i) Parents will support technology projects if well informed of the project's objectives	0	0	0	60 (3)	40.(2)
j) I think that technology can help a school administrator or a teacher become a better educator	0	0	0	60 (3)	40(2)
k) The internet increases teachers ability to connect students with the world	0	0	0	40(2)	60 (3)

Q14. Please indicate the importance of the factors that you think most limit public access to the ICTs in Turkmenistan	High %	Medium %	Low %
a)The cost of television	0	25 (1)	75(3)
b) The cost of computers	60 (3)	40 (2)	0
c) The availability of computers to purchase	20(1)	60 (3)	20 (1)
d) The cost of obtaining cable or satellite connections for internet in schools, offices and private homes	100 (5)	0	0
e) The processing time required to obtain connecting cable or satellite services	100 (5)	0	0
f) The risk that communications over the internet will be monitored by authorities	40 (2)	60 (3)	0
g) The cost of using internet centres or cafes	60(3)	40 (2)	0
h) Poor and/or unreliable connectivity to the internet	60 (3)	40 (2)	0
i) Official policy with respect to making the internet available to all	60 (3)	20 (1)	20 (1)
j) Limited computer skills	60 (3)	40(2)	0
k) Weak telecommunications infrastructure and poor telephone service	60 (3)	40 (2)	0
m) Lack of educational programmes on television	80 (4)	0	20 (1)

Q15. My suggestions for increasing public access to ICT (the internet, computers, etc) are:

1) 4 replies: 1) government support for increasing public access to ICT, 2) Free ICT trainings, 3) Provide the training on ICT for schoolchildren in schools, for parents in office, 3) the government is to create favourable environment for ICT development

2) 4 replies: 1)National Strategy for ICT, 2) Free reliable Internet access, 3) Provide Internet access in school and office, 4) affordable prices for Internet and computers

3) 4 replies: 1) developing ICT school programme, 2) Awareness workshops on ICT, 3) Create more local websites for searching the required information in the country, 4) wireless connection

Q16. Is there something specific that you think the InfoTuk project could have done differently or better in the last two years?

3 replies: 1) Expand office facilities, 2) Provide schools access to the internet, 3) facilitate building better relationship between the Ministry of Education and Supreme Council

1 reply: Hire additional person in Ashgabat office like a Administrative assistant

1 reply: Conduct more awareness workshops on ICT for authorities from Educational sector

Q17. My suggestions to make the InfoTuk project more effective in the future are

3 replies: 1) increase of numbers of CTCs in Turkmenistan, 2) Expand office facilities, 3) focus on strategic things

2 replies: 1) Connection of CTCs to Internet, 2) Hire additional person in Ashgabat office like a Administrative assistant

1 reply: Find a way to improve Internet connection and make it independent

Q18. Please indicate how you think UNDP and the Infotuk project performed up to October 2007 in:	Very much progress %	A little progress %	Don't Know %	No progress at all %
a) Advancing national goals and development plans for ICTs	40 (2)	60 (3)	0	0
b) reaching schools in poorer areas or/and with poorer students	0	60 (3)	20 (1)	20 (1)
c) supporting school head teachers to increase access to ICTs	60 (3)	40(2)	0	0
d) gaining effective cooperation from school head teachers	40 (2)	60(3)	0	0
e) helping policy decision makers increase access to ICTs	0	60 (3)	20 (1)	20 (1)
f) gaining effective cooperation with policy decision makers	40 (2)	20 (1)	20(1)	20(1)
g) Increasing socio-economic equity in educational opportunities and quality of learning?	60 (3)	40 (2)	0	0
h) increasing gender equity	40 (2)	60(3)	0	0
i) increasing ethnic equity	20(1)	60 (3)	20 (1)	0
j) increasing regional equity	20(1)	80 (4)	0	0
k) increasing rural/urban equity	0	80 (4)	0	20(1)
l) requiring skills that school personnel did not generally have	20(1)	80 (4)	0	0
m) Requiring levels of technical support greater than those available at the schools?	25 (1)	75 (3)	0	0
n) Changing the structure of education?	0	80 (4)	0	20 (1)
o) Increasing investment in ICT infrastructure beyond what would have been done without InfoTuk?	40 (2)	40 (2)	0	20.(1)
p) Increasing investment in ICT instructional materials and equipment beyond what would have been available without InfoTuk?	40 (2)	40 (2)	20 (1)	0
r) ensuring that the achievements of InfoTuk will be sustainable over a sufficient period of time to reach fruition, financially	40 (2)	40(2)	20 (1)	0
s) ensuring intuitional sustainability	40 (2)	20(1)	40 (2)	0
t) building political commitment to sustain the achievements	60 (3)	0	40(2)	0

Q19, You are welcome to make any other comments or suggestions relating to increasing public access to ICTs in Turkmenistan, especially by educational institutions-

2 Replies: 1) Free ICT trainings, awareness workshops, free public access, web-site development for local content on Internet, 2) Without support and activity of the Government to develop ICT in the country, it is impossible to reach the significant result. InfoTuk project can be as catalyst in this process but not sole implementer

Annex 9 Evaluation workshops

Two workshops were held in order to expand the evaluation team's collection of data and insights and, in the second workshop, to validate some of the team's emerging findings and possible recommendations.

The first workshop, in Mary City on 9 November 2007, took the form of an informal brainstorming amongst 10 teachers, 4 school librarians and 8 school Directors and/or Deputy Directors from the 10 schools provided with access to the internet by the InfoTuk project. This was facilitated in Turkmen and Russian by the national evaluator and by the InfoTuk Project Manager, working from questions and flip charts prepared by the internationally recruited evaluator. The flip charts were completed by the participants in group discussions amongst themselves. For this purpose, three groups were formed comprising respectively the Directors and Deputy Directors, the teachers and the librarians. This was followed by similar discussion with two groups of parents.

At what age are children taught computing skills in your school?

Age groups	Never	1-2 per year	3-8 per year	1 per month	2-3 per month	1 per week	2-4 per week	1 per day
7								
8	**							
9	**							
10	**							
11	**							
12								***
13								**
14								*****
15								******
16								*******

For what subjects do you and your students access the internet?

Subjects	Never	1-2 per year	3-8 per year	1 per month	2-3 per month	1 per week	2-4 per week	1 per day
English						∗	∗∗	∗∗
Mathematics		∗		∗		∗∗	∗	∗∗∗
Russian						∗∗	∗∗	∗
Physics						∗∗		∗
Chemical				∗		∗	∗	∗
ICT						∗	∗∗	∗∗∗∗
History						∗∗	∗∗	∗
Turkmen	∗							
Biology						∗∗	∗∗	∗∗

For what tasks do you use computers?

	Never	1 per month or less	2-3 per month	1 per week	2-4 per week	1 per day
Recording attendance data			*	**		
Researching for lessons					*	
Preparing lesson notes					****	
Preparing lesson presentation					*	
Preparing handouts				**		
During class – to show text			**			
During class – to show data			**			
During class to access internet				*		
After class to record marks			*			*

What benefits do computers have in school?

For application at a lesson
Helps to raise an outlook of the teacher and the students
Saves time in getting information
Helps find employment
Good to get teaching materials
Facilitates work

What are the gains from accessing internet in school?

E-mail
Raises a level of knowledge
Involves youth
Communication of parents with school
Information interchange
For preparation for employment
For increase of an educational level of school
For communications
For preparation of curricula
Useful to get information
From the Internet we receive the information about new job

Early lessons from the 10 schools piloting internet access in Mary Velayat
DOs

It is necessary to establish more computers than 5, with software and projectors,
Salary necessary for teachers working overtime in computer centres
To raise speed of the Internet
To establish programs of multimedia
Computer courses for teachers
Classes for studying language
Create network at school (communication of administration of school with all classes)
Training courses on repair of computers
Establish a network between schools
Need multimedia courses
Need web-camera and other devices

DONTs

Teachers should not work without salary
Not only one teacher should be responsible for the center (also Principal or Deputy)
To establish computers in classes without an air conditioner
Don't make children pay for computer use
Don't close classes (extend opening hours of computer centre to all day, every day)

Suggestions to make fuller use of computers in the school library

It is necessary to create connection of the Internet
More special software, specific to teaching particular subjects
 To create a network between libraries
To create the electronic catalogue
Computer courses are necessary for librarians

Why some teachers do not like to use the computer?

No free time
Computers may harm health
 No skills of work on computers
We need computer courses of teachers
Necessary for centre to be open all the time to accommodate different schedules of teachers
Centers always should be are opened
ICT courses should also be conducted everyday

FOR PARENTS
How has using a computer changed your children?

Positive	Negative
Successes in study	nervous more often
Polite	

Learns foreign language
Reads much information
Many friends on the Internet
Always active
My daughter makes successes in study

FOR PARENTS
How has access to the internet changed your children?

Positive	Negative
Better to study	Forgets to perform work of the house
Reads the various information	is injurious to health
Polite	does not do physical exercises
Reads news on the Internet	
Learns foreign language	
Many friends on the Internet	

The second workshop, in Ashgabat on 16 November, was more formal with an agenda circulated in advance. However, because of the delayed MFA approval process, invitees outside the MoE received their invitations only late in the afternoon before the workshop, with the result that not many came. A cross section of government ministries, civil society, academia and media and development partners had been invited but participation was primarily limited to some 50 teachers and officials of the MoE with only a few partners present. The workshop basically involved two modules: a validation module aimed at getting feedback on tentatively evolving observations and issues and a more forward looking module aimed at identifying and prioritizing needs for technical cooperation in ICT for developing Turkmenistan.

After a formal opening by the UN Resident Coordinator and a representative of the Ministry of Education (the invited representative from the SCST did not show up), participants broke into five groups, with each group completing one of the tasks listed below. Handouts in Turkmen, Russian and English gave more specific instructions. The tasks were:

- Prepare a realistic action plan to fully achieve, by June 2008, the following expected project output: National & regional civil servants are actively promoting ICT, and in particular internet access, for development in Turkmenistan.

- Prepare a realistic action plan to fully achieve, by June 2008, the following expected project output: the Ministry of Education has, by June 2008, a useful web site on education in Turkmenistan, with lots of daily "visitors/hits" and with the capacity and commitment to sustain the web site with minimal external support.

- Prepare a realistic action plan to fully achieve, by June 2008, the following expected project output: 8 computing centres established to train the general public in computing & to give public access to the internet.

- Prepare a realistic action plan to fully achieve, by June 2008, the following expected project output: 50 more schools connected to the internet so that students and teachers can use the internet for learning, communications etc

- Identify a specific output, not already included amongst InfoTuk's outputs, that your group thinks a United Nations supported project like InfoTuk should achieve in the next few months, say during 2008?

From these group discussions, follow-up discussions in the afternoon sessions and discussions in the plenary as well as from "gallery" sessions in which everyone was requested to write an idea or comment on a card and post this on a flip chart, the following flip charts were completed:

Flip charts completed by participants
(Most cards were posted in Russian or Turkmen[15])

Public access to internet: how has it changed since 2005?
1. The number of Internet users increase not in proportion to Internet.
2. The number of computers having Internet connection at schools (too low).
3. All of organizations shall have TuREN access.

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[15] Unfortunately the translator contracted by InfoTuk to translate the cards from Russian and Turkmen into English only completed translation of the Russian cards. Despite repeated requests to the translator to email the translations of the Turkmen cards, these were never received by the evaluation team. Generally, for reasons indicated in the main text, future evaluation workshops should be organized not by the project or by the agency hosting the project, but by UNDP.

4. Thanks to InfoTuk project internet access has become more available. It would be great if the project will exist as long as it's possible.
5. To increase the number of schools with Internet connection.
6. The number of signed up users: there are more than 2 000 users.
7. To make an Internet connection at least on one computer in new classrooms (possible using TuREN).
8. I think that Internet access has increased but not much. Shown numbers are a bit understated.
9. Internet access shall be unlimited to everybody, not depending on social status, gender, age etc.
10. To change the treatment of management regarding Internet.
11. Since the InfoTuk project was penetrated in education system (opening of computer centers at schools) the number of IT educated people increased.
12. Adopting ICT into educational process.
13. Number of Internet users is actually higher because of multiple users. That is one address is used by a number of users.

Positive factors that helped increase public access to the internet since 2005
1. Positive factors:
   - President's policy "Internet for everyone as a goal".
   - Free of charge Internet access in computer centers.
2. Positive factors:
   - Opening of Internet cafes is helping in increasing Internet access.
3. Opening educational projects and centers with Internet access.
4. Positive: Government policy has changed; Internet access has become easier.
5. InfoTuk is the only organization which gives trainings for Internet users. Thanks to them for what they do! But they need more resources.
6. International organizations make big efforts in Internet education.
7. Opening of computer centers at schools and connecting it to Internet.
8. Changing the Government politics.
9. Population interests.
10. Centers and Internet cafes have opened.
11. The Internet popularization is required.

Negative factors that constrained or limited public access to the internet since 2005
1. Negative: Telecom does not have business rivals, the hour-paying system and low speed.
2. The Internet disconnects rapidly.
3. High prices and low speed.
4. Not enough time.
5. Negative: the prices in Internet cafes are too high with respect to incomes.
6. Internet cafes are empty because:
   - Internet price is too high for most people (students, retirees, unemployed);
   - Internet speed is too low: in cafes for example in Dashoguz.
   - Passport demand before using Internet.
7. It must be free of charge so everybody may have access.
8. Not enough Internet education in past.
9. Internet speed is too low.
10. I think it is because the connection is too slow.
11. The technical base of governmental Internet provider is not enough.
12. No business rivals.

Actions that could make partnerships more effective in helping Turkmenistan give all its citizens access to the internet (more specific suggestions are more likely to be actionable)
1. The Internet access strategy is required.
2. I think that organizations partnership is present because they have the same goal.
3. Mass media does not always reflect work, perspectives and achievements of UN organizations. Not enough information regarding their partnership.
4. Tight partnership between the programs and organizations with same/similar goal is required.
5. Presidents' Council is an organizer and spotter of process of Internet mastering in Turkmenistan. It helps in developing ICT, advances Internet to the whole territory of Turkmenistan. The President has given a clear program during his speech.
6. It is possible that Internet development program is present in Ministry of communication but it was not published in mass media and was not discussed.
7. The work should be coordinated with all organizations.
8. Close collaboration with international organizations. A good coordination.

9. Governmental strategy is really not present. For developing partnership between different organizations the private Internet providing company should be opened.

If you are familiar with InfoTuk, what do you see as its main achievements?
1. To introduce Internet to people and show its wide potential in daily life.
2. Availability of the Internet, education of people in ICT, helping new users with using Internet.
3. Free of charge computer trainings and free Internet.

If you are familiar with InfoTuk, what do you think it could have done differently?
1. Explaining to the managements the advantages of ICT.
2. It would be good to increase the number of Internet centers and project staff. So that project may involve more people.

How could UNDP have supported InfoTuk more effectively?
1. Increase the number of project staff and computers, involving more people and increasing the number of users.
2. InfoTuk shall cooperate with all regions.
3. Organize trainings for project staff in order to raise the level of their skills.

How could the Ministry of Education have supported InfoTuk more effectively?
1. The Ministry of Education shall encourage teachers working for InfoTuk project.
2. The Ministry of Education shall help teachers in raising the level of their skills.
3. To be very interested in it and help in all way.

How could UNDP or InfoTuk have related to other partners more effectively?
1. There should be Internet connection in each school and each school shall have its own web site.
2. Experience exchange meetings shall be arranged.
3. Give the project trainers more time for working in InfoTuk classes, not giving them additional tasks.

If InfoTuk is extended, what would you like to see it focus on most of all?
1. Project development, opening the new centers.
2. Special courses, international certificates for courses (ICDL).
3. Increase the number of computers and equipment at schools.
4. Trainers at schools centers should be pecuniary interested in order to increase efficiency and increase trainings quality.

Any other suggestions to improve the performance and potential impact of infoTuk in the future?
1. Special courses and workshops for trainers should be done frequently.
2. Enlarge the project Internet center area and hire more staff.
3. In order to make project better it is possible to enlarge the sphere of its activity. Rent additional offices, increase number of computers and hire more staff.
4. Each trainer shall increase his/her level of education rapidly.

Next time, a workshop like this should be arranged differently by…..
1. Reading each question separately and write down the answers of participants.
2. The workshop was organized great!
3. To invite more Ministry representatives. For example Ministry of Education, Ministry of Communications etc.
4. Let know beforehand (about workshops). Make such workshops more frequently.
5. In my opinion more attention should be paid to advertisements, so that more people will know about workshop and come to participate.
6. To invite representative from Ministry of Communications.
7. Make such workshops more frequently, inform the trainers about InfoTuk activities.

Any other suggestions?
1. Pay to the trainers of centers part of their salary for trainings, so that financing will be done by school budget. Such strategy will not negatively affect the users and will help to increase the trainings quality.
2. Trainers should be stimulated using UNDP grants.
3. Exempt the trainers of computer educational centers from other public work at school because the time is not enough.
4. The question regarding payment to InfoTuk trainers for their work at centers should be solved.
5. InfoTuk project trainers' salary should be paid.
6. Maybe it will be good to hire additional stuff in Turkmenistan regions in order to give education to more people. This way the project in Ashgabat will not be affected and at the same time education in regions will be continued. More people will be involved including trainers, teachers, students and their parents.

7. Good payment for trainers of InfoTuk project will increase the education level and interest.
8. Any work should be paid for and work that is done by trainers too.

Annex 10
Organigram of InfoTuk, November 2007

PROJECT BOARD

Representative of Users	Executive	Senior Supplier
Vacant	National project coordinator Ms.Marina Hamraeva	UNDP Ms.Mary Rizaeva

Project Monitoring
Ms. Nurjemal Jailova
UNDP

Project Manager
Ms. Gulshirin Annadurdiyeva

Technical Advisor on ICTD
Mr.Dangeldy Karaev

Network Administrator Mr.Denis Kozinskiy

Webmaster Mr.Andrey Kaletinskiy

Trainers/ CTC/ Managers/CNTC instructors Ms.Aybolek Bayramuradova

CNTC In 20 Schools	CTC Tedjen	CTC Balkanabat	CTC Serdar	CTC Dashoguz	CTC Turkmenbashi	CTC Turkmenabat

Ashgabat | Mary

Source: InfoTuk

Annex 11
Large and supporting tables

Table 1 Number of trainees trained by each of InfoTuk's 8 public computing centres as at November 2007

Training centre	date of opening	title of training	Number trainees						Age			Education		
			total	Male	female	state sector	non-state sector	other	under 18	18 - 35	35 and above	secondary	higher	other
Ashgabat	15-10-02	Computer training	593	216	377	331	104	158	211	226	156	303	287	3
		Training of trainers	18	12	6	18	0	0	0	15	3	0	18	0
		Subtotal	611	228	383	349	104	158	211	241	159	303	305	3
		Workshops in Ashgabat	71	24	47	71	0	0	0	41	30	0	71	0
		Workshops in Mary	20	3	17	20	0	0	0	11	9	0	20	0
		Subtotal	91	27	64	91	0	0	0	52	39	0	91	0
Balkanabat	14-11-02	Computer training	470	130	340	165	45	260	149	294	27	437	32	1
Turkmenbashi	14-11-02	Computer training	408	96	312	140	32	236	230	133	45	214	194	0
Serdar	15-11-02	Computer training	382	171	211	87	38	257	228	120	34	330	52	0
Tejen	22-10-03	Computer training	412	206	206	152	60	199	316	73	23	386	22	4
Mary	30-09-03	Computer training	424	161	263	210	56	158	145	192	87	319	105	0
Turkmenabat	11-03-04	Computer training	652	214	438	199	289	164	278	239	135	462	168	22
Dashoguz	11-02-07	Computer training	133	23	110	92	0	42	41	44	48	71	62	0
		Subtotal	2881	1001	1880	1045	520	1316	1387	1095	399	2219	635	27
		Total project training:	3583	1256	2327	1485	624	1474	1598	1388	597	2522	1031	30

Source: InfoTuk

Table 2 Numbers of people trained in computing skills at each of 20 school computing centres

School #	date of ICT center opening	Number trainees						Age			Education		
		total	Male	female	state sector	non-state sector	other	under 18	18 - 35	35 and above	secondary	higher	other
Ashgabat													
19	01-12-05	140	62	78	140	0	0	115	15	10	126	14	0
20	01-12-05	270	135	135	270	0	0	256	14	0	251	19	0
34	01-12-05	150	69	81	150	0	0	132	9	9	150	0	0
52	01-12-05	95	32	63	50	0	45	95	0	0	95	0	0
53	01-12-05	155	66	89	155	0	0	155	0	0	141	14	0
16	01-10-06	66	11	55	56	10	0	40	17	9	41	25	0
18	01-10-06	110	60	50	90	10	10	87	16	7	99	11	0
27	01-10-06	118	43	75	101	0	17	75	27	16	80	38	0
50	01-10-06	87	54	33	82	0	5	85	2	0	87	0	0
64	01-10-06	66	41	25	66	0	0	64	0	2	66	0	0
		1257	573	684	1160	20	77	1104	100	53	1136	121	0
MARY													
1	01-12-05	140	56	84	140	0	0	123	10	7	140	0	0
3	01-12-05	73	24	49	66	3	4	49	18	6	57	16	0
18	01-12-05	137	90	47	136	0	1	101	23	13	111	26	0
23	01-12-05	132	67	65	126	1	5	126	4	2	127	5	0
6	01-12-05	80	74	6	80	0	0	73	7	0	80	0	0
8	Nov-06	90	44	46	90	0	0	80	6	4	82	8	0
10	Nov-06	90	44	46	90	0	0	55	24	11	58	32	0
15	Nov-06	86	11	75	86	0	0	81	7	0	79	7	0
20	Nov-06	148	53	95	148	0	0	140	6	2	144	4	0
19	Nov-06	90	30	60	90	0	0	75	10	5	86	4	0
	Subtotal:	1066	493	573	1052	4	10	903	115	50	964	102	0
	Total project training:	2323											

Source: InfoTuk

Table 3 InfoTuk's training schedule				
Week	Day	Theme	Theory (hours)	Practice (hours)
1.	1.	Windows XP	1,5	1,5
	2.	Windows XP	1,5	1,5
	3.	Microsoft Word XP	1,5	1,5
	4.	Microsoft Word XP	1,5	1,5
	5.	Microsoft Excel XP	1,5	2
2.	6.	Microsoft Excel XP	1,5	1,5
	7.	Microsoft PowerPoint XP	1,5	2
	8.	Internet	1,5	1,5
	9.	Internet (search)/E-mail	0,5 / 1,5	0,5 / 1,5
	10.	E-mail/Total Review	-	1 / 2,5
Total:	2 weeks/10 days: around 30 hours			

Table 4 List of booklets/posters prepared to increase public awareness

TITLE	DATE PREPARED	NUMBER OF COPIES MADE
Leaflets on InfoTuk phase II activity	December, 2005	1000 units
The color poster on banner textile on InfoTuk 2001-2007 (A1, 840 mm*594 mm)	December, 2005	7 units
The color poster on banner textile (A1) on InfoTuk 2001-2007	April, 2006	10 units
The color poster on banner textile (A1) on InfoTuk 2001-2007	August 2006	15 units
InfoTuk mini-poster (24 pages) on InfoTuk CTCs	October 2006	12 units
The color poster on paperboard (A1, 15 units) and banner textile (A1, 5 units) on InfoTuk CNTCs	November 2006	20 units
Leaflets on project activity phase II and centers	December 2006	1000 units
Leaflets on the Project activity and Internet use	March, 2007	1400 units

Table 5 Websites visited by users of InfoTuk's Computer Centre in Ashgabat
(Data collected for the 6 days beginning Monday, 7 November, 2007.

№	Site	Usage
1.	http://win.mail.ru	108.75 Mb
2.	http://attach.mail.ru	58.56 Mb
3.	http://r.mail.ru	53.64 Mb
4.	http://foto.rambler.ru	53.32 Mb
5.	http://www.mail.ru	46.30 Mb
6.	http://mail.rambler.ru	39.42 Mb
7.	http://love.mail.ru	30.87 Mb
8.	http://foto.mail.ru	29.56 Mb
9.	http://www.loveplanet.ru	19.59 Mb
10.	http://my.mail.ru	18.47 Mb

11.	http://www.love.rambler.ru	18.01 Mb
12.	http://cards.mail.ru	16.58 Mb
13.	http://images.rambler.ru	16.42 Mb
14.	http://www.rambler.ru	12.04 Mb
15.	http://www.yahoo.com	11.84 Mb
16.	http://mail.yandex.ru	11.59 Mb
17.	http://www.izzy-us5.com	11.39 Mb
18.	http://dl.zvukoff.ru	11.26 Mb
19.	http://horoscopes.rambler.ru	10.76 Mb
20.	http://mail.yimg.com	10.62 Mb
21.	http://images.cards.mail.ru	10.11 Mb
22.	http://www.mobile.de	9.84 Mb
23.	http://pagead2.googlesyndication.com	9.02 Mb
24.	http://cards.rambler.ru	8.01 Mb
25.	http://img.mail.ru	7.76 Mb
26.	http://www.tmchat.ru	7.63 Mb
27.	http://cards.yandex.net	6.83 Mb
28.	http://www.acrobatika.ru	6.76 Mb
29.	http://keep4u.ru	6.57 Mb
30.	http://xerurg.ru	6.20 Mb
31.	http://us.f579.mail.yahoo.com	6.15 Mb
32.	http://maxichat.ru	6.10 Mb
33.	http://counter.rambler.ru	5.74 Mb
34.	http://www.tm-chat.net	5.65 Mb
35.	http://avt.foto.mail.ru	5.33 Mb
36.	http://www.yandex.ru	5.33 Mb
37.	http://horo.mail.ru	5.24 Mb
38.	http://www.rickymartin.com	5.24 Mb
39.	http://forum.poisk.vid.ru	5.22 Mb
40.	http://w15.easy-share.com	5.16 Mb
41.	http://www.avada-kedavra.ru	4.98 Mb
42.	http://zvukoff.ru	4.88 Mb
43.	http://img.yandex.net	4.84 Mb
44.	http://www.smallweb.ru	4.74 Mb
45.	http://www.hot.ee	4.71 Mb
46.	http://www.wadja.com	4.37 Mb
47.	http://exe.agent.mail.ru	4.37 Mb
48.	http://www.itogi.ru	4.36 Mb
49.	http://download.ware.ru	4.28 Mb
50.	http://dump.ru	4.14 Mb
51.	http://engine.awaps.net	4.07 Mb
52.	http://mail.km.ru	3.94 Mb
53.	http://go.mail.ru	3.92 Mb
54.	http://www.superjob.ru	3.88 Mb
55.	http://bs.yandex.ru	3.88 Mb
56.	http://vision.rambler.ru	3.83 Mb
57.	http://www.gogo.ru	3.77 Mb

58.	http://sb.google.com	3.75 Mb
59.	http://kommersant.org.ua	3.57 Mb
60.	http://www.studunion.msu.ru	3.36 Mb
61.	http://www.lyngsat.com	3.35 Mb
62.	http://chat.mail.ru	3.31 Mb
63.	http://www.mamba.ru	3.29 Mb
64.	http://vid-1.rian.ru	3.26 Mb
65.	http://cdn.sparkart.net	3.15 Mb
66.	http://www.us5.ucoz.ru	3.12 Mb
67.	http://2.chat.mail.ru	3.10 Mb
68.	http://www.ria-pobeda.ru	3.09 Mb
69.	http://www.awto-export.de	3.07 Mb
70.	http://www.turkmenistan.gov.tm	3.04 Mb
71.	http://static.diary.ru	3.03 Mb
72.	http://www.google.ru	3.01 Mb
73.	http://www.inter.it	2.91 Mb
74.	http://www.ultimatejesse.com	2.84 Mb
75.	http://fanlib.ru	2.81 Mb
76.	http://www.surveymonkey.com	2.79 Mb
77.	http://webattach.mail.yandex.net	2.79 Mb

Source: InfoTuk

Analysis of websites

Total Mg usage – 869.24
Average per day- 144.8 Mg
Average per user session –8.2Mg

№	Type of site	%
1.	e-mail	24
2.	News	22
3.	Music	4
4.	Searches	6
5.	Forum	6
6.	Study	28
7.	Sports	2
8.	Trade	2
.	other	6

Table 6 InfoTuk survey of users in February to May 2006

Questions	Age						Sex			Education					
	14-18	19-30	31-45	46-55	56+	Total	M	F	Total	Secondary ungraduated	Secondary	Professional Schools	High ungraduated	University	Total
From what date did you visit the InfoTuk Centre?															
1st semester 2004	2	11	4	1	1	19	4	15	19	1	3			4	7	19
2nd semester 2004	3	5	1	2		11	4	7	11	1	3	3	2	2	11
1st semester 2005	7	15	3	4	1	30	10	20	30	3	7	6	2	12	30
2nd semester 2005	31	31	12	6	1	81	22	59	81	3	31	13	10	24	81
1st semester 2006	26	28	5	2		61	24	37	61	8	17	17	6	13	61
Total	69	90	25	15	3	202	64	138	202	16	61	43	24	58	202
How many times do you visit Centre each month?															
1-2	21	28	6	1		56	19	37	56	3	22	10	7	14	56
3-5	27	33	13	8	3	84	25	59	84	5	24	16	10	29	84
6-9	21	29	6	6		62	20	42	62	8	15	17	7	15	62
Total	69	90	25	15	3	202	64	138	202	16	61	43	24	58	202
For what purposes you use the Internet?															
E-mail	42	72	22	12	1	149	45	104	149	9	42	32	20	46	149
Education	34	55	8	8	1	106	35	71	106	9	26	25	18	28	106
Information search	44	56	16	11	1	128	39	89	128	12	39	23	16	38	128
Communication	29	29	7	8	1	74	21	53	74	6	25	18	8	17	74
Entertainment	13	5		1		19	4	15	19	4	7	4	2	2	19
Other		3	1	1		5	1	4	5			2		3	5
What do you like about the InfoTuk Centre?															
Time of reservation	22	41	10	9	1	83	29	54	83	8	16	20	12	27	83
Opportunity to reserve by phone	52	66	19	11	3	151	50	##	151	12	45	31	17	46	151
Free access to internet	51	76	21	12	3	163	51	##	163	12	46	36	20	49	163
Comfortable environment	37	63	15	14	3	132	40	92	132	10	30	31	18	43	132
Responsive staff	34	64	18	12	3	131	45	86	131	8	31	31	15	46	131
Convenient location of centre	30	64	17	10	3	124	37	87	124	10	26	28	15	45	124
What do you don't like in the Internet Centre?															
Time of reservation	14	18	4	2		38	9	29	38	3	13	6	4	12	38
Opportunity to reserve by phone	4	3		1		8	4	4	8		4	2		2	8
Free access			1			1		1	1					1	1
Unfavourable conditions		1				1	1		1					1	1
Inattentive staff	1		1			2	1	1	2		1		1		2
Inconvenient location of centre	6	1				7	1	6	7	1	4	1		1	7
Estimate the quality of Internet.															
Excellent	37	49	10	10	2	108	30	78	108	3	37	25	13	30	108
Good	27	35	12	5	1	80	28	52	80	11	21	16	9	23	80
Satisfactory	5	6	3			14	6	8	14	2	3	2	2	5	14
Unsatisfactory						0			0						0
TOTAL	69	90	25	15	3	202	64	138	202	16	61	43	24	58	202
If you don't like the quality of centre activity, would you suggest closing it?															
Yes						0			0						0
No	69	90	25	15	3	202	64	138	202	16	61	43	24	58	202
TOTAL	69	90	25	15	3	202	64	138	202	16	61	43	24	58	202

Source and note: InfoTuk gave forms out to users and trainees visiting the Ashgabat Centre inviting them to complete the forms. 202 completed as indicated above.

Table 7 Costs of connecting the 6 non connected InfoTuk public centres as at November 2007

Location of InfoTuk Centre	Type of connection	Monthly dialup costs (4,62 US$/hour * 4 hours/day * 23 days/months)	month	US$ per month
Turkmenbashi	Dial-up(uplink) to Balkanabad CTC	424.62	1	424.62
Serdar	Dial-up(uplink) to Balkanabad CTC	424.62	1	424.62
Turkmenabat	Fiber-optic channel to Virtual Silk Highway	835.00	1	835.00
Dashoguz	Dial-up(uplink) to Ashgabad CTC (optional: to Virtual Silk Highway)	424.62	1	424.62
Balkanabat	Fiber-optic channel to Virtual Silk Highway		1	0.00
Tedjen	Dial-up(uplink) to Ashgabad CTC	424.62	1	424.62
				2533.46
			Subtotal	2533.46

Cost for Phone line per month
Cost for Phone line per hour

Source: InfoTuk

Table 8: Comparison on hosting possibilities for the education portal prepared by InfoTuk

		http://www.networksolutions.com	http://www.online.tm/www.html	http://www.verio.com	http://smallbusiness.yahoo.com/webhosting/compare.php#close	http://leaderhost.ru
US$ cost per month/year		17,95 / 215,4	975,95* / 11711,4*	19,95 / 239,4	11,95 / 143,4 (+25 setup)	7,7 / 107 (IP)
Technical characteristics	HD	15GB	0.1GB	10GB	5GB	5GB
	Traffic per month	400GB	Unlimited	400GB	200GB	Unlimited
	Support	CGI-Bin Directory, Server Side Includes (SSI), Perl, PHP 4	?	Gallery photo gallery software, Online calendar software, Local directory from your CGI scripts, Perl, PHP and Python programming tools	Advanced scripting and database tools (like PHP, Perl, and MySQL), PHP version 4.3.11 and support for hundreds of PHP functions, Perl version 5.8.7, Password-protected user accounts – 200	PHP (4.4.x or 5.2.x), Server Side Includes, Perl (5.8.8), Crontab, SSH-access
	MySQL Database	4 (400MB)	?	+	MySQL 4.1.12, with virtually unlimited databases	PostgreSQL (7.4.x), MSSQL 2005.unlimited
E-mail	Tools	POP3 & SMTP, Unlimited E-mail Forwarding, Webmail, Address Book, External Mail	-	E-mail accounts with mail forward and auto-responders, Webmail	POP and SMTP email access, Web-based email access, SpamGuard Plus, Norton AntiVirus, Catch-all default mailbox	POP3, IMAP, SMTP, Web-access
	e-mail box	100	1	200	200	Unlimited
	Email volumel	500MB	>10MB	?	Unlimited (attachment size 20MB)	limited
	Virus and spam	Symantec Brightmail® spam & virus protection	-	Spam Filtering, Virus Protection	SpamGuard Plus, Norton AntiVirus	ClamAV 0.90.1
Technical support		24x7 support by phone and e-mail, on-line instruction , flash-instruction	phone	Access to Verio Web hosting expertise through 24/7 direct technical support by phone or E-mail, Extensive, searchable documentation, Searchable online help	24-hour toll-free phone support, Online help center and email support, Getting Started guides and video tutorials	24x7 technical support by phone or E-mail ,on-line instruction , on-line chat and internet-

Source: InfoTuk

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Table 9 Opening hours of each school computing centre established by InfoTuk

School №	Teacher responsible for computer centre	Computer Centre opening hours	Total hours open Per week
Ashgabat city			
№ 16	Irina Torayeva itora@rambler.ru	Monday 13:30-15:30 Tuesday 10:30 –12:30 Wednesday12:00 –15:00	7
№ 18	Nikolay Galkin nikolay-galkin@yandex.ru	Monday 13:30 – 15:30 Tuesday 13:30 – 15:30 Wednesday 13:30 - 15:30 Thursday 13:30 - 15:30 Friday 13:30 - 15:30 Saturday 13:30 – 15:30	12
№ 19	Oguldursun Mayliyeva hon201279@yandex.ru	Computer User Training Monday 13:30-14:30 Tuesday 13:30-14:30 Wednesday 13:30-14:30 Thursday 14:20-15:20 Friday 13:30-14:30 Saturday 12:30-13:30 Internet Monday 16:00-17:00 Tuesday 14:30-15:30 Wednesday 15:20-16:20 Thursday 15:20-16:20 Friday 14:30-15:30 Saturday16:30-17:30	12
№ 20	Sazak Esenguliyev ashg20@yandex.ru	Monday 12:00-13:30 Tuesday 12:00-13:30 Wednesday 12:00-13:30 Thursday 12:00-13:30 Friday 12:00-13:30 Saturday12:00-13:30	6
№ 27	Oleg Bucharskii olross27@yandex.ru	Monday 14:30-17:30 Tuesday 14:30 – 17:30 Wednesday14:30 - 17:30 Thursday 14:30 - 17:30 Friday 14:30 - 17:30	15
№ 34	vacant		
№ 50	Atamurat Saryyev man.tm@rambler.ru	Ccomputer User Training Monday 9:00-11:00 Tuesday 9:00-11:00 Wednesday 9:00-11:00 Thursday 12:00-14:00 Friday 9:00-11:00 Internet Monday 11:00-12:00 Tuesday 11:00-12:00 Wednesday 11:00-12:00 Thursday 9:00-10:00 Friday 11:00-12:00	15
№ 52	Mive Beknazarova steve.berd@bk.ru	Monday13:30 – 15:30 Tuesday 13:30 – 15:30 Wednesday13:30 - 15:30 Thursday 13:30 - 15:30 Friday 13:30 - 15:30	10
№ 53	Nepes Babayev sepen85@mail.ru	Computer User Training Monday 9:00-11:00 Tuesday 9:00-11:00 Wednesday 9:00-11:00 Thursday 12:00-14:00 Friday 9:00-11:00 Internet Monday 11:00-12:00 Tuesday 11:00-12:00 Wednesday 11:00-12:00	15

		Thursday 9:00-10:00 Friday 11:00-12:00	
№ 64	Bostan Saparova sbu@list.ru 510275д	Tuesday 14:00 – 15:00 Wednesday 11:00 -12:00; 13:30-14:30 Thursday 11:00 - 12:00; 14:00-15:00 Friday 9:00 -10:00	6
1	*Mary city*	Monday 14:00-16:30 Tuesday 14:00-16:30 Wednesday 14:00-16:30 Thursday 14:00-16:30 Friday 14:00-16:30 Saturday 14:00-16:00	14.5
№ 18	Akmurad Saparlyyev asaparlyyev@yandex.ru	Monday 14:00-16:30 Tuesday 14:00-16:30 Wednesday 14:00-16:30 Thursday 14:00-16:30 Friday 14:00-16:30 Saturday 14:00-16:00	14.5
№ 20	Melevshe Hekimova hekimowamelew@yandex.ru	Monday 14:30-17:00 Tuesday 14:30-17:00 Wednesday 14:30-17:00 Thursday 14:30-17:00 Friday 14:30-17:00 Saturday 14:30-17:00	15
№ 3	Ogulavadan Babayeva abadanbaba@yandex.ru		
№ 6	Zumrut Bagirova		
№10	Ogulsapar Hommadova ogulsaparmekdep6@rambler.ru	Monday 14:00-16:30 Tuesday 14:00-16:30 Wednesday 14:00-16:30 Thursday 14:00-16:30 Friday 14:00-16:30 Saturday 14:00-16:00	14.5
№15	Galina Yedieva selbielb@yandex.ru	Monday 14:30-17:00 Tuesday 14:30-17:00 Wednesday 14:30-17:00 Thursday 14:30-17:00 Friday 14:30-17:00 Saturday 14:30-17:00	15
№19	Zohra Geldiyeva zuhra74@rambler.ru	Monday 14:00-16:30 Tuesday 14:00-16:30 Wednesday 14:00-16:30 Thursday 14:00-16:30 Friday 14:00-16:30 Saturday 14:00-16:00	14.5
№23	Gulshat Akmuradova gulshatakmur@rambler.ru	Monday 14:00-16:30 Tuesday 14:00-16:30 Wednesday 14:00-16:30 Thursday 14:00-16:30 Friday 14:00-16:30 Saturday 14:00-16:00	14.5
№8	Lyale Hudaykuliyeva laylamekdep23@yandex.ru	Monday 14:30-17:00 Tuesday 14:30-17:00 Wednesday 14:30-17:00 Thursday 14:30-17:00 Friday 14:30-17:00 Saturday 14:30-17:00	15

Source: Infotuk

Annex 12   COMMENTS ON FOLLOW-UP TO RECOMMENDATIONS OF THE 2004 EVALUATION OF INFOTUK

Both UNDP and the project were asked to comment on follow up to each of the recommendations of the previous evaluation of InfoTuk, carried out in 2004. Each was asked to indicate whether the recommendation was carried out or not, and if not, reasons why it was not carried out.

Most recommendations made by the 2004 evaluation were made in an annex (pp 28-34) in the form of proposals for a new project document for the current phase of InfoTuk. These recommendations as well as those from pages 22 to 24 of the main text of that evaluation are quoted in the second column below, numbering 36 recommendations in total. The numbering of the recommendations below was not used in the 2004 evaluation, but has been introduced here to facilitate cross reference. In all cases the page number of the quoted recommendation from the 2004 evaluation report is given in parentheses. The sequencing of recommendations follows that in the 2004 evaluation report (even though there was some repetition).

#	Recommendation of 2004 Evaluation	Comments of UNDP Country Office (by responsible Programme Officer)	Comments of InfoTuk Project (by Project Manager)
1	….successful completion of an ICT for D Strategy….(p22)	Main implementing partner was changed from SCST for the Ministry of education because of the emphasis on connecting schools to Internet; at that juncture the Ministry was not in a position to lead the process of strategy formulating; in addition SCST seemed reluctant at that time to take a leadership role in strategy formulation; currently however, the need for a strategy is acute	National strategy not completed but drafts for education & science sectors submitted to Government, but never formally approved. Unaccepted in ProDoc (Project Document).
2	active efforts are vital to encouraging wider participation of civil society…..extending access through the Centres and the news Schools Pilot will be important here. (p22)	The existed environment was (and still is not) conducive to bring Internet to all local centres established by the project. There is only one internet provider – Telecom that would charge the project an inflated (because of huge difference between official and black market exchange rate) price. That was not affordable to the project. Rough calculation showed that Internet would cost the project nearly 300 $K annually	The civil society was not participated in the project activity. Only the representative of Blind and Mute Organisation received the Computer user training. Also since 2004 all civil societies should be registered in Ministry of Justice and only two organisations as Youth Union and Women Union was officially registered organisations.
3	InfoTuk 1 can be characterised primarily as training and information generation building. InfoTuk II must be based on ever widening networking, interaction and use. Full access to the Internet will be central to this, including extending access deeper into the community in support of its social, economic and cultural aspirations. The InfoTuk Team must be prepared to exploit this to the full. (p22)	Was limited only to 20 schools participating in the project	Done. InfoTuk Centres in Ashgabat and Mary provided access to the Internet for public use. The InfoTuk Team fully understands the importance of Internet use for communication, information sharing, which provides a basis for further opening of information for general access.
4	more proactive approach from the Project Manager and Team would be welcome in relation to developing its own capacities and services in electronic networking, and making them available to government, civil society and private sector. …….. External, international inputs will be required to implement these actions. (p22)	Experience shows that demand for computer basic literacy is growing; in all project centres the queue for enrolment is two months minimum; shifting the project resources to, for example, electronic networking especially when access to Internet was scarce and there was not enough critical mass for real networking seemed not efficient	InfoTuk Centres in schools connected to the network for information sharing among school CNTCs and InfoTuk Centres in Ashgabat and Mary. Also CNTCs Instructors has been trained on developing its own website design. External, international inputs were provided to implement these actions through the recruitment of additional staff (TECHNICAL ADVISER ON ICTD) and procurement of equipment as required.
5	(For) the ICT Access Centres: a) additional computers…should be obtained to address the significant amount of unfulfilled demand, b)	Local centres were strengthened with addition equipment; for specialised training please refer to the	a) Additional computers was put in Internet Access Unit in Ashgabat and half-time CTC Managers became a full time employee; b) The CTCs was

	Additional peripherals, such as scanners, printers, digital cameras, digital video, digital sound recording, and specialist software, c) Specialised training courses for artistic, social and economic uses….. d) Consideration could be given to opening the Centres in evenings, as Internet access centres to local communities for educational, social and economic activities, e) Access for people from the local community should be facilitated, beyond those in receipt of training. Certainly in Ashgabat, the only Centre currently providing internet access, could undertaken more systematic outreach to ensure that its facilities are fully utilised. This should also be applied in the other Centres, when quality Internet access is achieved. (p23)	above comments (4)	equipped with additional peripherals, such as scanners, printers, digital cameras, software for increasing functionality and integration into the multi-media environment; c) Specialised training courses on website design was provided to CNTC Instructors. The specialised training for artistic, social and economic uses was not developed, they had the project Computer training. d) The CTC provided training in evenings but not in schools. Internet access for public was provided in Ashgabat Internet Centre till 8:00 p.m. by staff (Monday-Friday 09:00 a.m – 20:00 p.m.) and Saturday (10:00 a.m. – 14:00 p.m.). Staff works free of charge. The project used the volunteers in summer time; they can work only being in vacation. During study time, it is impossible for them, there is written instruction. e) The Trainer in Ashgabat (Aybolek) and Elman register the people for Internet use by phone or they can come to centre to be registered according to available Internet hours/computers.
6	create a network of schools, providing ICT access and training to pupils, teachers and the local community, and enabling and encouraging networking between each other. (p23)	Networking between the schools was anticipated; however, Internet was brought into 20 schools in early June 2007 when summer holidays began. Since September 2007 the schools are learning Internet potentials; networking will definitely needs to be included in the next phase	Done.
7	Schools in principle appear to be receptive to the idea of opening out to wider development groups and individuals active in the community, and to see their schools-based centres offer training and Internet access – schools can thus be a door to the wider community in terms of its social, cultural and economic development….Through school interactions with the community and the Parent Teacher Committees, the potential is there (and care must be taken to realise this) to ensure that this system makes information available also to the local community at atrap and at school level. (p24)	It has been planned, however because the schools were connected to Internet only recently; these have not been materialised yet. Refer to the above comment (6)	The schools offer training and Internet access namely for school teachers and pupils, there is huge demand from schools.
8	The InfoTuk schools network and educational pilot (SNEP) will comprise three main distinct but overlapping components: a) Students will receive, from their teachers, education and practical training in ICTs and live internet access, as part of the core Informatics curriculum but mainly as optional activities. …b) School and local networking and information exchange activities will be initiated and supported, locally, nationally and even internationally in various configurations between students, teachers, local and cultural interests and others. … c) A pilot for the Educational Management Information System (EMIS) will be implemented linking schools, Departments of Education in Etraps, Velayats and nationally, and others in a network (p28)	The capacity in the departments of education was not sufficient	■ a) Done. ■ b) Done ■ c) Unaccepted in ProDoc. The Educational Management Information System (EMIS) does not work. There is not connectivity between the indicated organisation.
9	Over a three year period, a total of sixty schools will incrementally be incorporated centrally into the project, spread between the Velayats and Ashgabat. (p29)	The capacity of the Silk Highway project network was not sufficient to accommodate more schools	Done, twenty schools instead of sixty schools work and became the main part of InfoTuk.
10	The general criteria for selection of participating schools will be designed to maximise the likelihood of success in all components, including EMIS. …specific criteria for selection, including also for EMIS, will be developed in close consultation with the Velayats. (p29)	Refer to comments (8)	For selection of the schools we used Sean's criteria and developed a little. EMIS was not accepted in the ProDoc.
1	Consideration will also be given to including a pre-school		Criteria for Computer Networking Training centers:

1	establishment and a school for people with special needs in the pilot. (p29)		■ Expressed interest & experience in ICTs from local authorities, education department and school administration ■ Technical capacity for quality internet connection ■ Need to create the modern computer class in the school ■ Capacity to maintain the computer class when the project expires ■ Number of pupils ■ Existence of the teacher with good ICT knowledge Local authorities, education department and school administration ■ support: ■ To provide free of charge premises; ■ To renovate the premise if required; ■ To provide free of charge telephone line To provide clean computer class and safety of equipment
1 2	Significant effort should be made to develop InfoTuk II as much as possible using Open Source and free software, for server (e.g. Linux) and PC use. (p29)		Done for server (e.g. Linux). The project training material on Windows XP and there is not any base for change into open source.
1 3	A minimum of five high specification computers (including CD writer) will be provided to each school, connected by LAN and with permanent internet access of good quality, along with a large television or LCD projector, and laser and colour printers and a scanner. Additional peripherals will be given where there is a demonstrable potential and desire for their use, such as a digital video and still camera, editing software etc. These facilities will be located in a secure adapted room provided by the school. (p30)	done	Done. Computer equipment and peripherals procured and installed in safety premises.
1 4	Technical support and maintenance (for the schools) will be supplied from the Networking Centre as needed. (p30)	done	Done by project technical staff.
1 5	A training programme will be offered to all teachers in these schools….by an InfoTuk trainer Teachers will receive up to 80 hours training, flexibly scheduled during in-school and after school hours and dates, as appropriate; (p30)	done	Done. CNTC Instructors (Teachers) received up to 40 hours training (Training of ICT Trainers).
1 6	The school facilities will be utilised to provide a range of pupil training and education, in general provided by the teachers: i.)Pupil training in extra-curricular hands-on ICT and internet use, from basic through to more advanced and for all pupil ages; ii.) Support for the existing curriculum in informatics (Currently in Grades 8 and 9); iii.) Support for other curriculum subjects ranging from cultural studies, to mathematics, to English and other languages. (p30)	Done and refer to above comments (6 and 7)	Accepted in the ProDoc i.)Pupil training in extra-curricular hands-on ICT and internet use, from basic through to more advanced and for all pupil ages; Unaccepted in Prodoc: ii.) Support for the existing curriculum in informatics (Currently in Grades 8 and 9); iii.) Support for other curriculum subjects ranging from cultural studies, to mathematics, to English and other languages. (p30)
1 7	The possibility of providing access to other schools in the neighbourhood, by joint agreement, may be explored, while ensuring that such sharing will not compromise the high quality and level of training required for the optimal completion of the pilot. (p30)	Refer to above comments (7)	Not done, the quality of Internet will not allow to do it at present and for additional connecting the schools required approval.
1 8	Teachers and pupils will be offered supervised access to the facilities at other times, aside from the formal training, for practice and for networking activities (p30)	done	Done.
1 9	Schools may also, at their discretion, provide training and access to others, such as librarians, social and health workers, non-governmental organisations, parents or members of the community, as a means to extend the benefits of the initiative more widely into the community. (p30)	Refer to above comments (6 and 7)	Partially done, the training and access to librarians was provided.

20	Remunerating teachers for the additional work involved in providing training will be necessary, and may be borne by InfoTuk or another partner…. A volunteer process may also be developed locally, and collaboration may be sought in some places also with the Peace Corps and UNICEF. (p30)	done	Teachers in CNTCs work as volunteers.
21	Schools …with …local Education Departments …will develop and engage in extra-curricular networking activities with other schools in the Velayat and nationally, and even internationally. This will be done by means of a dedicated national Intranet for participating schools and other actors, as well as via the Internet. These activities will be supported by the Networking Centre Managers, as resources permit. The central InfoTuk Team will also have a significant role in terms of training and capacity building of Centre Managers, applications and services. Peace Corps Volunteers may also be involved. (p31)	Done and Refer to above comments (6 and 7)	The school centres has access to Internet and can communicate with project centre and school centres.

The central InfoTuk Team provided training and capacity building of Centre Managers, applications and services.

Peace Corps Volunteers was not involved in the project activity. |
22	The Project will pilot EMIS, a system for the collection, distribution and management of educational information that has been applied elsewhere in Central Asia. …It will connect schools, and Education Departments of Etraps, Velayats and Ministry, and others of relevance, and also provide information to local communities and parent/teacher groups. All necessary equipment, internet connectivity and training will be provided by InfoTuk, for participating school administrations, Etraps, Velayats and other participants. Training in the system will be undertaken by all participants, the technical as aspects of which will be provided by the Networking Centres . (p31)	Refer to above comments (6, 7 and 8)	The Project did not pilot EMIS. The education sector was not ready and equipped enough to implement the activity.
23	the Project must give early and careful consideration to the configuration and number of schools and Etraps involved (in EMIS) . (p31)		Not accepted in the ProDoc.
24	External expertise will also be provided with practical experience of EMIS or similar programmes. Consideration will be given to collaborating with the UNICEF Pilot Schools Programme. (p31)	Was suggested to the Ministry of education; selection of schools for Infotuk was also driven by technical feasibility criteria; UNICEF operates in rural schools	Not accepted in the ProDoc.
25	The InfoTuk ICT Training and Networking Centres will act as the support hub for the schools network, provide technical assistance to the EMIS system, and develop further their existing activities in training, access and networking available to all. (p32)	done	Not accepted in the ProDoc.
26	The existing eight ICT Training and Networking Centres will be expanded to maximise the use of the full-time managers, and additional centres developed as they become necessary. Consideration will be given to relocating the centres in the context of expansion, accessibility, and their support role for the schools. Collaboration with the existing programmes and centres will be explored. (p32)	Additional centre was opened in Dashoguz	Two shift training was provided in the CTCs by full-time Managers.
27	Ongoing training will be provided to a diverse range of government and non-government people ensuring that all those with a genuine interest and capacity to use ICTs may apply via the agreed channels. While training will be freely available to all, access for marginalised groups and individuals, including unemployed people and those with disability, will be emphasised. Training will be of five or ten day's duration. (p32)	Employees from some state structure (for example Ministry of Social welfare) trained; a pilot of group of people with disabilities trained	Ongoing ten days training was provided to all who wish (government and non-government people, unemployed, disabled.
28	Training will be provided for teachers from the connected schools, using an agreed curriculum in basic ICT use, e-mail and Web browsing, and training of trainers. It will be of ten days duration, with flexible deliverable times, and may be provided in Centres or by a short-contract InfoTuk trainer going out to schools. Consideration will be given to gaining accreditation. Training will	done	Training for teachers was provided on Windows XP, Internet, Email, website design and training of ICT trainers.
No training on EMIS.

	also be offered on the technical networking implementation of EMIS to those involved. (p32)		
2 9	An ongoing supervised access point will be available to those having completed training and others approved through the agreed channels, including non-governmental organisations. it will also include access for graduates and others from the higher institutions involved in the NREN. (p32)	done	Access was provided to people who completed the training.
3 0	(InfoTuk0 support for the schools and for others will include: a) Moderating and facilitating discussion groups of specific topics of interest, and training in such activity; b) Providing technical maintenance, as necessary, to the schools and other direct participants, perhaps through a technical contract with others; c) Support for Website development, beyond those developed by each school. Peace Corps Volunteers may also assist in some aspects above. (p32)	Refer to above comments (6 and 7)	Not done yet (a) Moderating and facilitating discussion groups of specific topics of interest, and training in such activity;) Planned to do it using video/web equipment; Done. (b) Providing technical maintenance, as necessary, to the schools and other direct participants, perhaps through a technical contract with others;) Project started training on web design for CNTC Instructors who will develop site.)c) Support for Website development, beyond those developed by each school.) The project did not involve Peace Corps Volunteers to assist in some aspects. The centres connected to Internet in June 2007.

3 1	InfoTuk will support capacity building in relation to a national strategy process for ICTs through enriching it with international experience, appropriately interpreted in the national context. Such support may include: a) a senior level InfoTuk consultant in ICT for D strategy, engaged for the duration of this support activity (and having other responsibilities); b) a set of targeted actions to ensure that international best practice is combined with senior local level expertise, to contribute to the strategy development. c) In general support actions will focus on ensuring the horizontal focus and commitment of the strategy; on the integration of ICTs as an enabler of development; on the participation of the widest range of stakeholders including civil society; and on capacity building of relevant groups and individuals. d) An e-readiness assessment will also be conducted, updating and supplementing the information compiled by UNDP in July 2000. (p33)		The following was done:
			    ＋ a senior level InfoTuk consultant in ICT for D strategy (D.Karaev), engaged for the duration of this support activity;
			    ＋ Actions could include: Short term expert contract support, Regional study tours (Estonia, Almaty);
			
			Regarding d), InfoTuk phase I terminal report indicates "The InfoTuk supported the development of a Report on Status of Information Technologies, and an E-readiness Assessment together with the Government (SCST)."

3 2	(InfoTuk will) provide ICT services to government services, and to national and international development organisations. (p33)		Done. Project provided ICT services to government services, teachers, students.
3 3	A high level consultant with international experience will be employed as a Strategy Manager to work alongside and in cooperation with the existing (retitled) Training and Networking Manager. The responsibilities of the new Manager will include a) The EMIS activities , b) Supporting capacity building in national ICT Strategy, c) Liaison with Project partners and collaborators. The position will be for the duration of the Project. (p34)	Ministry of education was not responsive (for the last two years the Minister changed three times)	Not done, not accepted in ProDoc.
3 4	The existing Manager and team will receive training in ICT networking activities, including in Internet server development and maintenance, in Open Source and Free Software, in facilitation of a diverse range of networking using different platforms, and in advanced training in specialist areas such as multi-media. Such capacity building will require external inputs or training abroad. (p34)		Not done. Project Manager, Project Coordinator and UNDP NPO had training "UNDP Inter-Regional Europe and the CIS/Asia-Pacific e-Governance Community of Practice Meeting" in Estonia (December 2006). Project Manager participated in International Conference on "Information and Communication Technologies of e-Learning" in Almaty, Kazakhstan, on 05-06 October, 2007.

3 5	The Project Coordinator will continue in a coordinating role for both Managers. (p34)		Done. The Project Coordinator will continue in a coordinating role.
3 6	The ICT Training and Networking Centre Managers will have additional responsibilities in relation to providing technical and applications support for schools and in supporting the developments of applications. Where they are not already, their position will become full time. (p34)	done	Manager of CTC in Mary provided the technical and administrative support to school centres. The InfoTuk in Ashgabat do the same.

Sources: see note underneath title of table