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Innovative Information and Communication Technology in Education and Its Potential for Reducing Poverty in the Asia and Pacific Region: Flyer “**Using Video Recording and Playback for More Effective Teacher Preparation in Rural Nepal**”

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Using Video Recording and Playback for More Effective Teacher Preparation in Rural Nepal

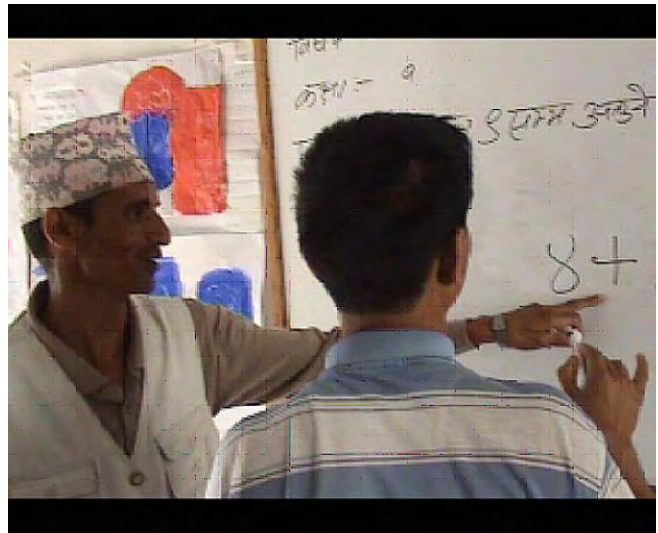
The Asian Development Bank (ADB) funded an investigation of the effective use of information and communication technology (ICT) in education in rural areas of Bangladesh, Nepal, Mongolia, and Samoa. In these areas, the multidimensional elements of poverty diminish access to and the quality of education for the poorest people. The study assessed the potential for ICT, combined with training, to improve these education factors for people whose educational opportunities are severely limited.

In Nepal, the study introduced digital video recorders to rural, mobile teacher training teams that deliver teaching qualification programs to serving, but untrained, teachers. The study showed that use of video for self assessment of teaching practice can add significant value to in-service and pre-service training programs.

The study—Innovative Information and Communication Technology in Education and Its Potential for Reducing Poverty in the Asia and Pacific Region—was carried out as Regional Technical Assistance. It was conducted by a team of international and national consultants from RTI International and iEARN-USA during April 2006–September 2007.

Examples of Different Training Activities that Were Recorded by Nepali Trainers

- Microteaching exercises and school-based classroom practice to review and provide feedback to trainees (self-assess)
- Classroom practice to create a repository of model teaching examples
- Training program lectures and hands-on activities to improve trainer performance, and enable teachers to review selected lessons, or get copies on CD-ROM
- Classroom lectures that enable training management at the central level to review training quality and adjust curriculum as necessary
- Training review in the classroom so trainers could assess trainee participation and assign marks—had the effect of improving attentiveness and performance of trainees
- Extracurricular or village cultural activities for use in social studies classes or for sharing with training centers in other regions



Video recorder captures a teacher trainee learning how to deliver a mathematics lesson. [Photo: Study team]

The study team identified examples of the effective use of video recordings during teacher training, steps that trainers can integrate into their curricula, and the unique benefits that video recordings offer to both trainees and trainers.

Why use video for teacher training?

These attributes of video recordings make them useful for learning teaching skills and strategies:

- **Flexible review:** Video can be rewound and replayed, slowed down, or frozen frame by frame. Teachers in training can review and analyze specific aspects of their own behavior, such as making eye contact, and pupil reactions. Without video, these details might go unnoticed because they occur so quickly.
- **Visual representation:** Learning through visual representation of real situations bridges the gap between theory and reality, and can reduce a sense of disconnection between residential, face-to-face training and actual classroom practice. It can also help create a shared vision of practice between schools with different cultural, environmental, and socioeconomic characteristics.
- **Permanency:** Video offers a permanent record of an event or activity. Teachers in training can review this record to recall important steps in a teaching method or content-specific exercise.

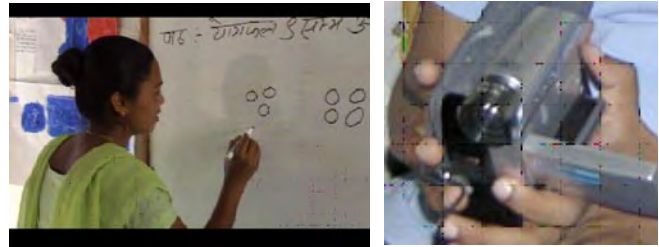
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Recording occurs in a safe environment, where observation and interpretation of teaching practice are not inhibited by the actual demands of teaching. Teacher trainees develop confidence in teaching through viewing examples, practicing (especially risk taking) during microteaching exercises, and viewing the outcome of that practice.

Why use digital video in training?

VHS video has been common in teacher training in some countries since the 1970s, but the advent of digital recording offers many new possibilities for using video in the classroom and in developing country contexts.

- Video recorders and storage cassettes are compact and easily transported from schools to institutions to offices. This is particularly important in a context, such as in Nepal, where foot transportation is common.
- Digital video, in combination with a computer, can be quickly edited to the most important moments, reducing the need to save and search through lengthy recordings for one important visual lesson.
- The digital format makes it easier to share video clips through e-mail and to record onto CD-ROM.



Training trainers to use video

To use video effectively, trainers must understand how to integrate video case studies in the classroom. The following steps can be used to develop an orientation for teacher trainers on the use of video:

I. Introduction

Discuss attributes of video. Ask: Why are these attributes important, useful for training purposes?

II. Review background theory on pedagogical uses of video case studies in teacher training

The objectives and benefits of using video case studies in teacher training include:

Learn how to DO. Observe teaching practice:

- Watch other teachers, and try to imitate best practice and learn specific subject knowledge
- See different teaching methods—such as group work, interactive techniques, art forms—in practice
- Observe classroom management techniques

Learn how to SEE. Observe student interaction and classroom environment:

- Look at what is important in a teaching situation. Identify where to focus attention as a teacher.
- Make connections between specific classroom interactions and the broader concepts and principles of teaching that they represent. For example, ask: What is this a case of? Answers might be inclusion or problem solving.
- Look for the reason behind an unsatisfactory teaching experience by observing the lesson from the perspective of the students. What are they actually doing during the lesson? Are they paying attention? Video allows a focus on aspects other than the lesson plan and teaching behavior.
- Make connections between classroom interactions and the teaching environment, including grade level, subject matter, culture, school environment. Use this information as a basis to understand and react.

Steps for Reviewing Videos with Teacher Trainees

1. Review observation checklist (see below)
2. Play video to group of trainees who will use their observation checklists to record what they see.
3. Discuss
 - Review notes from the observation checklist
 - Ask trainees to answer: What can be improved?
 - In small groups, discuss other strong and weak points
 - Groups present
 - Instructor concludes

An observation checklist includes criteria of effective teaching. For example, did the teacher

- Make eye contact?
- Roam about the classroom?
- Exhibit confidence?
- Follow the lesson plan?
- Use teaching aids?
- Manage time effectively?

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III. Role-play with video case studies

- Prepare an observation checklist, as might be used in regular classroom observation for teacher performance evaluation.
- Record a teacher trainee delivering a practice lesson (microteaching), using content or methods from the training program. Focus the camera, if possible, on both the teacher and the students.
- Rewind and review the video. Using the observation checklist, ask: What did you notice? What is the importance of what you noticed? Do you have any questions about what happened? What is good practice? What could be improved?
- Prompt trainees to analyze student thinking, the teacher's role, and interaction. Relate their observations to specific aspects of the curriculum.
- Have trainees do this activity first as individuals, writing a summary of their observations and interpretations. Compare their contributions to a summary from the mentor teacher or teacher trainer. This method can also be appropriate for distance training.
- Watch the video again as a group. How do reactions and observations change after group discussion? What consensus is reached?
- Teachers who self-assess their practice should assess their performance before viewing the cassette. Ask: How well do you think you delivered the lesson? Do you think the students were interested? What could you have done better? Then, have the teachers re-answer the questions after viewing the videotape. See if or how perceptions changed after they review the video.

Improving subject matter knowledge

When video equipment is available in the classroom, many other possibilities exist for using it to supplement the curriculum and regular classroom lectures. In particular, educational videos such as simulations and documentaries can help improve teachers' subject matter knowledge in science, languages, and social studies.

Summary of Uses of Video in Teacher Preparation (Wang and Hartley)

1. Reflection on theory vs. practice, and changing pre-existing beliefs about learning and teaching
 - Self-examination—match desired practice with actual performance
 - Reflection on authentic teaching—critique and analyze authentic classroom situations
 - Modeling desired practice—view a model teacher in order to imitate best practice
2. Acquiring pedagogical content and knowledge
 - Representing subject matter in action—watch an experienced teacher teach a subject
 - Developing flexible content knowledge—see a variety of situations and approaches to subject matter knowledge
3. Understanding learners
 - Learning how to observe and interpret children's learning—record groups of students to allow the possibility later of interpreting individual behavior and group interaction
 - Learning how to interact with children—view video of certain classroom situations that are less demanding than the actual classroom

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