Introduction of Distant Learning Materials into Teacher Training in Rural Mongolia

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発表内容

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   B) プロジェクトの概要
   C) 遠隔教材導入のための社会基盤整備の現状

2. 遠隔教育の導入について

3. 遠隔教育導入に関する調査
   A) ガイドライン
   B) ラジオ番組
   C) VCD 教材

4. 調査結果比較分析

5. 今後の課題・留意点
Recent Incidents Related to Rural Schools in Mongolia

• Transition from socialism to capitalism in 1990’s
  ➢ Drop of budget for education in GDP: 11.5%(1990)->6.8%(1998)
  ➢ Drop of student enrolment: 98%(1990)=>84%(1995)
  ➢ New education law (2003): Child-centered approach
  ➢ Regional gap in teacher training due to decentralization

• “Dzud”: natural disaster of extreme cold (2000-2001)
  ➢ Death of 6,000,000 lifestocks (1/3 of whole Mongolia)

➢ Affects of “Dzud” to Schools
  ➢ Destruction of school building and dormitory
  ➢ Damage of heating system
  ➢ Loss of study time
  ➢ Decline of teachers’ motivation
  ➢ Migration of teachers to cities
Project Outline

UNESCO
UNICEF

UN Human Security Fund

Budget

Technical Assistance

Survey of Reusable Energy

Means of Distant Training
Teacher Recurrent Training

Building Rehabilitation

Project Team

Rural Schools
20 schools in 3 provinces

Tokyo Tech
- Global Scientific and Information Center
- Department of International Development Engineering

Building Rehabilitation and Teacher Recurrent Training Project in Gobi Provinces

Mongolian Govt
Ministry of Education

Teacher Recurrent Training
Rural Schools
20 schools
in 3 provinces
Mobile Training

- Lecturers move by cars
- Low population density
- Lack of public transportation

=> Distant learning
Status of Infrastructure for Deploying Distant Learning Media

• Electrical power network
  – Dundgobi: connected to central grid
  – Bayankhongor, Zavkhan: village or school generator
    • Village level: hydro, diesel (stopped due to oil expense)
    • School level: engine generator, solar panel
Status of Infrastructure for Deploying Distant Learning Media

- Communication network
  - Telephone available only in telecenter in the village
  - No Internet access
Status of Infrastructure for Deploying Distant Learning Media

- Media appliances
  - National radio (LF/HF): whole country
  - Satellite TV: parabolic dish, more popular than terrestrial TV
  - Audio cassette player
  - VCD player: combination with TV, driven by solar cell
Production of distant learning materials

**Guidelines**
- Content based on teachers' concrete questions
- Complementary materials to radio program and VCD

**Contents**
- Departments according to the 6 selected subjects: (Natural Science, Mathematics & Informatics, Humanities, Art & Technology, History and Social Science)
- Teachers & student communication

**Radio program**
- Being aired in May, June (6 times X 2)
- 15-20 min, 6 program and its repeat next day
- Group training is highly recommended
- Contents developed by SUoEd and Institute of Education
- 2,500 USD to develop and air program
- Nationwide coverage of the program

**Audio cassette material**
- 300 copies are to be distributed in June
- Half of schools in Mongolia are to be covered

**VCD material**
- Content is 25 min
- 4,500 USD to develop material
- School of Mongolia Language & Art
- 6 subjects, 10 lessons
- Material testing in summer training

**Needs assessment for teachers**
- Baseline survey, May 2004
- Questionnaire for teachers, Nov. 2004
- Additional response from teachers, Dec. 2004

**National Project Team**
- State University of Education
- Institute of Education

**Manual**
- Post-graduate training department

**VCD production**
- School of Mongolian Language, Department of Journalism
- Unit in distant education

**Ministry of Education**
- Educational Policy

**Institute of Education**
- Collaboration in developing contents

**National Radio Station**
- Technical assistance and airing in radio program

**Feedback**
Evaluation of Distant Learning Materials

- Observation of Infrastructure
- Interview in Training
- Questionnaires
Mobile Teacher Training

• Date: July 30 – August 17, 2006
• Participants

<table>
<thead>
<tr>
<th>Province</th>
<th>School</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zavkhan</td>
<td>Uliastai Devshil</td>
<td>78 (from 7 villages)</td>
</tr>
<tr>
<td>Bayankhongor</td>
<td>Jaagalant</td>
<td>77 (from 8 villages)</td>
</tr>
<tr>
<td>Dundgobi</td>
<td>Mandalgobi Saintsaagan</td>
<td>124 (from 8 villages)</td>
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</tbody>
</table>
Executive Summary
Useful Media for Future Training

<table>
<thead>
<tr>
<th>Media Type</th>
<th>Zavkhan</th>
<th>Bayankhongor</th>
<th>Dundgobi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guideline</td>
<td>48% (26)</td>
<td>31% (12)</td>
<td>48% (36)</td>
</tr>
<tr>
<td>Radio program</td>
<td>6% (11)</td>
<td>28% (11)</td>
<td>21% (16)</td>
</tr>
<tr>
<td>VCD</td>
<td>61% (33)</td>
<td>89% (35)</td>
<td>69% (52)</td>
</tr>
<tr>
<td>Mixed use</td>
<td>20% (11)</td>
<td>21% (8)</td>
<td>39% (20)</td>
</tr>
</tbody>
</table>

- **VCD is highly appreciated.**
  - Use of solar cell
  - VCD player at home

- **Radio is not preferred.**
  - Time constraint
  - Impression of “old medium”

- **Guideline is still useful.**
  - No appliances

Training in small group at home

Interest in mixed use
Issues and Future Tasks

1. Enhancement of VCD materials
   • Improvement of audio and visual quality
   • Experiments and model lectures
   • More titles to cover wide subjects

2. Electrical power supply
   • Reusable energy, e.g. solar cell – policy

3. ICT infrastructure
   • Rapid change due to progress of technology
   • Internet training facility available in provincial capital
   • Best media always changing

4. Complement, not replacement
   • Mobile training is still needed.
Project Sustainability

• Use of available and affordable technology
  – Running cost is majority in ICT.
  – Advanced technology needs more expensive human resource (technician), which may drain after project.

• Matching with needs
  – Distant training materials do not work alone.
  – How to use materials in training should be carefully considered and provided to teachers.
Training in Uliastai, Zavkhan
Training in Uliastai, Zavkhan