

**Barstow Community College**  
**Core Competency Assessment Summary Report**  
**– Critical Thinking and Questioning -**  
**2011-2012**

Barstow College conducted an assessment of the Critical Thinking and Questioning Core Competency using six different disciplines, all three divisions were represented

**ASSESSMENT PLAN** - The plan in 2011-2012 will cover the **Critical Thinking and Questioning** Core Competency and included 6 courses. At least one adjunct instructor was involved in the assessment. Courses from each division were represented:

Math/Nat. Science/PE:	BIOL 5 and PELC 1/PSYC 13
CTE:	CHLD/PSYC 4
Humanities/Social Science:	ENGL 1C, HIST 2A, and SPAN 1A

**CORE COMPETENCY ASSESSMENT TEAM**

**Courses and instructors in 2011-2012 Assessment**

- History 2A – Ramon Vasconcellos
- English 1C – Dr. Christie Firtha
- Child Development 4 – Nancy Nunes-Gill
- PELC 1/ PSYC 13 – Dr. Mike Karpel
- Biology 5 – Dr. Robert Stinson
- Spanish 1A – Ian Caldon (adjunct)

**Other Personnel**

- SLOAC Coordinator – Nancy Nunes-Gill
- Interim Dean of Instruction – Penny Shreve

**Preparing the Assessment:**

- SLO coordinator meet with faculty and reviewed assessment tools to use for the assessment
- The courses were selected based on certain criteria: semester taught appropriateness to Critical Thinking assessment, and relatively large pool of students.
- A 5 point rubric level was determined, but instructors create rubric areas based on specific discipline's expectations and assessment task. However, criteria were agreed upon.

**CONCLUSIONS**

Summarization of the findings are listed on following pages.

NOTE: BIOL 5 used a new universal assessment test only. While SPAN 1A used both methods and the results of that class are included in both areas.

**Results of 2011-2012 Core Competency Assessment – Critical Thinking and Questioning**

<b>Results of 2011-2012 Core Competency – Critical Thinking Total – 161 students –</b>						
	<b>SPAN 1A Writing</b> (5-sentence paragraph, not final exam)	<b>PELC 1 / PSYC 13 Writing</b> (Final Essay Exam)	<b>HIST 2A Verbal</b> (Final Presentation)	<b>English 1C Writing</b> (Final Essay Exam)	<b>CHLD 4 / PSYC 4 Writing</b> (Final Essay Exam)	<b>TOTAL 161 students assessed</b>
<b>Rubric</b>	<b>% of Students</b>	<b>% of Students</b>	<b>% of Students</b>	<b>% of Students</b>	<b>% of Students</b>	<b>% of Students</b>
<b>5</b>	32%	32%	22%	15%	60%	29%
<b>4</b>	35%	26%	33%	31%	25%	30%
<b>3</b>	6%	26%	28%	41%	10%	25%
<b>2</b>	13%	3%	6%	13%	5%	9%
<b>1</b>	13%	13%	11%	0%	0%	7%

**Writing:** CHLD 4, ENGL 1C, PELC 1, and SPAN 1A used a Writing Assessment

**Verbal:** HIST 2A used a Presentation Assessment

**Critical Thinking and Questioning Summary (Total of all five courses)**

- 1) above satisfactory level was 59% (4 and 5 on rubric)
- 2) satisfactory level was 25% (3 on rubric)
- 3) unsatisfactory was 16% (1 and 2 on rubric)

Critical Thinking and Questioning assessments - **writing** (SPAN 1A, PELC 1, ENGL 1C, CHLD 4)

- 1) above satisfactory level was 59% (4 and 5 on rubric)
- 2) satisfactory level was 25% (3 on rubric)
- 3) unsatisfactory was 15% (1 and 2 on rubric)

Critical Thinking and Questioning assessments - **verbal presentation** (HIST 2A)

- 1) above satisfactory level was 55% (4 and 5 on rubric)
- 2) satisfactory level was 28% (3 on rubric)
- 3) unsatisfactory was 17% (1 and 2 on rubric)

### 1. Analysis:

Four courses used direct writing for assessment. One course used verbal presentation. Percentages in reflecting critical thinking verbally and written were comparable.

	Writing	Verbally
Above Satisfactory	59%	55%
Satisfactory	25%	25%
Unsatisfactory	15%	17%

**Conclusion:** Students are equally proficient demonstrating critical thinking in writing and speaking.

### 2. Analysis:

The percentage of satisfactory (3s and 4s) were good, but concern that there were in relation so few 4-5s. The team asked why, this was specifically a question for the English faculty. As it was noted that the English course's 5 was almost ½ of the average students assessed at 5 in all the other courses.

**Conclusion:** The reliance on sequential skills (especially in English) impacted the success in skills based courses versus content based courses. Students were not retaining skills from one class or even one lesson to another. While content seemed to carry over more.

### 3. Analysis:

Classes that were more career connected had higher success rates. CHLD 4 / PSYC 4 85% = above satisfactory (4 and 5) compared to the other more general education classes with 56% above satisfactory.

	CHLD 4 / PSYC 4	Other non-CTE courses (General Education)	Difference
Superior understanding	60%	25%	+35%
Above Satisfactory	25%	31%	-6%
Satisfactory	10%	25%	-15%
Below average	5%	9%	-4%
Far below average	0%	9%	-9%

**3. Conclusion:** The team hypothesized that there were two factors:

- 1) CHLD 4 / PSYC 4 was a class directly correlated to most students chosen career path (either in child development or psychology) and therefore due to interest and seeing the class as relevant to a concrete goal were more motivated.
- 2) The assessment in CHLD 4 was perceived as related to student's experiences and starting knowledge base. The assignment was on Bullying which the team determined all people have knowledge and opinion on before the topic was presented in class. While other assessments, were often less directly relevant to pre-existing knowledge. Though it was determined that students with more life experiences or who have traveled more or who were taking other classes that related did better at connecting critical thinking ideas than students without those experiences.

## BIOL 5 and SPAN 1A

Universal Assessment Tool Assessed Student work for four universal elements to determine full acquisition and demonstration of all learning elements:

- CU = Conceptual Understanding
- PS = Process and Structure - Organization
- C = Communication
- A = Accuracy

**The BIOL 5 Final (with student products) were assessed as follows:**

Of the 22 student authentic assessments the instructor determined that students were highly proficient in demonstrating full acquisition of knowledge in the scientific method

Universal Assessment Indicator	Mean score (out of 5)	% of total demonstration
CU = Conceptual Understanding	4.9	98%
PS = Process and Structure - Organization	4.4	88%
C = Communication	4.2	84%
A = Accuracy	4.3	86%

### 1. Analysis:

Students scored exceptionally high in Conceptual understanding. All other areas were above satisfactory in the 80% range. The lowest area of successful demonstration was in communication.

**Conclusion:** Students clearly understood the concepts in the assessment. While acceptable, students' ability to effectively communication grasp of concepts and scientific process can be improved.

### 2. Analysis:

The numbers in all areas were high with 89% average. And a 98% in Conceptual Understanding. Critical Thinking was determined to be best determined by Conceptual Understanding and Process and Structure – Organization. Thus the critical thinking aspect average was 93%.

**Conclusion:** With a 98% Conceptual Understanding, and 94% average for critical thinking the team determined that either the assessment question used was too easy to determine successful critical thinking or the assessment tool was too general to be effective for assessing a core competency.

**SPAN 1A** – (submitted both universal assessment technique and the 5 point evaluative rubric)

**Universal Assessment Tool Summary for SPAN 1A:**

Thirty two percent of students scored exceptionally high in Conceptual understanding while thirty five percent of students scored above satisfactory in the 80% range. The lowest area of successful demonstration was in accuracy at six percent due to the fact that more scaffolding can be done to help improve student success in regards to this criteria.

**1. Analysis:**

Since the lowest area of successful demonstration was in accuracy due to the fact that more scaffolding can be done to help improve student success in regards to this criteria. Also that accuracy in a new language is skill based more than content based.

**Conclusion:** Students clearly understood the concepts and “content” in the assessment, but could definitely improve on the accuracy and language skills of the communication provided via better process and strategies.

**2. Analysis:**

The numbers in the area of Process and Strategies could also be improved along with Accuracy; however, students are successfully communicating and conceptualizing the activity.

## **CHANGES TO BE IMPLEMENTED TO IMPROVE ASSESSMENT PROCESS**

### **Based on the assessment results and analysis, the team recommended the following:**

Use the same 5 point form to gather data. Do not continue the Universal data tool for assessing core competencies at this time - until it has been reviewed and tested more.

Work with other faculty to continue to provide mini-workshops and other effective instruction to better develop the skills of the students in regards to the criteria for assessment.

Develop more in-class activities over the semester that scaffold and also guide students in regards to practicing these abilities.

## **CHANGES TO BE IMPLEMENTED ON THE CAMPUS/CLASSROOMS**

### **Based on the assessment results and analysis, the team recommended the following:**

Professional development activities to help instructors develop activities or techniques that assist students in relating new knowledge to pre-existing knowledge and experiences assistant in acquisition.

Develop storing pathways and degrees that utilize the general education courses as a more direct pathway to student's future.

Offer cohorts or learning communities connecting classes that focus on similar new knowledge to reinforce acquisition such as History 2A or 2B and English 1C.

Use of CALL (Computer Assisted Language Learning) and other online components with text to provide self-paced learning and continuous opportunity for learning outside of the class.

Partner with other faculty to strengthen the cohorts or learning communities connecting classes and students in terms of retention and success rates for transfer or degree completion. Also, partner with Student Services for further development of pathways for developmental areas of and better practices for student success, which will help to reinforce Process and Strategies and Accuracy as they are the areas of improvement in regards to this institutional assessment.

### **Included are the following exhibits:**

- Exhibit A – [Critical Thinking and Questioning Core Competency \(linked\)](#)
- Exhibit B – Critical Thinking Core Competencies mapped to selected courses (see addendum)
- Exhibit C – [Competency Assessment Reporting Sheets for participating courses \(linked\)](#)

**Barstow Community College**  
**Core Competency**  
**II. Critical Thinking and Questioning**

		BIOL 5	CHLD 4 / PSYC 4	ENGL 1C	HIST 2A	PELC 1 / PSYC 13	SPAN 1A
<b>A. Analyze</b>							
	Apply rules and principles to new situations.	M	D	D	N/A	M	D
	Discover rules and apply them to solve problems.	M	D	D	N/A	M	D
	Check, edit, and revise written work for correct information, appropriate emphasis, form, style, and grammar.	N/A	D	M	D	D	D
	Differentiate between facts, influences, assumptions, and conclusions.	N/A	D	M	D	D	N/A
<b>B. Compute</b>							
	Use basic numerical concepts, such as: whole numbers, percentages, estimates of math without a calculator.	D	N/A	NA	N/A	N/A	N/A
	Use tables, graphs, charts, and diagrams to explain concepts or ideas.	D	N/A	NA	N/A	N/A	N/A
	Use basic geometrical shapes, such as: lines, angles, shapes, and space.	N/A	N/A	NA	N/A	N/A	N/A
<b>C. Research</b>							
	Identify the need for information and data.	D	D	M	M	M	N/A
	Obtain data from various sources.	N/A	D	M	M	M	N/A
	Organize, process, and maintain records of the information collected.	N/A	D	M	M	M	N/A
	Analyze the information for relevance and accuracy.	D	D	M	M	M	N/A
	Synthesize, evaluate and communicate the results.	D	D	M	M	M	N/A
	Determine which technology resources will produce the desired results.	D	D	D	D	D	N/A
	Use current technology to acquire, organize, analyze, and communicate information.	D	D	D	D	D	N/A
<b>D. Solve Problems</b>							
	Recognize whether a problem exists.	M	M	D	D	M	I
	Identify components of the problem or issue.	M	M	D	D	M	I
	Create a plan of action to resolve the issue.	N/A	M	NA	N/A	M	I
	Monitor, evaluate, and revise when necessary.	N/A	M	NA	N/A	M	I

I = introduced

D = Developed & Practiced with feedback

M = demonstrated at the Mastery Level Appropriate for Graduation