

# **Texas A&M International University**

## **Annual Institutional Effectiveness Review (AIER)**

**Date Submitted** February 4, 2007

**Assessment Period Covered (2006)**

**Academic Program/AES Unit** Bachelor of Science in Interdisciplinary Studies with a major in science with Grades 4th - 8th Certification

**Person(s) Preparing Review** Dr. Cordelia Nava and Dr. Sushma Krishnamurthy

**Provide summary of the last cycle's use of results and changes implemented**

College of Education Report:

Students' performance data were shared with program faculty who agreed that it was important to refine their instructional efforts with respect to Domain I. Additionally, closer inspection of the Spring 2005 and Fall 2005 TExES data revealed that greater attention needed to be given to Domain III of the TExES, since students' average performance on competency #10 (Assessment) did not consistently exceed 70% across two administrations of this exam. Faculty agreed to develop a plan to systematically incorporate these competencies into their courses and will begin implementing the revised courses in the Fall 2006 semester.

Department of Biology & Chemistry Report

Embedded subject specific critical thinking questions in examinations were used in the assessment. The overall results narrowly missed our benchmark of 70%. Results from one semester of data are insufficient to assess student learning. This new method of assessment was implemented a year ago.

Section I: Planning and Implementation
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### **Institutional Mission**

Texas A&M International University, a Member of The Texas A&M University System, prepares students for leadership roles in their chosen profession in an increasingly complex, culturally diverse state, national, and global society ... Through instruction, faculty and student research, and public service, Texas A&M International University embodies a strategic point of delivery for well-defined programs and services that improve the quality of life for citizens of the border region, the State of Texas, and national and international communities.

### **Academic Program or Administrative/Educational Support Unit Mission**

The mission of the College of Education at Texas A&M International University is to provide a comprehensive and coherent professional development system for educators linking all aspects of the educational profession. Through educational experiences provided by the system,

educators will be prepared to provide learner-centered instructional experiences that promote excellence and equity for all students in the field.

**Identify outcomes and the relationship to Strategic Plan**

**Outcome 1**

**Is this outcome related to writing (QEP)?**

Preservice teachers in the educator preparation program will demonstrate an understanding of instructional design and assessment to promote student learning.

**Identify Strategic Plan Goal related to Outcome 1**

Goal 1 Academics

**Identify Strategic Plan Objective related to Outcome 1**

1.7 Establish and pursue student learning outcomes appropriate for each program with systematic assessment and use of results for continuous quality improvement.

**Identify methods of assessment to be used**

Texas Examination of Educator Standards (TExES).

**Indicate when assessment will take place**

Annual

**Criteria/Benchmark**

The average score of students in the educator preparation program will be 70% or a minimum of 240 on Domain III (Implementing Effective, Responsive, Instruction and Assessment) of the Pedagogy and Professional Responsibilities (PPR) Texas Examination of Educator Standards (TExES).

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**Outcome 2**

**Is this outcome related to writing (QEP)?**

Student interns in the educator preparation program will demonstrate the skills related to implementing effective, responsive instruction.

**Identify Strategic Plan Goal related to Outcome 2**

Goal 1 Academics

**Identify Strategic Plan Objective related to Outcome 2**

1.7 Establish and pursue student learning outcomes appropriate for each program with systematic assessment and use of results for continuous quality improvement

**Identify methods of assessment to be used**

Texas Examination of Educator Standards (TExES).

**Indicate when assessment will take place**

Annual

**Criteria/Benchmark**

The average score of students in the educator preparation program will be 70% on Competency 007 (The teacher understands and applies principles and strategies for communicating effectively in varied teaching and learning contexts) from Domain III of the Pedagogy and Professional Responsibilities (PPR) Texas Examination of Educator Standards (TExES).

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**Outcome 3**

**Is this outcome related to writing (QEP)?**

Student interns in the educator preparation program will demonstrate the skills related to implementing effective authentic assessment.

**Identify Strategic Plan Goal related to Outcome 3**

Goal 1 Academics

**Identify Strategic Plan Objective related to Outcome 3**

1.7 Establish and pursue student learning outcomes appropriate for each program with systematic assessment and use of results for continuous quality improvement

**Identify methods of assessment to be used**

Texas Examination on Educator Standards (TExES).

**Indicate when assessment will take place**

Annual

**Criteria/Benchmark**

The average score of students in the educator preparation program will be 70% on Competency 010 (The teacher monitors student performance and achievement; provides students with timely, high-quality feedback; and responds flexibly to promote learning for all students) from Domain III of the Pedagogy and Professional Responsibilities (PPR) Texas Examination of Educator Standards (TExES).

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**Outcome 4**

**Is this outcome related to writing (QEP)?**

Students will apply critical thinking skills to solve problems in biology.

**Identify Strategic Plan Goal related to Outcome 4**

Goal 1 Academics

**Identify Strategic Plan Objective related to Outcome 4**

1.7 Establish and pursue student learning outcomes appropriate for each program with systematic assessment and use of results for continuous quality improvement

**Identify methods of assessment to be used**

Embedded questions in examinations in required (core) upper division courses (Genetics - BIOL 3413 and Ecology - BIOL 3410). The questions will be agreed upon by biology faculty in each of the fields listed

**Indicate when assessment will take place**

Annual

**Criteria/Benchmark**

Seventy percent of the biology senior students will have applied critical thinking skills to solve problems in biology (70% of the embedded examination questions answered correctly).

## Section II: Analysis of Results

### When (term/date) was assessment conducted?

**Outcome 1**  
Spring 2006

**Outcome 2**  
Spring 2006

**Outcome 3**  
Spring 2006

**Outcome 4**  
In both spring and fall 2006 class and final examinations.

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### What were the results attained (raw data)?

**Outcome 1**  
On average, the students who took the PPR Examination obtained 77.9% of the items correct on Domain III. An analysis of the students' performance on the four competencies comprising Domain III indicated that their two strongest areas were Competency #7 (Communication) with 83% accuracy and Competency #9 (Technology) with 83% accuracy. On Competency #8 (Instructional Practice), students demonstrated 71% accuracy and 61% accuracy on Competency #10: (Assessment).

**Outcome 2**  
On average, the students who took the PPR Examination obtained 61% of the items correct on Competency 010.

**Outcome 3**  
On average, the students who took the PPR Examination obtained 71% of the items correct on Competency 008.

**Outcome 4**  
CRITICAL THINKING SKILLS  
BIOLOGY SCORES

SPRING 2006  
Class 1  
CLASS SIZE: 40

	Correct	Incorrect	
Question 1	27	13	67.5%
Question 2	35	5	87.5%
Question 3	30	10	75%
Question 4	32	8	80%

Question 5	36	4	90%
Total _____	160	40	80%

Overall correct answers 160 (80%)  
 Incorrect Answers 40 (20%)

FALL 2006  
 Class 1  
 Class Size: 29

	Correct	Incorrect
Q14	29	2
Q15	30	1
Q16	18	13
Q17	28	3
Q26	18	13
Q28	21	10
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	144	42

Overall Correct 144 (77%)  
 Overall Incorrect 42 (23%)

Class 2:

Question#	1	2	24	33	45
a	5	4	2	1	1
b	3	1	12	4	4
c	1	5	2	2	4
d	3	8	3	0	4
e	7	1	0	12	6
Correct%	15.8	42.1	63.2	63.2	21.1

Overall Correct 41.08%

The average score for critical thinking questions for the year 2006 is 66%. This does not meet our benchmark of 70%.

**Who (specify names) conducted analysis of data?**

**Outcome 1**

Dr. Ronald Anderson

**Outcome 2**

Dr. Ronald Anderson

### Outcome 3

Dr. Ronald Anderson

### Outcome 4

Dr. Neal McReynolds, Dr. David Beck, Dr. Mario Garcia Rios and Dr. Tom Vaughan were responsible for data collection and compilation. A statistical analysis of the data can be performed when there are multiple data sets for analysis. The sample size at this point is too small for a meaningful statistical analysis.

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**When were the results and analysis shared and with whom (department chair, supervisor, staff, external stakeholders)? Submit minutes with data analysis to [assessment@tamiu.edu](mailto:assessment@tamiu.edu) (Please use Minutes Template located on the [Project INTEGRATE web page.](#))**

College of Education:

The results and analysis were shared on January 11, 2007 with Dr. Diana Linn, Ms. Thelma Solis, and Ms. Cordelia Nava. Results were also shared with Dr. Jennifer Coronado, Interim Chair of the Department of Teacher Preparation.

Department of Biology & Chemistry:

Spring 2006 results: The results of the assessment of critical thinking skills was shared with the faculty at a department meeting on September 15, 2006. Hard copies of the results of the were distributed and also discussed at the meeting.

Fall 2006: The results of the critical thinking questions, were discussed at length at our first department meeting (for the year 2007) held on Feb 2, 2007. Hard copies of the results were distributed to the department faculty.

**NOTE: Submit all assessment documentation (i.e., surveys, rubrics, course exams with embedded questions, etc.) to the Office of Institutional Effectiveness and Planning.**

**Use of Results: Indicate whether criteria were met/not met and what changes, if any, have been identified based on the data collected?**

#### Outcome 1

Met    Not Met

**Provide narrative:** Enter text here

#### Outcome 2

Met    Not Met

**Provide narrative:** Enter text here

#### Outcome 3

Met    Not Met

**Provide narrative:** Enter text here

**Outcome 4**

Met    Not Met

**Provide narrative:** Our benchmark of 70 was not met. There will be no changes in this student learning outcome. The faculty concerned will continue improving and assessing student critical thinking skills through both lab and lecture.

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**How have these data-based changes improved your program/unit?**

As was discussed at the August 26, 2005 SACS Integrate Subcommittee for Bachelor of Science Degree in Early Childhood Education/Reading Specialization meeting, faculty will continue to focus effort on increasing scores on Domain III by implementing the following activities into the Block I classes (EDCI 3301)

At the beginning of the semester Mr. Randy Koch from the Writing Center will visit the Block I classes to present what services/materials are available from the Writing Center.

Students will be required to write a one-page paper on their educational philosophy, and include a minimum of one cited source (APA).

Students will be required to write two lesson plans and a reflection statement for each of a minimum of ½ page. Each lesson plan will state specific instructional strategies that will meet the needs of English Language Learners, special needs of students, and address the gifted and talented populations in the classroom.

Students will keep a journal that will include their observations/reflections from their field placement. Students will be required to make one entry per week.

Students will write a one to two page paper on the history/importance of parental involvement, and how they plan to involve parents in the classroom. Students must include at least three cited sources (APA).

Students will write a reflective paper based on an interview with their mentor teacher. This particular assignment will adhere to instructional best practices designed to meet the needs of diverse types of learners, e.g., English Language Learners, Special Education, and gifted and talented populations. Topic of the interview will be determined by Block I faculty, and remain consistent among all Block I classes.

Changes to the Block II (EDCI 3304/3305) syllabi include:

Students will write a one-page enhanced version of their educational philosophy and include a minimum of two cited sources (APA). Students will submit their philosophy from Block I with their Block II philosophy.



Students will keep a journal that will include their observations/reflections from their field placement. Students will be required to make one entry per week. Students must be able to focus on instructional practices and assessments that are being observed.

Students will write a letter to parents in English and Spanish. Topics to be determined by the Block II faculty.

Students will participate in role-plays involving administrator/teacher conferences and teacher/parent conferences.

Students will write a reflective paper based on an interview with a parent. Topic of the interview to be determined by Block II faculty.

Students will write a six-page paper in regards to assessment. The students will collect three forms of assessment used by their mentor, provide a description of the different types of assessment, critique the three forms of assessment, create their own assessment instrument, implement their assessment instrument, and reflect on how well the instrument assessed the intended outcomes. Data will be used to help individualize instruction for diverse students in a class, address students with special needs, and determine ways to enhance instructional practices through the use of technology. The data will also be used as a reflective piece that will help student interns determine the validity and reliability of their instrument, the use of the instrument, and how to accelerate learning.

In addition, it was recommended that an additional faculty member be hired to assist in the delivery of the block pedagogy courses to alleviate the large class sizes in order to facilitate effective instruction and provide necessary feedback. For example, for the 2005 fall term, there were 5 sections of EDCI 3301, with 35 students as the average class size. There were 3 sections of EDCI 3304, with 36 students as the average class size. In order to offer 5 sections of Block I, it was necessary to hire 2 adjunct faculty members to deliver instruction. Hiring adjuncts for Block courses makes it extremely difficult for students to meet with faculty, since they do not hold office hours, and it does not allow for adjuncts to meet with other Block faculty to plan, since they are not on campus. The large class sizes make it very hard to provide the quality feedback that the students need. For example, in Block II the students are required to write 6 lesson plans. If a faculty member has a class of 36 students, that totals 216 lesson plans that a faculty member needs to read and provide detailed feedback to the students. Adjuncts that are hired will receive personal training from block faculty to ensure a smooth transition into teaching and thus effectively prepare students within their methods block classes.

Department of Biology & Chemistry:

Weakeness in critical thinking have been identified with the help of this student learning outcome.

Section III: Programmatic Review

**Are resources affected by the changes identified in Section II?**  Yes  No

**If so, specify the effect(s) using the chart below:**

Funding	Physical	Other
<input checked="" type="checkbox"/> New resources required	<input type="checkbox"/> New or reallocated space	<input checked="" type="checkbox"/> Primarily faculty/staff time
<input type="checkbox"/> Reallocation of current funds		<input type="checkbox"/> University rule/procedure change only
		<input type="checkbox"/> Other: Enter text here

**Provide a narrative description and justification for requested resources (include linkage to Strategic Plan)**

<b>Identify proposed outcomes for the next assessment cycle:</b>
Continuation of present outcome(s) – (Indicate reason for continuation): College of Education: Sufficient data has not been collected in regards to Domain III since a change in testing company that prepares the TExES has occurred; therefore we will continue to analyze the data and the impact that course requirements may have on the TExES scores throughout the 2006-2007 year.
Department of Biology & Chemistry: More data is required for a meaningful interpretation of the results. All the Student learning outcomes listed have been in existence for about 1 year. Small sample sizes are harder to analyze statistically.
New Outcome(s) – (List outcomes below): Enter text here
Modification of present outcome(s) – (Indicate reason for modification): Enter text here

**\*\*\*\* This section to be completed by dean/director/vice-president \*\*\*\***

**Are resources requested a priority for the academic program/AES unit?**

Yes  No

**Comments:**

Enter text here

**If funding, physical or other resources were requested, what is the impact of the budget decisions on the academic program/AES unit?**

Enter text here