What makes teachers’ ICT-supported Resource Centres effective, affordable and sustainable?

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Teachers’ professional development is often
- fragmented
- unrelated to teaching practice and classroom realities
- lacking in depth and follow-up.

Conclusions from OECD report (2005) on 25 countries [Australia; Austria; Belgium; Canada (Quebec); Chile; Denmark; Finland; France; Germany; Greece; Hungary; Ireland; Israel; Italy; Japan; Korea; Mexico; the Netherlands; Norway; the Slovak Republic; Spain; Sweden; Switzerland; UK and USA.]

*(OECD: Organisation for Economic Cooperation and Development)*
Wide variation in professional development requirements for teachers (minimum per year)

- 0 hours (Canada, Chile, Denmark, France)
- 1-5 days per year (Finland)
- 120 hours over 7 years (Hungary)
- 169 hours, 10% of total workload (Netherlands)

15 of the 25 OECD countries had no professional development requirements for teachers
How much professional development do teachers get?

% schools with 1 or more teachers attending a professional development event or programme within the previous 3 months (PISA database, 2001)
What kinds of professional development?
(% upper secondary teachers, OECD 2005)

- Observation in other schools: 52%
- Mentoring + coaching: 53%
- Joining in teachers’ networks: 54%
- Conferences: 67%
- Visits to companies: 68%
- Collaborative research: 72%
- Degree programme: 81%
- Regular collaboration among teachers on teaching issues: 94%
- Courses + workshops: 94%
Global trends (OECD study 2005)

- Most countries now link professional development to school development (75% of all activities).
- Shift from a supply-oriented to a demand-oriented system (schools often hold funds, set agendas, choose providers).
- Reducing number of individual teachers on long programmes with funding provided.
- A variety of training providers, not only universities or colleges
EU-China collaboration

- EU-China Gansu Basic Education Project, an international co-operative project to assist Gansu in basic compulsory education in poor rural areas
- Teachers as key to improving quality of rural education
- Shared project, jointly implemented
- Euros: 15 million (EU) + 2 million (China)
项目目标是：帮助我省实现教育改革及支持在贫困地区实施九年义务教育。为此，项目将在可承受的基础上减轻农村的贫困程度以及在甘肃41个国家级贫困县实现普遍接受的基础教育目标。

Goal: Alleviate rural poverty by supporting education reform and compulsory 9-year basic education in 41 poor counties in Gansu.
Gansu, Western China: (pop. 26.4 million)
How do you provide …

- Frequent learning opportunities for rural teachers?
- Access to high quality learning resources?
- Professional development closely linked to school realities?
- Local support + interaction with the wider world?
Trend: growing use of ICT for teacher education

Challenge for ICT lies in aligning two things

- The characteristics of effective professional development
- The capabilities of ICT (stand-alone + functions enabled by connectivity)

Often, planners pay most attention to the technology, and neglect the teacher development functions.
Features

- A systems approach
- A scaleable model
- Affordable
- Teacher-centred
- Role-focused professional development
- Congruent with culture
- Embedded in structures + practice
- Local ownership
Teachers’ Learning Resource Centres (TLRCs)

- School-based professional development
- Integrated with Provincial Education Department policies and provision
- A teachers’ resource centre for district village schools
- A community learning centre
Phase 1 (Pilot) (2003-4)
- 86 TLRCs, 6 counties

Phase 2 (2004-5)
- 600 + 86 TLRCs, 41 counties
  - Township primary and junior middle schools
  - Serving district village schools and teaching points
Teachers’ Learning Resource Centres

- 2 computers
- Laser printer
- CD-re-writer
- Data storage
- Television
- Satellite dish
- IP card + software
- Video-player
- Digital camera
- Modem
- Reading materials
- Consumables
Human resources for school based training

TLRC CORE TEAM
- Headteacher
- Technical support teacher
- Backbone (gugan) teachers

Village school gugan teachers

TLRC Management Committee
- District Education Director
- TLRC HT/director
- Village HTs
- Community members

COUNTY level
- Ed. Technology Officer
- Teacher Training Institute
- Research & Training Officer

County level PMO
Teachers’ Learning Resource Centre, Township School

Potential e-network

Project Website

Village schools
School-based development

Director, District Education Committee

County PMO

Annual School-based training plan

TLRC

Learning resources

Provincial Education Department Policy + regulations

Village schools

County TTI

Management Information System

Mobile training teams County + provincial

B. Robinson_Hangzhou_Nov.2009
Bangluo District, a typical cluster.
Learning resources for teachers

- Satellite-delivered materials
  - Centrally produced
  - Free
- Teachers' Learning Resource Centres
  - Purchase ¥
- Printed materials + video
  - Centrally produced
  - Locally produced
- Internet websites + email
  - Free
- Teacher-created materials
  - Locally produced
8 modules for teachers & headteachers

- Innovative design
- Locally relevant
- Combined media
- Applied focus
- Guided reflective practice
- Designed for active learning + flexible use

TITLES
- Guiding Children’s Learning
- Participatory Approaches to Learning
- Teachers’ Professional Development
- Assessment of Learning
- Classroom Management +
- School Management (3)
Teachers’ written reflections as a training resource (print and website)

Teachers’ collaborative development
Huining county TLRC webpage
Training activities organised by Songshan school in one year

- 25 structured training events or sessions
- 477 teacher-times participations (including headteachers)
- 85% teachers can use Office 2003 and can make simple multi-media courseware
- Student computer groups set up outside of class time
- Classes for herders on yak management organised
- Heavy informal use of TLRC by teachers.

‘Teaching has improved’
Outcomes?

- A viable platform for in-service teacher development.
- A blend of the technology infrastructure with
  - the social systems of schools;
  - teacher in-service policy and structure.
- A flexible design giving scope for evolution (professional and technological)
- A locally appropriate model.
Changes in teaching practice
Training + teaching approaches
The 4As Framework: a rights-based approach

- Availability
- Access
- Acceptability
- Adaptability

(Tomasevski 2003)
From (before)

1. Out of school training.
2. 2-3 weeks every 5-10 years.
3. Content and time determined by provider.
4. Few resources for teachers.
5. Theory focused.
6. Few training opportunities.
7. Little or no equipment.
8. The technology of the text and blackboard.
9. Closed loop system.
To

1. School-based training.
2. Ongoing, increased access.
3. On demand, teacher’s choice, flexible.
4. Large amount of resources for teachers.
5. Focus on practical methods and application.
6. Variety of training opportunities.
7. Increased use of media.
8. A wider range of technologies.
9. Open loop system.
Sustainability

‘The continuance of benefits generated by a project after the project has closed.’

Two kinds of sustainability:

1. The continuous flow of the same benefits
2. The use or adaptation of project results by the original target group and/or the extension of the results to others (contexts and groups)
Key questions

1. Will results and benefits continue after project closes?
2. Is there local ownership of the results and benefits?
3. Is local ownership committed to the methods of achieving the results?
4. Are sufficient resources available?
5. Is there adequate institutional capacity to maintain benefits?
6. Is there a continuing relevance of the benefits or results or has the problem been solved?
7. Do local and national policies support the continuance of these benefits?
可持续性
Sustainability

Technology Infrastructure
技术设施

Policy environment
政策环境

Human resources
人力资源

Needs fulfillment
需求的满足

Financial
财力

Organisational
组织
Risks?

- Costs of use (e.g. learning resources, Internet connection) too high for rural schools
- Concentration on technology rather than on skills and pedagogy
- Weak integration with teaching and learning
- Using new technology to continue old practices
- Inadequate training provision
- Insufficient evaluation and research to inform decision-making
- Poor integration of ICT initiatives and projects
10 Lessons

1. Keep the focus on educational goals
2. Choose appropriate technology for appropriate purposes
3. Match technology plans to the social and organisational infrastructure
4. Train, train, train everyone involved
5. Establish system-wide involvement
6. Work with the policy environment for sustainability
7. Leave room for creativity
8. Strong and active leadership is essential
9. Don’t underestimate what rural teachers can do
10. Targeting individual teachers is not enough to achieve system improvement
Successful innovation is not likely to be a product of either central directive or local initiative alone.

Change flourishes in a ‘sandwich’: where there is consensus above and pressure below, things happen.
B. Robinson, ‘Using distance education and ICT to rural improve access, equity and quality in rural teachers’ professional development in western China.’ *International Review of Research in Open and Distance Learning*, 2008, Vol.9 (1)

Thankyou!

Xie xie!