

Learner-Centered Education Program
Arizona Board of Regents
INSTITUTIONAL SUPPORT FORM

Proposal Title: Video Based Learning Modules

Institution: Northern Arizona University DEPT/Unit: Teaching and Learning

Multi-Campus/University Projects
(check other campuses or universities participating)

List other participating agencies:

ASU Main

UA

ASU East

UA South

ASU West

NAU

Briefly describe the program and the development plan.

This project will create video based learning modules that will provide a more realistic curricular framework to enrich our teacher preparation courses. Through these modules, students will become more actively engaged in the culture of the classroom where decisions are made quickly with immediate consequences, linking practice to theory as students interact in the virtual classroom. By enhancing our curriculum with interactive video streaming, we will build a learner-centered environment that allows the pre-service teacher to experience some of the pressures, constraints, and systems of support that can influence curriculum construction and delivery. We would spend Spring '04 developing, filming, and editing the lesson modules. The lessons would be tested and piloted in Summer '04 courses. In Fall '04, we would implement lesson modules as we create additional scenarios to be developed in Spring '05. As we evaluate the project in Spring '05, we would also share and request feedback at a National conference.

Funding Category

Indicate a primary (P) and, if applicable, secondary (S) funding category:

Professional Development

Program or Course Development/Modification

LCE Research

Improved Assessment of Learning Outcomes

Authorizations

Project Director: Jean Ann Foley

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Signature

Official Authorized to Enter into Contractual Obligations

Signature _____

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Video Based Learning Modules

Gretchen McAllister, Jim Manley (Elementary)
Jean Ann Foley, Marilee Roberts (Secondary)

Part One: Abstract

The goal of this project is to use technology, in particular video streaming, to augment a web enhanced simulation for pre-service teachers. We believe that such technology will provide an enhanced learner centered approach to teacher preparation. According to Thornhill, Asensio, and Young (2002) "Moving images add authenticity and reality to the learning context and can bring the course content alive." Throughout the past year, four faculty members have been supporting a face-to-face web enhanced simulated secondary and elementary school, Sim School©, in their curriculum courses. This simulation has allowed students to develop their teaching, thinking skills, and knowledge of schools in a realistic and versatile environment that approximates life in an actual classroom. We believe that by integrating video streaming into the simulated environment, students will become more actively engaged in the culture of the classroom where decisions are made quickly with immediate consequences, linking practice to theory as students interact in the virtual classroom. By creating a simulated school that is enhanced by interactive video streaming, we will build a learner-centered environment that allows the pre-service teacher to experience some of the pressures, constraints, and systems of support that can influence curriculum construction and delivery.

Objectives

The Project will:

- Design interactive web enhanced curriculum through video streaming scenarios
- Foster collaboration among two different faculty groups in the Teaching and Learning Department
- Use technology as a tool for student-centered education
- Promote self directed and independent learning through asynchronous curriculum

Anticipated Outcomes

Students will:

- Apply theory to video scenarios
- Develop a classroom management plan
- Develop team building skills
- Become more confident and efficacious as a teacher
- Enhance concept retention through using multiple channels of instruction
- Develop skills for classroom management

Part Two: Identification of Need

The original idea of Sim-School© grew out of a need to foster a more realistic curricular framework in our curriculum courses (ECI 321: Elementary School Curriculum, ECI 322: Secondary Curriculum and ECI 450: High School Teaching Methods) and to build upon students' technology skills. The Sim-School© program has been in use by students for the last two years. Students have reported that the simulation has helped them feel prepared and more confident about engaging in their student teaching. In addition, they reported that they feel more connected to the content of the courses because they are continuously applying the theories and course information to their simulated school. Our research of the simulation, in particular teacher efficacy, supports students' self report (Foley, McAllister, & Sanogo, K. 2003; McAllister and Foley, 2002).

Technology in the form of Sim-School© has been an innovative vehicle for developing curriculum as well as a powerful medium that has served to engage student learning. Sim-School© provides the web enhanced simulated school structure that enables the effective development of real world case scenarios. However, because the current version of Sim-School© is static in nature, we are interested in procuring funding to create a more dynamic learning context through the use of video based case studies.

Our charge as teacher educators in the College of Education is to prepare "tomorrow's teachers." In order to honor this charge, we need to continue to pioneer new strategies for connecting preservice students to the reality of school life. Towards this effort, we have conceptualized interactive lesson models that use video streamed case studies to illustrate classroom issues. Content for this first lesson module will be classroom management in theory and practice for elementary and secondary teachers. If this project is supported, it will meet several important needs:

1. Create interactive strategies for teaching and learning to engage and motivate the preservice teacher.
2. Provide classroom experiences that model and simulate real classroom interactions.
3. Build confidence in teachers and provide a reality check through curriculum that is contextualized.

4. Provide a safe place to practice effective teaching skills without harsh judgment or potential harm to a live classroom.
5. Infuse technology into classroom teaching.

The video case scenarios will improve the current simulation and more closely approximate the complex nature of schools. Students will watch a video clip, and then make an immediate decision as to how to respond to a classroom situation. They will then receive feedback on their decision through a follow-up video segment. In essence, the students will have an opportunity to test out theory as well as their decision making ability through the use of the video-based scenarios. This approach will individualize instruction allowing each student to interact in the computer simulation as an individual teacher as well as a member of a grade-level or content-area team. Such learning will foster collaboration as well as individualized learning. In addition, the case scenarios will provoke learners to unite theory and practice within the simulated classroom as they must react to the problematic situations and apply theory to address the issues through “click and go” options for computer resources. Administrators and teachers agree that pre-service teachers are more likely to develop the skills, knowledge, and attitudes necessary to be effective teachers when their college courses include school-based experiences. The case scenarios will not replace field experiences for the preservice teacher, but will better prepare the student by engaging them in virtual issues prior to facing the real classroom. Moss (1983, p12) suggests that video in education holds the possibility to “...tilt the balance away from teacher centered instruction toward learner centered study, challenging them to rethink methods in content.”

The computer-based simulation will also address our desire to infuse technology through our courses. The interactive website will allow the students to choose when and where to interact with the scenarios – at home or on-campus – having more control over the learning process. As the students use the computer for the classroom management interactive lesson modules, they will become more familiar with computer technique as well as more aware of the potential for using technology in their own classrooms. In addition, the project will also builds on an already established relationship across grade levels. The Sim-School© team, made up of elementary and secondary instructors, will continue to collaborate across levels.

The interactive lesson modules that are embedded in the web enhanced Sim-School© can also be provided via CD. This will allow portability of the video case scenario idea for other colleagues at the College of Education and state wide, as well as other universities and colleges in Arizona and across the country. Upon completion of the Video Based Learning Modules, using video streaming, we will participate at the SITE conference with educators from other institutions to share the simulation and ask for adaptations. In creating the scenarios for classroom management, we plan to utilize multiple perspectives from novice teachers, veteran teachers, and pre service teachers.

Part Three: Technical Needs

We will need two sources of technical support; computer technical support, as well as the purchase of a video editing program. The Center for Technology Enhanced Learning (CTEL), who has been working with the Sim-School© project, through the E-learning grant, has encouraged us to apply for this grant. They have offered their personnel resources to assist in the editing and production of the video segments. We want to particularly continue to work with CTEL because of their familiarity with our project as well as the strong working relationship that we have developed. Part of this process will require the acquisition of the Macromedia program Director. Our other technical needs have been provided “in-kind” from the Preparing Tomorrow’s Teachers to Use Technology group (PT3) in the College of Education (COE). This includes a Macintosh G4 video editing suite, as well as the Flash program.

Part Four: Work Plan

Date	Activities	Personnel	Hours Involved
Spring Semester January, 2004	Develop Scenarios: <ul style="list-style-type: none"> • Research theoretical background • Locate resources on the web to support various theories on classroom management • Establish resource list for scenario solution support • Meet with Flagstaff teachers to construct a series of classroom management issues • Create Story Boards for classroom management scenarios: 	Elementary team: James Manley Gretchen McAllister Secondary team: Jean Ann Foley Marilee Roberts Interested classroom teachers	40 hours per person <ul style="list-style-type: none"> • 2-hour meeting with both elementary and secondary teachers • 8-hours to collate all of the scenarios

Date	Activities	Personnel	Hours Involved
	2 - elementary and 2 - secondary • Write the scripts		
	Cast Scenarios		8 hours
3/15/04	Rehearse Scenarios	Jean Ann Foley Director	6 hours
3/18/04	Live Footage of video taping	All of the members of the team, selected actors	8 hours
3/20/204	Present Project at National SITE conference		
3/25/04	Edit scenarios	CTEL team and members of the Sim School Team	24 (8 hours/ faculty) to test
4/15/04	Programming for interactive scenarios CTETL	CTEL	320 hours (CTEL)
6/05/04	Pilot one elementary and one secondary scenario in Summer 04 with classrooms Begin evaluation • Pre and post tests given • Observations made of student interaction with video-based modules	Graduate student collect data, Sim school team with graduate student analyze results	Summer session -- 3-5 days for each scenario
Fall 2004	Continue to Pilot the 2 Scenarios		3-5 days in each class
Fall 2004	Begin production on 2-3 more scenarios (3 for elementary, 3 for secondary)	Sim school team with CTETL personnel	
Fall 2004	Continue with evaluation • Pre and post tests given • Observations made of student interaction with video-based modules	Graduate student collect data, Sim school team with graduate student analyze results	200 hours (20 per week for one semester)
Spring 2005	Implement video based learner modules and collect evaluation data		
June 2005	End Evaluation		

Part Five – Key Personnel

Elementary Education:

Dr. Gretchen McAllister, assistant professor of elementary education, Department of Teaching and Learning: Dr. McAllister has been one of the originators of the simulation. She has used the simulation for four semesters and has been a faculty member since 1999.

Mr. Jim Manley, instructor of elementary education, Department of Teaching and Learning: Mr. Manley is the other originator of the simulation. He has also used the simulation for four semesters and has been a faculty member since 2000.

Secondary Education:

Dr. Jean Ann Foley, assistant professor of secondary education, Department of Teaching and Learning: Dr. Foley has taught both secondary and elementary education courses. She has used the simulation in full for her secondary curriculum course and has been a faculty member since 2001.

Ms. Marilee Roberts, instructor for secondary education, Department of Teaching and Learning: Ms. Roberts teaches many on-line courses for the secondary program. She is currently using the simulation in the secondary curriculum course, teaching in a traditional mode.

Graduate Assistant: This individual will be hired once funding has been received. We will seek an individual who has worked as a teacher. This individual will assist with coordinating various parts of the video production project, serve as liaison between various groups such as faculty, actors, and CTETL. In addition, this individual will help to

research background needed for the scripts, write scripts, as well as assist with data collections and analysis for evolution of the project.

Computer Consultant: CTEL has offered to serve as our consultant for programming the interactive aspects of the video-based learning module and for assistance with the production and editing of the video segments.

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Part Six – Results and Evaluation

Video Based Learning Modules project will gather and analyze different types of evidence using quantitative and qualitative methods. In order to maximize the validity of the project results we will employ a triangulated approach to better assess the teacher candidate's knowledge, skills, and performance. Multiple measures of the same attributes provide a more comprehensive, reliable, and valid measure of that attribute than any one measure alone (Stufflebeam, 1997).

Our investigation will focus on three attributes that are considered paramount for successful K-12 teaching. These attributes, adaptability, integration, and efficacy will be identified and measured using standardized efficacy and integration instruments, and observation and expert review. This multi-method approach will insure more valid results and offer multiple interpretations of our findings. The audience, anticipated outcomes, expected timeline, performance measures, means of assessment, and plans for dissemination are listed in Table 1.

Evaluation

Please refer to Table 1 below. Each of the rows correlates with the anticipated outcomes, which is found in the student section and faculty section. We have used multiple measures to assess whether we are reaching our outcomes.

References

- Bandura, A. (1997). *Teacher Efficacy Scale*. Unpublished. Given permission to use by author.
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- McAllister, G. & Foley (2002). *Sim-School©: Developing culturally responsive educators*. Paper presented at National Association for Multicultural Education Conference. October 26, 2002.
- Moss, R. (1983). *Video: The educational challenge*. Cram Helm: London and Canberra.
- Thornhill, S., Asensio, M. & Young, C. (2002). *Video streaming: A guide for educational development*. Retrieved September 2, 2003, from <http://www.clickandgvideo.ac.uk>
- Stufflebeam, D. L. and Shinkfield, A. J. (1990). *Stufflebeam's improvement-oriented evaluation*. In Stufflebeam, D.L. and Shinkfield, A. J. (1990). *Systematic Evaluation*. Boston, MA: Kluwer-Nijhoff.

Table 1: Outcomes and Measures of Evaluation

Audience	Anticipated Outcomes	Time	Means of Assessment	Plans for Dissemination
Students	Develop a classroom management plan	End of course	<ul style="list-style-type: none"> Classroom management plan assignment 	Simulation Project Project Report
	Apply theory to video scenarios	3-5 days when students interact with learning modules	<ul style="list-style-type: none"> Pre-survey Post Survey Observation Classroom management plan Reflections on video-based scenarios 	Simulation Project Project Report
	Develop team-building skills	Throughout the semester of the course	<ul style="list-style-type: none"> Observation Expert Review 	Simulation Project Project Report
	Become more confident and efficacious as a teacher	Measured at the beginning and at the end of the course	<ul style="list-style-type: none"> Bandura's Teacher efficacy instrument (1997) Observation Expert Review 	Simulation Project Project Report
	Enhance concept retention through using multiple channels of instruction	Assessed at the end of the course	<ul style="list-style-type: none"> Observation of interaction with video-based scenarios Classroom management plan Expert Review 	Simulation Project Project Report
	Develop skills for class room management	Assessed during the learning modules as well as at the end of the course	<ul style="list-style-type: none"> Bandura's teacher efficacy instrument Classroom management plan Observation of interaction with video-based scenarios 	Year 2 Project Report
Faculty	Foster collaboration among two different faculty groups in Teaching and Learning Dept.	Throughout the Fall and Spring	<ul style="list-style-type: none"> Self-reflection 	Simulation Project Project Report
	Design interactive web enhanced curriculum through video streaming scenarios	Spring 2004	<ul style="list-style-type: none"> Scenarios will be ready to pilot in the Spring of 2004 	
	Promote self directed and independent learning through asynchronous curriculum	Throughout the course	<ul style="list-style-type: none"> Observation of students 	
	Use technology as a tool for student centered education	Observe throughout the course	<ul style="list-style-type: none"> on line technology survey 	Simulation Project Project Report

