Life on the Bleeding Edge: How Emerging Technologies Can Help New Teachers

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Abstract: The Teaching Learning Interchange (TLI), a federal Preparing Tomorrow's Teachers to Use Technologies project, will be in its second year of applying several emerging technologies to help new teachers in several ways. This presentation will report actual second year results compared with the first year expectations listed below.

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The target population consists of “preintern teachers,” a designation in California for teachers who are not credentialed and have not passed subject matter competency. The intent of the preintern program is to provide a way for those wishing to enter the teaching profession to attain subject matter competency and a credential while they are working in the classroom. The program originated because of a severe teacher shortage in California.

TLI has partnered with 15 county offices to have access to preinterns and corporate partners who are developing new technologies.

ClearPhone provides software for conducting video conferences among small groups anytime/anywhere via Internet access. TLI identified a number of subject matter science specialists (the area of greatest need) from the Exploratorium. They are being connected with preinterns who need to attain subject matter competence. Each participant will be given a net cam, whiteboard and software. Online meetings will be conducted in which several preinterns can meet with a specialist and discuss topics covered on the Praxis science test. The whiteboard allows participants to share lesson plans and student work samples.

Expectations are that both the specialists and preinterns will give ClearPhone high marks in the ability to meet from distant locations. Those in rural areas with long distances are expected to have similar benefits to those in congested urban areas, notably the efficiency of meeting without the disadvantages of travel to a common location. The preinterns in the project are expected to score higher on Praxix than preinterns in general.

Lesson Lab provides online video of classroom practice that is particularly useful in helping preinterns understand and plan for the complexities of classroom management and lesson delivery. LessonLab has a unique software package that allows instructors and preinterns to time index a video of classroom practice while online. For example, an instructor can create an assignment to demonstrate a particular teaching practice, like responding to the efforts of learners. The assignment can provide a link to where an example,
say at 12 minutes 32 seconds of a 60 minute video. The assignment can then require preinterns to view all or some of the entire video and mark where they see examples of effective or ineffective practice and write narrative descriptions of their perceptions. When the assignment is completed by all the preinterns, a chart showing all the examples marked by preinterns can be displayed, forming the basis of a dialog on examples marked by many and those marked by only one or two. The advantage of this approach is that teaching is shown within a realistic context including both effective and ineffective teaching practice. Preinterns can explore practice via synchronous and asynchronous online discussions to obtain deep levels of understanding of the complexities of teaching. Both instructors and preinterns are expected to report that this technology is helpful in improving their classroom management, lesson planning and delivery.

Apple Computer recently redesigned its Apple Learning Interchange (ALI) to include video cases along with Units of Practice for particular lessons and links to related resources. A search engine is included on this portal that links Units of Practice to state and/or subject standards. Preinterns will be given structured access to the ALI. They are expected to report that the ALI is useful in obtaining and adapting lesson plans, viewing examples of successful practice and accessing resources and standards.

In conclusion, the experiments of the TLI in providing such state-of-the-art technology to new teachers is expected to produce a wealth of useful applications that have great potential in future teacher preparation programs, as well as identifying a number of potential problems that go along with such innovations.