Proposed online adaptation of an existing distance learning course for Vietnamese primary school teachers

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Primary School teachers in Vietnam have just started a three-year in-service course that aims to convert their didactic/instructivist approach to a learner-centred/active learning methodology. The distance learning course, developed with the assistance of international consultants, distributes VCD copies of thirteen video recordings of classroom teaching, exemplifying the new methodologies. Each video is viewed in short segments, by small groups of teachers, who carry out discussion activities specified by a printed Study Guide. This paper describes a proposed online adaptation of the course: multimedia versions of the Study Guides would accompany streamed video extracts, followed by asynchronous discussion moderated by tutors.

Overview of the current course

The target learners and the learning and teaching challenge

The existing in-service training course for primary school teachers in Vietnam promotes learner-centered, active learning, which contrasts drastically with the traditional didactic methodology practiced to date.

The learning challenge for the teachers is hence severe:

- cognitively – understanding and implementing an alien teaching methodology;
- affectively – believing in the new teaching philosophy, which appears irreconcilable with their current practice.

Media used in the current course to address the learning challenge

To address this challenge, the existing course distributes VCD copies of an introductory video, plus thirteen video recordings of classroom teaching that exemplifies the new methodologies. Each methodology video is viewed by groups of five or six teachers, once all the way through (average fifteen minute duration), then in short segments of about 3 minutes each, interspersed with discussion activities specified by a printed Study Guide.

The course also contains 3 booklets on political philosophy, plus 23 printed Units, 7 of which are each accompanied by one or more of the 14 video packages.

Format of the videos and study guides

Most videos take the form of pure video observation, without commentary, of classroom activities (such as mixed ability group work, use of learning aids). The teaching/commentary resides instead

in the accompanying printed Study Guides, each of which consists of an introductory section and six main sections:

0. An introduction, identifying the videos and when they should be viewed
1. A summary of the corresponding Unit
2. Two main points to look out for on the first viewing (non-stop, all the way through): the teacher's intentions regarding methodology and regarding learning outcomes.

3a. Post-viewing activity: discussion of the points noted in section 2

3b. An invitation to undertake Teaching Practice (of the techniques on the video), observed by group members, and followed by peer evaluation.

4. The main section, consisting of several subsections, each one specifying discussion activities relating to a short segment of the video. Teachers view the video again, stopping after each segment (at the *Stop-Tape Caption*) to carry out the activities.
5. Feedback on the activities of section 4.

Note that the teaching practice is conducted as item 3b, before the teachers have discussed the details of the observed methodology (in items 4 and 5). The rationale for this scheduling derives partly from recommendations by Cash, Behrmann, Stadt and Daniels (1997). They advocate practical work immediately after an overview of a theory but before the details of the theory. This enables learners to activate relevant existing knowledge and to construct new knowledge through implementing their interpretation of the overview. Following this, the details of the theory can be studied with less danger of overloading the learners, because these details would resonate with their new knowledge structures.

Rationale for the teaching and learning approach of the current course

The teaching and learning approach of the course incorporates the paradigm of Cognitive Apprenticeship, in that novice teachers observe a *master* classroom teacher, on video, modeling the new methodology. Coaching is provided through the Study Guide, which directs learners to analyze particular, critical aspects of the master's performance. In addition, the lesson has been edited down to one-third of its original duration, omitting non-essential, repetitive parts and staying within the concentration span of the learners.

The learning derived through this stop-reflect-start analysis is rendered deeper still because of the small group's collaboration, which can be described in terms of 'cognitive apprenticeship within a community of practice' (Brown, Collins and Duguid, 1989). These writers note that 'Groups are not just a convenient way to accumulate the individual knowledge of their members. They give rise synergistically to insights and solutions that would not come about without them' (1989, p.19).

The authors do not suggest a mechanism for this effect. However, it is intuitively plausible that synergistically generated insights would be triggered by hearing the differing slants of others' thoughts and hence being stimulated to think laterally.

Many other researchers report beneficial consequences for learners collaborating on a project, as follows:

- Sharing diverse perspectives (Stacey, 1999)
- Making and judging inferences (Bullen, 1998; Henri & Rigault, 1996)
- Discovering/exploring dissonance (Gunawardena & Anderson, 1997)
- Negotiating compromise/synthesis (Stacey, 1999; Gunawardena & Anderson, 1997)
- Personal cognitive adjustment towards the group consensus (Stacey, 1999; Henri & Rigault, 1996; Panitz, 1996).

The above writers were reporting on learners collaborating online, so the beneficial consequences would apply to the online adaptation of the course. However, the consequences should also apply to the face-to-face groups of the current course.

There is a particular advantage of group-work when it comes to watching video. An individual cannot attend to every feature with perfect concentration and cannot hope to recall each and every incident. UK Open University student teachers, viewing in a group, end up with a more extensive memory than any individual member because they trigger each others' memories of the events on the video (anecdotal reports, through personal conversations with UK OU students at Summer School).

Overview of the proposed online adaptation

Studying the video packages online

It is proposed that the video would be streamed from a web site or accessed from disk, depending on market research and discussions with the Ministry of Education and Training regarding broadband access and infrastructure in Vietnam. Edited parts of the Study Guide would be shown next to the video window, thus directing teachers' attention to relevant features of the teaching methodology.

For example, in a typical VCD-print package of the current course, the second section of the Study Guide describes the goals of the teacher who is shown on the video. After the in-service trainee teachers' first viewing of the video, they are asked to discuss how far these goals were met. They are also asked to relate the video-recorded classroom facilities to their own classroom. Hence, in our web version of the package, the guidance in this section should be printed near the video window. Trainee teachers can glance at the text occasionally to remind themselves what they should be *looking out for* while viewing the video. However, there should not be too much text; otherwise the trainees' reading would disrupt their video viewing. So we should shorten this section to a few key phrases. To ensure that these key phrases are understood, we will add some audio elaboration of the phrases. That is, when students click to *Play* the video, there would be a preamble before the video begins, consisting two or three phrases of text, accompanied by audio commentary

For each of the thirteen teaching methodology videos, the full video, then each video segment in turn, would be discussed asynchronously online, in groups of three students each, moderated by a tutor.

Teaching practice

Teaching practice would be carried out by each teacher, as in the current course. However, for logistical reasons, this would occur at the end of the viewing activities, as item 6 of the new online Study Guide rather than as item 3(b). This would be followed by online peer-evaluation of each teacher's lesson plan and her rationale for the plan. Face-to-face peer observation and evaluation of teaching practice sessions would be organised for only three of the thirteen sessions per teacher. Tutors would take part in all these face-to-face sessions.

Design and production of new materials, orientation meetings and tutor training workshops

Printed booklets would be distributed by post, as currently, with some exceptions**:** suitable parts of the printed Units will be presented online as *synchronous audiovision* sequences.

Some new video production is required for Video 1. Currently, it illustrates how to study the course and this function will be retained. So Video 1 would need to show an edited version of the new, online study activities of an in-service teacher and her small group.

At the start of the re-formatted course, a face-to-face orientation meeting would be conducted in each education District (details in the *Course delivery* section).

Before the course starts, there would be a training workshop for online tutors and Unit writers, as described in the next section.

Enhanced learning enabled by the proposed online adaptation

Our online adaptation will enhance learning in various ways, as follows.

First, in-service teachers find it difficult to get together in a group, all at the same time, to watch a video. Therefore asynchronous online discussion groups would be more practicable.

Second, online discussions would be more inclusive, giving a more equal voice to those teachers who are reticent face-to-face.

Third, the asynchronicity allows time for deeper reflection and hence higher level cognition. The collaborative aggregate of this cognition benefits from each student being the recipient of more deeply reflective messages. Hence, the benefits of face-to-face collaborative project work, described earlier, would be enhanced by converting to asynchronous online collaboration.

Fourth, the provision of face-to-face tutors in the field is not feasible for many outlying provincial schools, which are not easily accessible and where the group size is small. The provision of online tutors would solve this problem. They would be scheduled at centrally planned times, rather than on the off-chance of availability, hence creating a level experience for town and country teachers. Such central planning needs to be assiduously enforced. In a teacher training course in Korea,

> most of the instructors in the online training courses were recognized and busy scholars in the specific content areas and were unavailable for frequent learning support. Teachers indicated that instructors' failure or delay in responding to teachers' questions was one of the major problems with the online training courses (Jung, 2001, p.6)

Quickly responding to students' questions is also recommended by Tagg and Dickinson (1995), Bullen (1998) and Stacey (1999). These writers and others (Henri & Rigault (1996), Andrusyzyn & Davie (1997), Anderson et al (2001)) recommend further strategies for online tutoring, such as validation and support, prompting and probing, clarification, summarising, diagnosing misconceptions. These strategies would be addressed by the tutor-training workshop. Jung endorses the need for such training in reporting some inadequacies of in-service teacher training courses in Korea, 'without prior training in online facilitating skills, many of those instructing online teacher training courses could not organize online discussions effectively and thus failed to provide interactive learning environments' (2001, p.6)

Fifth, the integration of video and printed material onto a single screen eliminates the distraction of switching between physically separated media. Also eliminated is the requirement to stop the video player at certain points and turn to the appropriate page of the Study Guide. The elimination of these distractions helps memory of the video segments to be fresh in teachers' minds when they discuss them.

Sixth, in the case of the initial viewing of the whole video without stopping, the mechanism for focusing on specified features is facilitated by key phrases that have gained meaning through an audio track. Without such mnemonic phrases, glanced at occasionally while watching video, it is extremely difficult to bear in mind what to focus on (when one's attention is engrossed in the unfolding activities on the video)

Seventh, parts of the Units will be replaced by *synchronised audiovision* sequences on the web (audio, synchronized with a sequence of images), for the following reasons.

A major reason for the pedagogic potential of *synchronised audiovision* is the synergy between audio commentary and visual material that can be achieved by appropriate design (Koumi (2003). There are many learning tasks that require visual scrutiny of different parts of a diagram, for which static visual material is more appropriate than video. It is possible to facilitate this learning by adding audio guidance on the web site. The audio can guide learners through a sequence of specially designed visuals, such as a build-up of a tree diagram, thus exploiting the capacity for parallel audio/visual processing in the human brain.

It is very likely that some sections of the current Units could benefit from being converted to such *synchronised audiovision*. In the first two decades of UK Open University, about one-fifth of study-time was successfully undertaken with a similar composite medium, although the audio was on audiocassette, decoupled from the visual material (Bates, 1984, p.205).

Each Unit of the current in-service course has seven or eight sections. For some Units, it is very likely that one or even two of these sections might benefit from audiovision re-versioning.

Course delivery

Face-to-face orientation meetings

Online learning would be completely new to the vast majority of Vietnamese primary school teachers. Therefore our course should have some face-to-face provision, rather than being totally at a distance. At a minimum, there should be an initial face-to-face meeting with tutors, at a local teachers' center (there are several district level centers in each Province). This orientation meeting would include plenary viewing of the new Video 1, which demonstrates how the online course would be studied. Then at some point, the small groups would disperse for their own meeting, in which each would go online for non-stop viewing of the first methodology video (2a), then discuss. The discussion would involve the issues described in the on-screen Study Guide, but would be conducted face-to-face rather than in the online forum. Finally, the first of the 6 segments of Video 2a should be viewed and discussed in the same way.

Administration and management

The Vietnam Ministry of Education and Training would supervise the training course but would delegate most administration to the Provincial Education Centers, who would further delegate some functions to the District Centers. Postal distribution of Units would cascade through these three levels.

Each Province would oversee the organisation of tutors and in-service teacher groups. One online tutor would be assigned to twelve small groups of three (or four) in-service teachers each.

Students would learn at home and at their school computer labs. Those students with broadband access at home would learn entirely at home, except for the teaching practice sessions.

The duration of the new course would be three years, as currently.

Problems foreseen

Currently inadequate infrastructure

Studying the online adaptation would not be practicable in Vietnam at the moment because of insufficient access to computers and internet. But the situation is improving rapidly. Our adaptation design could serve as a reasonable template that the Vietnamese could adopt as soon as they have the appropriate infrastructure.

Asynchronicity not entirely beneficial

Despite the arguments above, there remains a worry that asynchronicity would detract from the learning, because teachers' memories of the video would not be fresh during discussions. In the existing course, the discussions are carried out face-to-face, immediately after viewing each video segment on the school's VCD player.

Online functionality will need to be regimented

Finally, there is a worry that the online interactive functionality will need to be linearly regimented. That is, each small group would need to keep to a fairly tight timetable, to avoid compromising the online discussions through one member falling too far behind the others. One suggestion for enforcing the tight timetable is that each member should be blocked from accessing individual features until she has accomplished a pre-requisite task (such as viewing a segment and contributing at least three messages to the discussion forum before writing up a summary of the discussion.)

While some such restrictions seem necessary, the regimentation flies in the face of self-directed learning philosophy; yet self-directed learning is one of the attitudes that teachers are supposed to encourage in the pupils under the new curriculum.

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