# College of Education and Affiliated Programs Annual Assessment Report Template – Spring 2009 Educational Technology

Note: this report presents and analyzes data from the 2007-08 academic year and Fall 2008. During 2007-08, the College of Education and Affiliated Programs engaged in extensive efforts to refine and extend their assessment system. In many cases, data collected starting in Fall 2008 and beyond will look substantially different from the data collected before that time.

## Background

1. Describe your program (general goals, how these connect to the college conceptual framework, enrollment, and number of faculty). Describe any program changes since your last CED Annual Report?

The educational technology program at CSULB prepares its graduates to capitalize on the potential of educational technology to improve learning. In connection with the mission of the College of Education, the program educates graduates who understand technology in relation to its societal and cultural context, critically evaluate benefits and limitations of technologies, and build on ways of using technology towards socially positive ends. Specifically, the program prepares graduates for educational technology leadership roles in schools, educational institutions, and other agencies. It also provides a foundation for individuals planning to pursue doctoral degrees. Graduates of the program learn strategies for applying theoretical perspectives to use technology in the service of practical problems. They learn to evaluate, design, develop, and effectively use technology for educational purposes. The program fully supports the goal of the College to "prepares socially-responsible leaders for a rapidly-changing, technologically-rich world."

About forty students are working towards their MA degree. During the 2007-08 academic year, four full-time and three part-time faculty members taught in the program (Table 5). Currently, there are three full-time and two part-time faculty members.

Since the last CED review, a program change that includes two major items was approved in November, 2007. The two items are: (a) adding "electronic portfolio with interview" to the existing exit requirement, and (b) updating course requirements. The electronic portfolio requirement aims to keep track of candidates' professional development and to provide evidence of their learning for assessment. The standard course outline for ETEC 551 (Education and the Internet) was updated. Two new courses, ETEC 510 (Foundations of Educational Technology) and ETEC 570 (E-learning Design and Development), were created, and along with other required courses, they squarely address the five SLOs. These SLOs, together with signature assignments and mapping to relevant college, state and national standards, are presented in Table 1.

# Table 1Program Student Learning Outcomes and Relevant Standards

SLOs	Outcome 1: Research/apply knowledge of multicultural, ethical, and legal issues pertaining to using educational technologies and networks within the global community.	Outcome 2: Synthesize leadership principles within the practice of educational technology planning, coordination and professional development.	Outcome 3: Apply instructional design principles to develop and evaluate electronic materials for learning.	Outcome 4: Integrate theoretical perspectives to review, interpret, and/or conduct research in educational technology.	Outcome 5: Demonstrate effective written, electronic, and oral communications that reflect crucial thinking.
Signature Assignment(s)	Final project	Final project	Web design project; Multimedia project	Final project	Project
National Standards	Educational technology leaders understand the social, ethical, legal, and human issues surrounding the use of technology in PK- 12 schools and develop programs facilitating application of that understanding in practice throughout their district/region/st ate.	Candidates demonstrate the knowledge, skills, and dispositions to use processes and resources for learning by applying principles and theories of media utilization, diffusion, implementation, and policy- making.	Candidates demonstrate the knowledge, skills, and dispositions to design conditions for learning by applying principles of instructional systems design, message design, instructional strategies, and learner characteristics. Candidates demonstrate the knowledge, skills, and dispositions to develop instructional materials and experiences using print, audiovisual, computer-based, and integrated technologies.	Candidates demonstrate knowledge, skills, and dispositions to evaluate the adequacy of instruction and learning by applying principles of problem analysis, criterion- referenced measurement, formative and summative evaluation, and long-range planning.	Use technology to communicate and collaborate with peers, parents, and the larger community to nurture student learning. Candidates: 1. Model the use of telecommunications tools and resources for information sharing, remote information access, and multimedia/hypermedia publishing in order to nurture student learning. 2. Communicate with colleagues and discuss current research to support instruction, using applications including electronic mail, online conferencing, and Web browsers. 3. Participate in online collaborative curricular projects and team activities to build bodies of knowledge around specific topics. 4. Design, develop, and maintain Web pages and sites that support communication between the school and community.
State Standards	n/a	n/a	n/a	n/a	n/a
Conceptual Framework	Values Diversity, Prepares Leaders	School Improvement; Service and Collaboration	Promotes Growth	Promotes Growth; Research and Evaluation	Promotes Growth
NCATE Elements	Knowledge and Skills – Other; Student Learning – Other	Knowledge and Skills – Other	Student Learning – Other	Knowledge and Skills – Other	Professional Dispositions

# Table 2 Program Specific Candidate Information, 2007-2008 (snapshot taken F08)

		<b>Transition Point 1</b>		
	Admission to Program			
	Applied	Accepted	Matriculated	
	#	#	#	
TOTAL	26	22	16	

 Table 3

 Program Specific Candidate Information, 2007-2008 (snapshot taken F08)

	<b>Transition Point 2</b>
	Advancement to Culminating Experience
	#
Thesis (698) <sup>1</sup>	1
Comps <sup>2</sup>	2
Project (699) <sup>3</sup>	5

## Table 4

#### Program Specific Candidate Information, 2007-2008 (snapshot taken F08)

	Transition Point 3	
	Exit	
	#	
Degree	5	

<sup>&</sup>lt;sup>1</sup> This is data on students who were enrolled in thesis work during Fall 2007 and Spring 2008. This figure may include students who actually "crossed into" this transition point prior to Fall 2007 and were still making progress on their theses at this time.

<sup>&</sup>lt;sup>2</sup> This is data on the number of students who *applied* to take the comprehensive examination in Fall 2007, Spring 2008, or Summer 2008. The data include students who may not have taken or passed the examination(s).

<sup>&</sup>lt;sup>3</sup> This is data on students who were conducting culminating projects during Fall 2007 and Spring 2008. This figure may include students who actually "crossed into" this transition point prior to Fall 2007 and were still making progress on their theses at this time.

## Table 5 Faculty Profile 2007-08

Status	Number
Full-time TT/Lect.	4
Part-time Lecturer	3
Total:	7

2. How many of the total full- and part-time faculty in the program reviewed and discussed the assessment findings described in this document? Please attach minutes and/or completed worksheets/artifacts to document this meeting.

The data meeting took place from 10:30 am to 12:30 pm on March 20, 2009. The College Assessment Coordinator, three full-time and one part-time program faculty members participated in the discussion. Meeting minutes are attached at the end of this document.

## Data

- 3. Question 3 is in two parts focused on *primary* data sources related to: student learning and program effectiveness/student experience:
  - <u>Candidate Performance Data</u>: Provide *direct* evidence for the student learning outcomes assessed this year and describe how they were assessed (the tools, assignments, etc. used). Describe the process used for collection and analysis. Present descriptive statistics such as the range, median, mean, percentage passing as appropriate for each outcome.
  - <u>Program Effectiveness Data</u>: What data were collected to determine program effectiveness and how (e.g., post-program surveys, employer feedback, focus groups, retention data)? This may be indirect evidence of student learning, satisfaction data, or other indicators of program effectiveness. Describe the process used for collection and analysis. Present descriptive statistics such as the range, median, mean, or summarized qualitative data, for each outcome.

#### a. Candidate Performance

The program faculty reviewed data on the following three SLOs during this assessment cycle:

SLO 1: Candidates research/ apply knowledge of multicultural, ethical, and legal issues pertaining to using educational technology in a global community.

SLO 3: Candidates apply instructional design principles to develop and evaluate electronic materials for learning.

SLO 5: Candidates demonstrate effective written, electronic, and oral communications that reflect crucial thinking.

Each of the SLOs was evaluated in a required course: ETEC 525 (SLO 1), 570 (SLO 3), and 523 (SLO 5). The faculty members who taught these classes assigned a signature assignment to all students and

scored the assignment according to a rubric developed by the program faculty. The following discussion presents descriptions of the three assignments and the data relevant to each of the assignments.

## Signature assignment used in ETEC 525 that addresses SLO 1 Assignment Description:

This signature assignment is part of the course ETEC 525 Social and Cultural Implications of Educational Technology. Students in this course have career interests in a variety of areas, but a majority of them are practicing K-12 teachers. There are two options for the assignment. One option is to research and write a paper (12-15 pages) related to a topic pertaining to the social and cultural implications of technology. For example, topics of previous papers have included online social networks and teens, gender and videogames, cell phones and safety in public schools, and digital equity in Vietnam.

In Fall, 2007, a new second option, targeted specifically for teachers, was created that places greater emphasis on application. This option is to implement a global learning project involving a curricular collaboration between the teacher's classroom and one in another country. Candidates pursuing this option identify an area in the curriculum they teach that would benefit from such a collaboration. They then identify an international partner through one of several organizations that specialize in this, and implement a curricular project spanning at least eight weeks. They engage in weekly online discussions regarding this process and relate it to themes in course readings (including issues of equity, bias, and gender). They also write a short paper (4-5 pages) at the end of the process. Previous projects have included collaborations with classrooms in China, Japan, Bosnia, and Nigeria.

For the research paper option, assignments are evaluated on criteria including the extent of the research, the quality of the argumentation, mechanics, and APA style. For the Global Learning Network option, assignments are evaluated on criteria including the scope of the project, the analysis of the project with respect to course themes, the delineation of refinements that would be planned if the project were to be repeated, and mechanics.

**Data Collection Process:** The signature assignment was given to students in ETEC 525 in Fall 2007 and Fall 2008. Data from the evaluation of these assignments are presented in graphical form in the following two sections. The first section (part I) provides overall data for Fall 2007 and Fall 2008. The second section (part II) presents more detailed information, which is specific to Fall 2008. Note that in Fall 2007, only data for overall course grades for ETEC 525 were collected. However, starting in Fall 2008, a process to collect more detailed information was established.

#### Part I. Overall SLO Data



Figure 1-1: Course Grades in Lieu of SLO Scores (Fall 2007)







Figure 1-3: Comparison of Mean SLO Scores for Research Paper and Global Learning Project (Fall 2008)



Part II. Criterion Data (Fall, 2008)

Figure 1-4: Research Paper: Mean Ratings of Criteria Scores



Figure 1-5: Research Paper: Criteria Scores Detail



Figure 1-6: Global Learning Project: Mean Ratings of Criteria Scores



Figure 1-7: Global Learning Project: Criteria Scores Detail

## Signature assignment used in ETEC 570 that addresses SLO 3

**Assignment Description:** For this assignment candidates first create, based on visual principles, a professional-looking presentation that illustrates their plan for the design and development of an interactive lesson or a tutorial. After their plan is approved, they then start working on the design and development. Their final product should include text, graphics (e.g., clip art), visuals (e.g.,

photos), and sound. These multimedia components should serve to enhance the content, not interfere with the messages to be communicated.

**Data Collection Process:** The signature assignment was given to students in Fall 2007 and Fall 2008. In 2007 only data for the course grades were collected, whereas in 2008 the grades for the signature assignment were collected as well. Starting in Fall 2008, the quality of the assignment was evaluated based on a rubric with 11 criteria measured at four levels of quality. The assignment grade was calculated based on 4\*11=44 points. The raw score was later converted to a 1-30 point scale to match the grading criteria in the course syllabus.



The following figures present the data collected from Fall 2007 and Fall 2008.

Figure 2-1: Course Grades in Lieu of SLO Scores (Fall 2007)



Figure 2-2: Overall SLO Scores (Fall, 2008)

Signature assignment used in ETEC 523 that addresses SLO 5

**Assignment Description:** The assignment consisted of designated teams, teaching the rest of the class a 1 ½ - 2 hour professional workshop on how to use a certain software and/or hardware while teaching a content area. This staff development workshop was designed for other teachers/ professionals with emphasis on how technology can be integrated into the learning environment. Materials/handouts were to be posted in the Discussion Board in Beachboard. Handouts, electronically posted in Beachboard were to be made available for all students. The end result was to reflect a completed workshop package that any student could pick up and use.

**Data Collection Process:** The signature assignment was given to students in Fall 2007 and Fall 2008. In 2007 only data for the course grades were collected, whereas in 2008 the grades for the signature assignment were collected as well. Each group's workshop was evaluated by every student in the class as well as the instructor by a rubric/ standard evaluation sheet which incorporated comments on the presentation as well as the content of the workshop presented.



The following figures present the date from the evaluation of these assignments in graphical form.





Figure 3-2: Overall SLO Scores (Fall 2008)

## Comparison of students' performance on the SLOs

The following figures present the data regarding students' performance in the three courses that address the SLOs.



Figure 4-1: Comparison of Course Grades in Lieu of SLO Scores (Fall 2007)



Figure 4-2: Comparison of Overall SLO Scores (Fall 2008)

## **b.** Program Effectiveness

Data from informal exit interviews of students (conducted by faculty) were gathered. Findings included suggestions on course offerings and delivery formats, as well as ways to improve communication with current and former students.

4. <u>Complementary Data</u>: You may summarize *additional* information about candidate performance, the student experience or program effectiveness used to inform programmatic decision making. This may include quantitative and qualitative data related to things such as student perceptions, community views of the program, or general faculty observations. If you elect not to respond to this prompt, please write "N/A."

In ETEC 570, addressing SLO 3, students were asked to present their signature assignment in class. Meanwhile, the other students in the class were required to use the same rubric that the instructor used to evaluate the assignment. The results of students' peer evaluation had a relatively high correlation with the instructor's ratings.

# **Analysis and Actions**

5. What do the data for each outcome say regarding: a) candidate performance and, b) program effectiveness? Please note particular areas of strength and particular areas in need of improvement.

The data from the course grades (Fall, 2007) and from the signature assignments (Fall, 2008) inform us about the candidates' attainment of the three SLOs under review. In general, most candidates did well on the three SLOs, though there were some candidates who were struggling. In Fall, 2007, about 20% of the candidates did not meet expectations for SLO 1 and about 10% did not meet expectations for SLO 5. In Fall, 2008, about 15% did not meet expectations for SLO 1 and about 8% did not meet expectations for SLO 3. The following discussion presents detailed analysis of the data relevant to the three SLOs.

## Analysis of the data for SLO 1

As noted previously, in Fall, 2007, data for overall course grades for ETEC 525 were collected and are reported as a proxy for data specifically concerning the signature assignment (Figure 1-1). In Fall, 2008, data specific to the signature assignment were collected (Figure 1-2).

On the order of 80% of candidates performed at a level of either "3" or "4" in Fall 2007 and Fall, 2008. (Figures 1-1 and 1-2).

Since the Fall 2007 data are based on overall course grades, it cannot directly be compared to the Fall 2008 signature assignment data. However, assuming the Fall 2007 data set is a rough proxy, the candidate performance may have improved in Fall 2008. It appears a greater proportion of students were assessed as performing at a level of "4" that year.

Figure 1-3 shows mean scores for SLO 1.

The mean score on this SLO was 3.3. The mean was higher for the research paper option (3.5) than the global learning project option (2.7).

This collection of additional data pertaining to criteria scores, starting in Fall 2008, permitted a more fine-grained evaluation of student performance. Figure 1-4 concerns the research paper option of the signature assignment, and gives the mean ratings for the criteria scores.

## Research Paper Option

- Mean scores of the criteria for the research paper assignment were all "3" or higher.
- Figure 1-5 provides a more detailed view of the individual criteria scores.
- The most highly rated criterion concerned Research: 88% of candidates obtained a rating of "4."
- On the criteria of Research, 94% of candidates received a score of "3" or "4." Likewise, on the criterion of Argumentation, 94% of candidates received a score of "3" or "4." However, the Argumentation category had comparatively fewer ratings of "4".
- One the criterion of APA Style, 82% of students had a rating of "3" or "4." Similarly, on the criterion of Mechanics, 81% of candidates had a rating of "3," or "4." However, ratings for APA Style were higher. The plurality of students was rated "4" for APA style (43%), but the plurality of students was rated "3" for Mechanics (50%).

## **Global Learning Network Option**

Figures 1-6 and 1-7 present data on the criteria for the global learning network assignment.

- A plurality of students (43%) received a rating of "4" on the criteria of Scope, Analysis, and Recommendations.
- A majority of students (71%) received a rating of "4" on the criterion of Mechanics.
- Interestingly, the criterion of Mechanics was rated much more highly on the Global Learning Network assignment then the Research Paper assignment. A possible explanation is that the research paper option involves a much longer and more elaborate written component that is more demanding in terms of Mechanics.
- (weakness) 29% of candidates did not meet the objective regarding recommended changes to how they would implement the project in the future. The typical cause of this was skipping this part of the assignment.

## Analysis of the data for SLO 3

The results showed that in 2007, 10% of the candidates in ETEC 570 received a grade "A" and in 2008 about 40% of the candidates received a grade "A." This means that even though the majority of the candidates met the SLO, at least 60% of the candidates did not reach the highest level of

expectation. After reviewing the results and candidates' sample work at the data meeting, the program faculty and the college assessment coordinator suggested the following factors that might have contributed to the results:

- it is possible that some students did not acquire basic technology skills in the prerequisite courses. Regarding the fact that this course is usually the last course that students take, it is expected that they come to this course with basic knowledge and skills about multimedia.
- It is possible that these students had the required knowledge and skills. However, the course/ the instruction did not help them meet the SLO.
- It is also possible that the expectations were not clear or they were simply too high for the candidates.

#### Analysis of the data for SLO 5

At least 90% of students performed at a level of "3" or "4" for Fall, 2008 for this signature assignment as seen in the table above (Figure 3-1). This assignment was not tracked in the previous semester. It appears that a majority of the students were successful in performing at a "4" level in 2007.

6. How do these findings compare to past assessment findings regarding: a) candidate performance and, b) program effectiveness?

The findings from the overall course grades (Fall 2007) were similar to those from past assessments. In Fall 2008, the program faculty started to collect data from signature assignments, which will be used as baseline data for future comparison.

7. What steps, if any, will be taken with regard to curriculum, programs, practices, assessment processes, etc. based on these findings in Questions 5 and 6? Please link proposed changes to data discussed in Q5 and prioritize the action items.

#### Steps to be taken for SLO 1

The research paper option has been part of the course since its inception in Spring 2004. To support students' overall performance, several processes have already been implemented for the research paper option: (1) students are required to prepare a proposal for the paper for feedback from the instructor, (2) students engage in a peer review activity to critique draft papers, and (3) the instructor provides feedback on draft papers. The instructor's informal view is that these steps have been beneficial. To further support progress in the area of Argumentation, the instructor plans to require students to submit an outline for feedback. The criteria of Argumentation, APA style, and Mechanics merit further discussion program wide.

On the other hand, the global learning network project has only been used in the course two times, in Fall 2007 and Fall 2008. Currently, comparatively fewer supports have been built into the course to support students' progress on the Global Learning Network option. This is partly because the assignment is new to the course, and also because it is novel. The instructor will be working to develop further teaching methods to support students in this area, for example, by putting current students undertaking this option in communication with previous students.

#### Steps to be taken for SLO 3

- The instructor will have a meeting with the other faculty to make sure that the required prerequisite skills are covered in courses earlier in the sequence.
- The instructor will add mini projects in order to make sure that the candidates have acquired the required new skills during that course.
- The instructor will make sure that the expectations, grading criteria, and the rubric are clear to the candidates.

#### Steps to be taken for SLO 5

The instructor will select another Signature Assignment for ETEC 523. This assignment was based on a group project. It was evaluated as a group project. It was decided at a program meeting that the Evaluation Portfolio assignment would be better suited as a Signature Assignment, where each student would be evaluated individually.

For SLO 1				
Priority	Action or Proposed Changes To Be Made	By Whom?	By When?	
1	For both options, create collection of examples of signature assignments to give students a clearer picture of expectations for this assignment.	S. Adams	Fall, 2009	
2	In the Global Learning Network option, modify the assignment sheet to give increased emphasis to the need for planned refinements to the project.	S. Adams	Fall, 2009	
3	In the Research Paper option, modify the assignment to require the student to submit an outline for feedback from the instructor.	S. Adams	Fall, 2009	

#### Action Items

4	Develop further methods for supporting students' progress in the global learning	S. Adams	Fall, 2009
	project option		
5	Further discuss programmatic approaches regarding argumentation, mechanics, and APA style	All program faculty	Fall, 2009
For SLO	3		
1	Discuss possible gaps or overlaps among all required courses used in the program	All program faculty	By the end of May, 2009
2	Add mini projects to the course requirements for next year	A. Rezaei	Fall, 2009
3	Affirm that students understand the criteria and the rubric for the signature assignment	A. Rezaei	Fall, 2009
For SLO	5		
1	Use the Evaluation Portfolio as the signature assignment for ETEC 523 that addresses SLO 5	F. Vasilomanolakis	Fall, 2009

#### Appendix A

#### Educational Technology Graduate Program

#### Data Analysis Meeting

#### March 20, 2009

Participants: Steve Adams, Teresa Chen, Don Haviland, Ali Rezaei, Francine Vasilomanolakis

#### Minutes

Discussion of SLO Means see SLOs comparison chart. Expectations of courses, everyone on the same page. How do we know everyone is on the same page? Rubrics are ideal for expectations; scores give you information on how students are performing. All said that students who take our courses might not have all the experience. Steve said design and development are not their thing. What kind of students are in the program? Even if students are not proficient, they should have an idea of how to design and develop. Ali mentioned that some students are given the idea...not the entire program.

<u>Issues:</u> In the design and development area, students should have general design knowledge that goes beyond graduation. Students should be familiar with the tool. Must be able to do a design, not just talk about it. Students can have alternate programs to work within.

<u>Question of concept of design and doing the design</u>: Is this the right signature assignment for this concept? ETEC 551 and 557 are in this SLO. Students improved in SLO 3 in spring semester. Course grades were given in the fall 08 grades. For the years 07-08 we are looking at grades and for 08 we are looking at rubric scores.

Signature grade should be close to final grade. Don was acknowledged by Ali for his efforts.

ETEC 570 – SLO 3 – Exemplar – Ali Rezaei – Fall 08 – showing a students work at <u>www.ricayoung.com</u> Example of 4 work. Quality of work is outstanding, included tutorials, graphics, screen captures. This work was an A. Next work, a 3 or B work: go to <u>www.youtube.com</u> and search for educational technology CSULB. Did interview with students...created a video. They received a B...they had no interview protocol. Ali's rubric is based in principle so it can give students latitude to "create" work. Next exemplar is a 2 or C work...www.freewebs.com/obednartey/mathprojects.htm. What is lacking...just a list of links, not any examples...screen design was good but there was no interactivity part. There are problems with navigation. No navigation bar...such as 6 out of 7...violated a few design principles. Next exemplar for D work: No one can run the program. Ali can because Ali knows how to get it work. The students' program did not work.

Ali forces students to stay in class and follow him on certain instructions. Gave instructions, and they go home and try it out instead of staying in the lab. Next semester he is giving students a choice...they can

stay if they need the instruction and leave if they don't. The student can decide to stay or not. What about the problem student that does not stay and does not get it and goes back to the instructor. Ali is thinking of shortening the rubric...needs more data to see what works. Suggests that we compare courses and look at overlap and what is missing. Look at ETEC 444, 523 for course content, especially ETEC 444, 523 and 570 should be looked at to examine what is taught in each of these courses. Suggestion: Don't answer emails at all hours of the time....it makes it too easy for the students.

Concerns: Important to know what students have already learned in previous courses.

SLO 1 ETEC 525 – Steve Adams – Overall most students are getting 4's and 3's. This assignment can show how students research a topic. Students must tie it together. APA style and grammar must be evident. Student exemplar of 4 grammar and APA style is good. Another exemplar, thorough on Journey of IBM, takes readings from various places and discusses the topic with research in mind. Exemplar of 3 – Paper on social networking sites, has research, more linear, there is research, some grammar problems, not polished, and does include references, not APA format. Exemplar of 2 – Paper on equity for Latinos...not much technology included in paper. Reference list was not up to expectations for assignment. Another 2 paper...it is fragmented, pieces are interesting but do not fit together. The writing is not where it should be...meets some expectations.

Steve suggested having example of papers for students. Have students figure out what a 4, 3, and 2. Feedback is given by peers and instructor. Links were given for APA style examples. Ali asked if they have minimum requirement. Part of the assignment involved collaboration with other countries. Option this semester, students could make a video. This semester, small group did the video.

Suggestion: APA style could be taught somewhere else in college. Post to Google account, student paper, just for ETEC faculty. Students choose 60% to do the paper, 40% to do the global learning project. Meeting the first two weeks in a row rather than every other week in the beginning of the semester helps the students tremendously in this hybrid course. Should show paper examples to students at the time the assignment is given (names removed of former students). Graded discussions...too much work, about various topics technology related.

Rubric for ETEC 525...recommendations: Split out the analysis of the topic

Action item for course....showing student's exemplars...showing them a 4.

Meeting ended 12:30PM