Building Locally
Linking Globally

Networking Micro-Communities of New Science and Math Teachers Using the NSDL to Advance Instructional Excellence in High Need Schools

Elizabeth Ambos and David Andrews
January 24, 2009
Western Noyce Scholars Conference
Ontario, CA
Building Locally, Linking Globally

- Project began in November 2007; steering committee involves leadership from Fresno, Los Angeles, Long Beach, Monterey Bay, Pomona, San Bernardino, and Chancellor’s Office of the California State University
- “Building Locally”: individual CSU campuses with active Robert Noyce Scholars programs create project-specific “micro communities” that include:
  - Social support systems – MERLOT “Voices” capability
  - Share and critique lesson plans/learning materials – Noyce Institutional Teaching Commons (ITC)
  - Create and share ePortfolios – KEEP Tool Kit
- “Linking Globally”: individual “micro communities” can:
  - Link together to form a regional to national Noyce Scholars community to support mathematics and science teaching
  - Access to the wealth of learning objects, library search tools, visualizations/graphics/data, and other science and mathematics information housed at the NSDL (National Science Digital Library) and MERLOT (Multimedia Education Resource for Learning and Online Teaching)
California State University Campuses now participate in the NSF Robert Noyce Scholar Program

Most of the CSUs have strong ties to K-12 high need school districts

- CSU Noyce Scholar Programs
Overview of Noyce-NSDL-MERLOT Project Activities

- **Build** a select collection of online science and mathematics learning content and curriculum that is successful in high needs schools, particularly in middle and high schools; **emphasizing inquiry conducted in complex classroom management situations**

- **Share** experiences with instructional applications of NSDL-MERLOT resources and such tools as CSULA’s effective and engaging “Virtual Courseware” science simulations

- **Link** the CSU Noyce Scholars Teaching Commons to their local school district user communities, enabling Noyce Scholars to share NSDL-MERLOT teaching resources and pedagogy with teacher colleagues

- **Provide** Scholars with powerful ePortfolio tools to assist them in using NSDL and MERLOT resources to meet the challenges of teaching in high need settings, work effectively with under-achieving students, build their own professional resumé, prepare for teacher performance assessments, national board certification
First Year – Great Progress:
- Building the ITC content and associated tools
- Pilot Workshops for over 200 Noyce Scholars, Noyce PIs, and other science and math teaching professionals in California
- Testing modes of online delivery of professional development
- Supplemental NSF funding for Mathematics
Project Feedback Thus Far….

- Noyce Scholars, PIS, and other stakeholders have given us feedback that what they like best about our project are the opportunities to:
  - connect with other scholars and current teachers to form a multi-dimensional community of mathematics and science teachers in high needs schools
  - find resources and tools on the web in a “one stop shop mode” that are trusted and will actually transition (fairly) easily to classrooms with little technology infrastructure
  - Participate in professional development activities, particularly those that offer a “hybrid” approach: some face-to-face interactions, some on-line synchronous, and some asynchronous
  - share teachers’ own lesson plans and other teaching tools in a central web portal, tied to development of professional portfolios
Our Work Today….THANK YOU…In Advance

- Building on our first year’s success, we want to refine our services and programs
- Need input from you!
- We will now ask for you to think through some typical scenarios for use of the resources, tools, and professional development programs we have developed
- We also hope that some of you will volunteer to keep working with us over the next year