An IT Transfer Policy Framework for Ethiopia's Healthcare Sector: Embedding Telemedicine in its Social Context

Ethiopia's medical crisis: Telemedicine as a possible solution

- Ongoing challenges
  - HIV/AIDS
  - Malaria and other diseases
  - Shortage of medical personnel
- Telemedicine is a feasible solution
  - The practice of delivering health care over a distance using telecommunications equipment as simple as telephones and fax machines or as complex as PCs and full-motion interactive multimedia (Huston and Huston 2000).

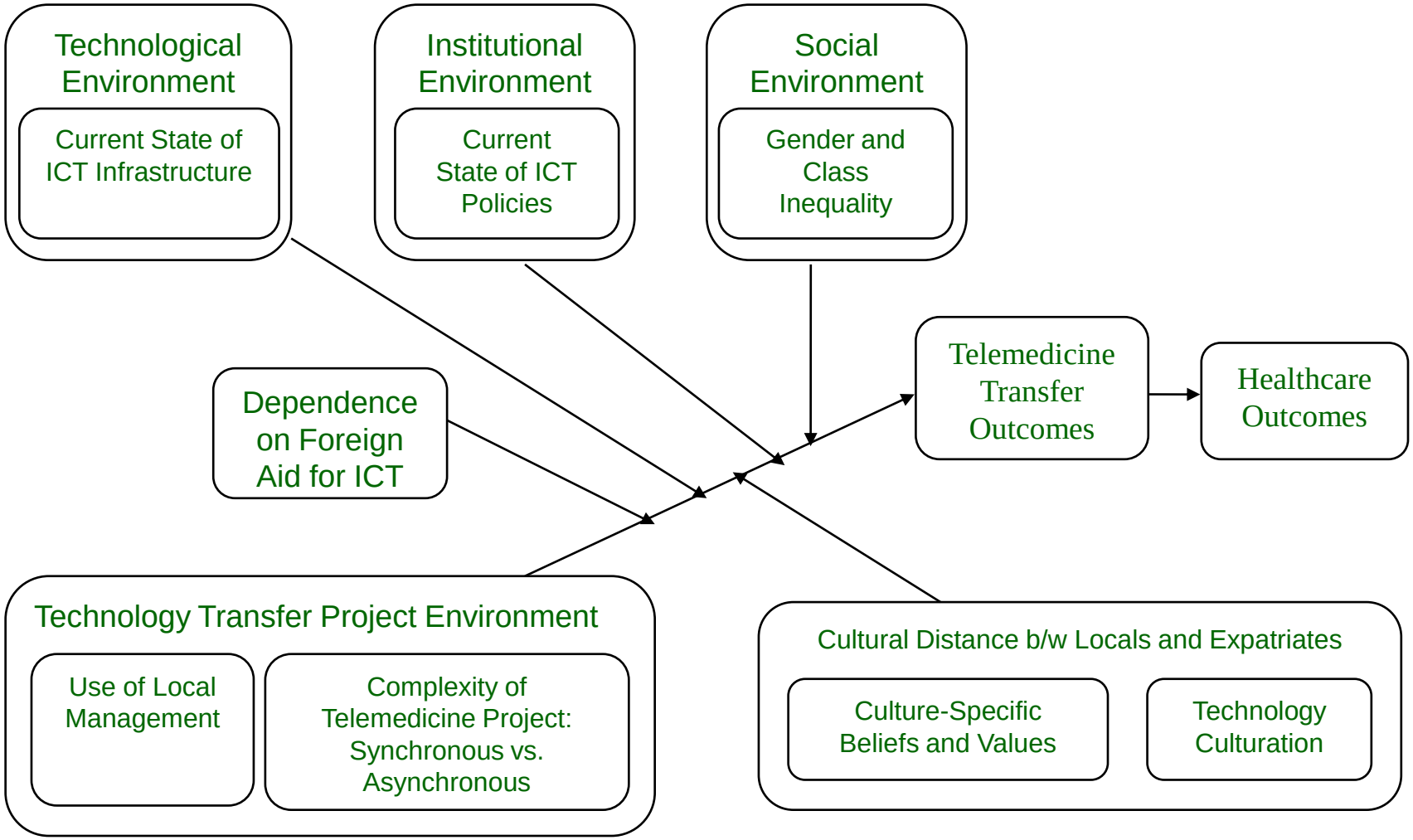
Importance of telemedicine in Ethiopia

- Overwhelming need for health care services, especially outside the cities
- Links between hospitals and other medical institutions could centralize and coordinate medical resources
- Improve the efficiency of health-care delivery
- Maternity units in remote regions connected by telemedicine would allow the remote monitoring of pregnant women
- Tourists would be encouraged to visit the country and visit remote areas if there is a facility for telemedicine

Feasibility of telemedicine in Ethiopia

- Strong government support
  - The Ethiopian government has invested in telemedicine equipment in over 600 centres all over Ethiopia
- There is substantial experience and expertise with regard to telemedicine in developed countries
  - Facilitates technology transfer
- Financial considerations
  - Government has already made significant investments
  - Health care already consumes a large portion of national budget
- Technologically feasible
  - The Internet is rapidly expanding in Ethiopia
  - E-mail is cheap, simple, and does not need to be real-time

Model of telemedicine transfer for developing countries (especially SSA)



Telemedicine transfer and healthcare outcomes

- Telemedicine transfer outcomes
- Healthcare outcomes
- Prioritization of healthcare vs. ICTs
- Multiplier effect of telemedicine on ICT investments

Technology transfer projects

- Project complexity jeopardizes success
- Local management for longterm sustainability

Environmental factors

- Information and Communication Technologies (ICTs)
  - Fundamental technology for telemedicine
  - Healthcare multiplier effect
- ICT policies
  - Managed transfer, regional alliances increase sustainability
  - Policies specific to telemedicine
- Social environment
  - Social, economic, and institutional reforms are necessary

Cultural factors

- Mixed findings about effects of culture
  - Culture affects systems and projects
  - “Political economy”, not culture
- Cultural distance between locals and expatriates

Dependence on foreign aid

- Telemedicine could be more efficient investment of foreign aid:
  - Serves more people and lasts longer
  - Turnkey project—easier to start up by locals
- Foreign aid works in conjunction with:
  - Government support
  - Academic institutions
  - NGOs and UN agencies

Recommendations

1. National ICT investments, when coupled with telemedicine investments, would yield greater healthcare outcomes than direct investments in healthcare of the same amount.
2. Telemedicine implementation projects must eventually be locally managed to assure long-term success.
3. Policies specific to telemedicine transfer are essential, rather than merely generic ICT policies.
4. Continuous development of both basic national ICT infrastructure and the national healthcare system is essential for long-run success of telemedicine projects.
5. Foreign aid investments in telemedicine serve more people and extend funds longer than direct healthcare allotments. Moreover, it is more feasible for an early permanent handover of the project from the foreign donors to local health providers.
6. When foreign experts help establish telemedicine projects, it is important to reconcile cultural differences between local managers and foreign experts.