

Assessing GE in the face of changing outcomes, calendar & curriculum:

Student perceptions of GE learning outcomes achievement

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The roadmap

- GE@CalStateLA
- Campus changes and impacts
- The GE survey
 - methodology
- Results
 - expectations met
 - surprises that generate questions
- Next steps
 - department responses to the survey results
 - Reporting of direct assessment ideas prompted by

History of GE assessment at Cal State LA

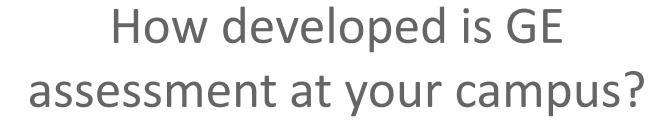


- 1990s preparation for WASC
 - Critical thinking test
- Early 2000
 - Evaluation of life sciences courses
- Late 2000s
 - Broad brush survey and development of rubric for upper division writing assignments

Challenges in GE instruction and assessment



- Faculty participation:
 - Many GE courses are taught by lecturer faculty employed for fractional loads across several campuses
 - Full time faculty typically have more commitment to the "meat/ tofu" of their discipline and don't consider GE 'serious' courses
- Distributed curriculum
 - The GE learning outcomes (GELOs) are addressed by programs spanning many disciplines
 - Difficult to gather evidence on a regular basis
 - Courses span many areas and sub-disciplines
 - Upper and lower division courses (800+ now on our campus)
- Most courses address several GE outcomes





- a. We don't assess GE
- b. We have collected evidence episodically
- c. We collect evidence regularly, but don't discuss it
- d. We collect evidence regularly, and discuss it but haven't used it to change the program
- e. We collect evidence regularly, and the discussions have led to program changes

Previous assessment GE survey of student perceptions of outcome achievement



- GE survey distributed to all enrolled in any lower division GE course (2010, Winter, Spring and Fall quarters)
- Response rates of 10-12%
- No demographic data collected
- The prompts (for each GE outcome):
 - The class I am describing in this survey helped me (achieve outcome): (5 (strongly agree) to 1(strongly disagree)

One term's results



Outcomes

	Fall 2010: % Agree and Strongly Agree with stateme nts	Helped me to organize and express ideas in written English	Helped me to organize and express ideas in oral English	Helped me to reason critically across a variety of disciplines	Helped me understan d and apply basic concepts in quant reasoning	Provided knowledg e&values for participati on in Am soc/gover nment	Helped me understan d distinct perspectiv es&achiev ements in natural and physical sciences	Helped me understan d distinct perspectiv es&achiev ements in social sciences	d distinct	Helped me to understan d and appreciat e diversity and to develop respect for others.	Helped me to develop a greater awarenes s of ethical and social concerns.	Provided opportuni ty to develop writing skills with significant writing assgn'mnt (5 - 19 pages)	Provided knowledg e & skills for lifelong understan ding and self- developm ent
S	A1 written comm.												
rea	A2 oral comm.												
σ	A3 critical thinking												
Course	A4 quant.												
no	Reasoning Am Inst												
Ŭ	B1 Biol Sci w/lab												
	B2 Phys. Sci w/ lab												
	B3 app. Nat.												
	sci. C: Arts & Humanities												
	D social sciences												
	[]												
	Legend	100- 85%	70-84%	55-69%	40-54%	25-39%	10-24%	% Strongly Agree + Agree		indicates content area directly addresses outcome			



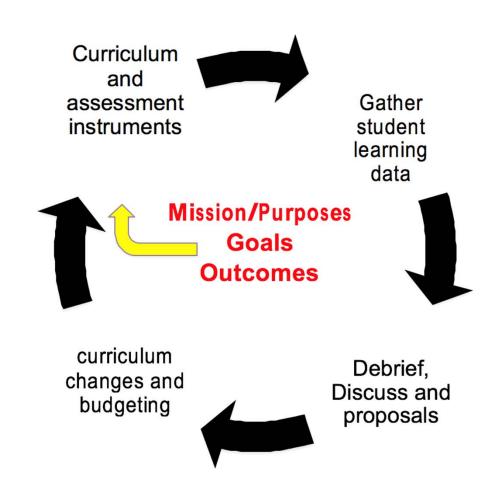
And in 2012 we started

- GE revision!!
- Working with recommendations from program review of GE and
- Some data

 Planning for campus transition from quarters to semesters also began, with Fall 2016 scheduled as the first semester









New GE Program: developed 2012-2015, implemented Fall 2016

- Many GE outcomes resembled those in the previous program, falling into the categories of our institutional learning outcomes (ILOs)
 - Knowledge: Mastery of Content and Processes of Inquiry
 - Proficiency: Intellectual Skills
 - Engagement: Local and Global Communities
 - Transformation: Integrative Learning
- Added requirements of
 - Civic learning (2 courses)
 - Refined the diversity requirement
 - Writing intensive courses (2 courses)
 - Required word count and revision cycle(s)



A new GE program was approved in 2015, effective Fall 2016

- 1. The new program was more outcome based
- 2. Several GE areas (American Gov't and Critical reasoning, for example) were no longer restricted to the discipline area previously assigned
 - How would this change perceived achievement in the GE outcome (and perhaps others)?
- 3. Added requirements
 - Civic learning (2 courses, one in LD GE)
 - Does the requirement make a significant difference?
 - Refinement of the diversity requirement language
 - What impact does that have on apparent achievement?

Assessing the New GE Program



- How do we know if our students are achieving these outcomes?
- Can assessment of student achievement of GE outcomes be integrated into program level evaluation via the programs that offer GE courses? (Program Review, Annual Assessment projects, etc.)
- How might faculty be motivated to collect meaningful data for direct assessment?

How do you collect GE assessment evidence at your campus?



- a) A separate process for each GE area obtaining data from each GE offereing program
- b) A process integrated with program review
- c) A process that collects data for the GE program review in a separate cycle.
- d) Other
- e) Ineffective or not extant

Student perceptions survey Development & Administration



- Online Survey Measure students' perception about their achievement of the general education learning outcomes (Survey Monkey)
- Modified an earlier version of the GE Survey
 - IR made suggestions on wording and question format
 - GE Subcommittee Reviewed and Finalized questions
- Instructions directed student to respond about a GE course she/he had taken
 in Fall term: 2015 Respondent's selection; 2016 Admin sampled selection
- Provided opportunity for respondent to submit answers for a 2nd GE course she/he had taken (optional) – Respondent's selection both years
- Leverage institutional data to shorten the survey (can omit demographic questions, class standing, major, etc.)
 - Confidential rather than anonymous
 - Unique link sent to each student (links survey data to institutional data)
 - Assists with the incentive drawing process



Data Collection & Incentives

ADMINISTRATION WINDOW (~2 weeks)

- Fall 2015 Launched 3rd week of Winter Quarter, after course add/drop period Wednesday, January 20 – Wednesday, February 3, 2016
- Fall 2016 Launched 2nd week of **Spring Semester**, coordinated w/other surveys Saturday, January 28 Monday, February 13, 2017

INCENTIVES

- FIVE \$50 Barnes & Noble Gift Cards
 - TWO Drawings After the first week (two gift cards) & at close of survey
 - Midnight deadline to submit the survey to be entered into drawings
 - Mail-in entry option (without completing the survey)

EMAILS

- 2015 Invitation & two reminders planned; Revised & sent more reminders (5) as we monitored responses
- 2016 Invitation & four (4) reminder emails
 - Responses spike after each reminder
 - Mid-Survey Drawing provides opportunity to announce 1st round winners with a reminder = BEST response spike after this email!
 - "Final" (2 days before end) AND a "Last Chance" (last day, midnight deadline)



Population & Sample

- Population: Students who had taken at least one lower-division GE course in Fall and received grade of D or better
- Sample: **2015** 36% of the population; **2016** 30% of the population

STUDE	NT LEVEL	N	Frosh	Soph	Junior	Senior
2015	Pop	9,503	58%	19%	12%	11%
2013	Sample	3,400 58%		19%	13%	10%
D		10.275	Γ00/	100/	120/	120/
2016	Pop	10,275	58%	18%	12%	12%
	Sample	3,085	57%	19%	12%	13%

RACE /		20	15		2016					
ETHNICITY	Pop N Pop % S		Samp N	Samp %	Pop N	Pop %	Samp N	Samp %		
NATIVE AMER	8	0.1%	5	0.1%	8	0.1%	1	0.0%		
ASIAN	1318	13.9%	484	14.2%	1395	13.6%	407	13.1%		
BLACK	350	3.7%	114	3.4%	391	3.8%	110	3.6%		
HISPANIC	6381	67.1%	2296	67.5%	7004	68.2%	2092	67.8%		
INTERNATIONAL	614	6.5%	217	6.4%	674	6.6%	216	7.0%		
TWO+ RACES	172	1.8%	63	1.9%	171	1.7%	64	2.1%		
UNKNOWN	232	2.4%	84	2.5%	219	2.1%	71	2.3%		
WHITE	428	4.5%	137	4.0%	413	4.0%	126	4.1%		
TOTAL	9503	100.0%	3400	100.0%	10275	100.1%	3087	100.0%		

Respondent Demographics

151

6

8

119

347

5

14

334

70%

45%

64%

74%

Grand Total

UNKNOWN

WHITE

Grand Total



Fall 2016								student level	
		F	M		to	tal		N	%
	n	% within Ethnicity	n	% within Ethnicity	% total n Ethnicty		freshman	300	55%
NATIVE AMER	0		0		0	0%	sophomore	115	21%
ASIAN	56	74%	20	26%	76	15%	junior	66	12%
BLACK	8	50%	8	50%	16	3%	senior	67	12%
HISPANIC	227	71%	91	29%	318	64%	total	498	100%
INTERNATIONAL	27	57%	20	43%	47	9%			
TWO+ RACES	9	75%	3	25%	12	2%			
UNKNOWN	7	70%	3	30%	10	2%			
WHITE	13	68%	6	32%	19	4%			

498

11

22

453

2%

5%

30%

55%

36%

26%

Fall 2015							,	student level	
	fe	female		male		tal		N	%
		% within		% within		% total			
	n	Ethnicity	n	Ethnicity	n	Ethnicty	freshman	264	58%
NATIVE AMER	0		1		1	0%	sophomore	91	20%
ASIAN	52	71%	21	29%	73	16%	junior	55	12%
BLACK	12	80%	3	20%	15	3%	senior	42	10%
HISPANIC	226	76%	72	24%	298	66%	total	452	100%
INTERNATIONAL	19	70%	8	30%	27	6%			
TWO+ RACES	6	100%	0	0%	6	1%			



Yields

		2015	2016
	Invitations sent	3400	3087
individuals	overall response rate	15% (13% after cleaning)	16% (before & after cleaning)
	responses (cleaned data)	453	498
	total courses submitted	571	579
courses	number of second courses submitted	118	80
	number of courses (cleaned)	545	548



Preliminary Results

- Review of mean scores: looking for patterns, changes
- Preliminary exploratory analysis
- Prompt ideas for further direct assessment methods
- Comparisons of:
 - GE Subject Areas with traditional GE outcomes and
 - GE Subject Areas with other GE Outcomes
- Looking for and asking:
 - What results are surprising? Not so surprising?
 - What do we expect from GE courses?
 - Are the students getting that?
- Specific Questions on design changes
 - American Government and History: courses offered by more disciplines
 - How would this change perceived achievement in the GE outcome (and perhaps others)?
 - Added requirements
 - Civic learning (2 courses, one in LD GE)
 - Does the requirement make a significant difference?
 - Refinement of the diversity requirement language
 - What impact does that have on apparent achievement



GE survey questions on GE outcomes

5 (strongly agree), 3 (neutral), 1 (strongly disagree)

The class I am describing in this survey:	Helped me organize and express ideas in written English
The class I am describing in this survey:	Helped me organize and express ideas in oral English
The class I am describing in this survey:	Helped me reason critically across a variety of disciplines
The class I am describing in this survey:	Helped me apply basic concepts in quantitative reasoning
The class I am describing in this survey:	Provided me with knowledge necessary for participation in American society and government
Please indication your level of agreement with how this	Natural Sciences
course has helped you understand the distinct perspectives (values and ways of acquiring new	Arts and Humanities
knowledge) and major achievements in:	Social Sciences
The class I am describing in this survey:	Provided me with knowledge and skills for lifelong understanding and self-development
The class I am describing in this survey:	Helped me develop my writing skills with useful feedback on one or more writing assignments

The overall averages for all categories was 3.81 in 2015 and 4.02 in 2016

Please indication your level of agreement with how this course has helped your understand the distinct perspectives (values and ways of acquiring new knowledge) and major achievements in:

English Oral English Across a variety of disciplines Across a variety of disciplines Critical Reasoning Across a variety of disciplines Across a variety of discip	ocial st	ifegrate L under- tanding
Oral Comm 4.35 4.44 4.09 3.86 3.88 3.26 3.65 Critical Reasoning 4.61 4.39 4.67 4.72 4.39 4.06 3.94 Quant and Math Reasoning 3.37 3.37 3.96 4.41 3.04 3.81 2.85 American & CA Gov't 3.62 3.44 3.68 3.42 4.06 3.26 3.58 BIOL Sciences 3.45 3.45 3.73 3.95 3.19 4.05 3.57 PHYS Sciences 3.59 3.53 3.63 4.00 3.19 4.59 3.24	uev	and self relopment
Critical Reasoning 4.61 4.39 4.67 4.72 4.39 4.06 3.94 Quant and Math Reasoning 3.37 3.37 3.96 4.41 3.04 3.81 2.85 American & CA Gov't 3.62 3.44 3.68 3.42 4.06 3.26 3.58 BIOL Sciences 3.45 3.45 3.73 3.95 3.19 4.05 3.57 PHYS Sciences 3.59 3.53 3.63 4.00 3.19 4.59 3.24	3.49	4.18
Quant and Math Reasoning 3.37 3.37 3.96 4.41 3.04 3.81 2.85 American & CA Gov't 3.62 3.44 3.68 3.42 4.06 3.26 3.58 BIOL Sciences 3.45 3.45 3.73 3.95 3.19 4.05 3.57 PHYS Sciences 3.59 3.53 3.63 4.00 3.19 4.59 3.24	3.59	4.33
Reasoning 3.37 3.37 3.96 4.41 3.04 3.81 2.85 American & CA Gov't 3.62 3.44 3.68 3.42 4.06 3.26 3.58 BIOL Sciences 3.45 3.45 3.73 3.95 3.19 4.05 3.57 PHYS Sciences 3.59 3.53 3.63 4.00 3.19 4.59 3.24	3.82	4.39
BIOL Sciences 3.45 3.45 3.73 3.95 3.19 4.05 3.57 PHYS Sciences 3.59 3.53 3.63 4.00 3.19 4.59 3.24	3.12	3.67
PHYS Sciences 3.59 3.53 3.63 4.00 3.19 4.59 3.24	3.86	3.80
	3.76	3.52
Applied Sciences 3.86 3.57 3.71 3.86 3.43 3.57 3.71	3.56	3.88
	3.43	4.00
Arts & Humanities (Literature) 4.06 4.06 3.94 3.50 3.40 2.88 4.13	3.19	3.88
Arts & Humanities (Arts) 3.26 3.05 3.21 3.26 2.95 2.53 4.05	2.79	3.42
Arts & Humanities (Philosophy) 3.58 3.42 3.92 3.58 3.42 2.92 3.75	3.00	3.92
Social Sciences 3.95 3.91 4.18 4.11 3.89 3.82 3.75	3.91	4.30
Social Sciences (D) 3.75 3.70 4.10 3.65 4.10 3.26 3.84	3.58	4.15
Life Long Learning 3.91 3.91 4.29 3.97 3.48 3.17 3.53	3.56	4.50
ENGL 102 (research written comm) 4.46 4.34 4.26 4.23 3.97 3.88 4.24	4.06	4.4



	All survey	participan								
		← (OUTCOME	s >			and perspe			
Course Area	written English	oral English	reason critically across disciplines	quantita-tive and math reasoning	American and CA government	Natural Sciences	Arts and Humanities	Social Sciences	lifelong under- standing and self-develop- ment	Develop writing skills with useful feedback
Written Comm	4.34	4.02	4.08	3.89	3.55	3.33	3.79	3.49	4.18	4.33
Oral Comm	4.35	4.44	4.09	3.86	3.88	3.26	3.65	3.59	4.33	4.33
Critical Reasoning	4.61	4.39	4.67	4.72	4.39	4.06	3.94	3.82	4.39	4.06
Quant and Math Reasoning	3.37	3.37	3.96	4.41	3.04	3.81	2.85	3.12	3.67	3.3
American & CA Gov't	3.62	3.44	3.68	3.42	4.06	3.26	3.58	3.86	3.8	3.76
BIOL Sciences		~	^^		2.40		^ = -			2.05
PHYS Sciences	3.59	3.53	3.63	4	3.19	4.59	3.24	3.56	3.88	3.47
Applied Sciences	3.86	3.57	3.71	3.86	3.43	3.57	3.71	3.43	4	3.57
Arts & Humanities (Literature)	4.06	4.06	3.94	3.5	3.4	2.88	4.13	3.19	3.88	4.06
Arts & Humanities (Arts)	3.26	3.05	3.21	3.26	2.95	2.53	4.05	2.79	3.42	2.95
Arts & Humanities (Philosophy)	3.58	3.42	3.92	3.58	3.42	2.92	3.75	3	3.92	3.83
Social Sciences	3.95	3.91	4.18	4.11	3.89	3.82	3.75	3.91	4.3	3.8
Social Sciences (D)	3.75	3.7	4.1	3.65	4.1	3.26	3.84	3.58	4.15	3.85
Life Long Learning	3.91	3.91	4.29	3.97	3.48	3.17	3.53	3.56	4.5	3.89



All survey participants Fall SEMESTER 2016

← OUTCOMES →

Understand perspectives & achievements in:

Course Area	written English	oral English	reason critically across disciplines	quantita- tive and math reasoning	American and CA governme nt	Natural Sciences	Arts and Humanities	Social Sciences	lifelong under- standing and self- develop- ment	Develop writing skills with useful feedback
Written Comm (41)	4.51	4.37	4.23	4.06	3.77	3.59	4.03	3.91	4.34	4.51
Oral Comm(35)	4.41	4.39	4.20	4.15	3.66	3.50	3.58	3.63	4.29	4.28
Critical reasoning(46)	4.33	4.07	4.37	4.15	3.96	3.65	3.98	3.93	4.37	4.41
Quant and Math	- ^-									
Reas oning (30)										
AM-L GOVT(30)	4.10	4.00	4.20	3.90	4.53	3.79	3.64	4.29	4.24	3.93
AM-I S HIST(56)	4.27	4.09	4.34	4.18	4.55	3.78	4.11	4.11	4.46	4.16
Biol Suremes (2-)	0.00	J.J_	5.75	J., .	0.00	5.55	J.J .	J.J.	J., .	5.52
Phys Sciences (14)	3.00	3.00	3.00	3.14	2.79	3.50	2.86	2.93	3.14	3.14
Arts (45)	4.04	3.86	4.11	3.82	3.60	3.20	4.39	3.24	4.04	3.87
Humanities(44)	3.95	3.89	4.27	4.11	3.89	3.26	4.12	3.65	4.27	3.89
Social Sciences (100)	4.08	4.00	4.24	4.11	4.06	3.62	3.92	4.07	4.36	4.02
Life Long Learning and Self-Development (66)	1 /117	4.02	4.08	4.11	3.65	3.77	3.78	3.67	4.27	4.00





5 (strongly agree), 3 (neutral), 1 (strongly disagree)

The class I am describing in this survey:	Helped me understand ways in which gender, race, ethnicity, and class intersect with each other
The class I am describing in this survey:	Helped me appreciate diversity
The class I am describing in this survey:	Helped me develop respect for others
The class I am describing in this survey:	Helped me develop a greater awareness of ethical and social concerns.
	I can explain how research can contribute to solving social problems.
Please indicate your level of agreement with the following statements about this course. (Addressing NEW civic learning outcomes)	I can explain how using the steps of the problem solving process can contribute to solving social problems.
	I am committed to making a difference in society more than I was before taking this class.

The overall averages for all categories was 3.81 in 2015 and 4.02 in 2016



0			← 01	HER OUTCOM	ES →		
	All survey takers i	Fall 2015				Agreement with:	
Course Area	Helped me understand ways in which gender, race, ethnicity, and class intersect with each other		Helped me develop respect for others	Helped me develop a greater awareness of ethical and social concerns.	research can	I can explain how using the steps of the problem solving process can contribute to solving social problems.	I am committed to making a difference in society more than I was before taking this class.
Written Comm	4.18	4.3	4.18	4.31	3.87	3.68	3.79
Oral Comm	3.77	4.12	4.42	4.1	3.7	3.56	3.7
Critical Reasoning	4.44	4.61	4.5	4.22	4.18	4.29	4.53
Quant and Math Reason g	_				Ţ.,		
American & (\ Gov't	3.86	3.86	3.88	4.03	3.83	3.73	3.77
BIOL Scie			~		^		
PHYS Sciences	3.06 3.53 3.88		3.88	3.47	3.65	3.76	3.88
Applied Sciences	3.29	3.71	4	4	3.86	3.14	3.29
Arts & Humanities (Literature)	4	4.19	4	3.69	3.44	3.25	3.31
Arts & Humanities (Arts)	3.47	3.63	3.47	3.79	2.89	3	2.95
Arts & Humanities (Philosophy)	3.58	4.17	4.08	3.92	3.17	3.25	3.58
Social Sciences	4	4.18	4.34	4.27	4.05	4	3.93
Social Scie	4.55	4.55	4.05	4.7	3.33	5.00	3.55
Life Long Larning	4.05	4.32	4.29	4.34	3.83	4.15	4.09



All survey takers	F 2016	OTH	IER OUTCOI	MES	Agreement with:			
Course Area	Helped me understand ways in which gender, race, ethnicity, and class intersect with each other	Helped me appreciate diversity	Helped me develop respect for others	Helped me develop a greater awareness of ethical and social concerns.	I can explain how research can contribute to solving social problems.	I can explain how using the steps of the problem solving process can contribute to solving social problems.	I am committed to making a difference in society more than I was before taking this class.	
Written Comm	4.23	4.34	4.34	4.40	4.32	4.18	3.97	
Oral Comm	3.95	4.28	4.44	4.13	4.23	4.20	3.87	
Critical reasoning	4.15	4.30	4.39	4.24	4.05	4.14	4.00	
(Jant and Math Neasoning	J.20	J. 4 U	3.03	3.37	3.33	4.03	5.07	
AM-US GOVT	4.43	4.23	4.37	4.57	4.07	4.14	3.82	
AM-US HIST	4.55	4.55	4.52	4.52	3.98	3.98	4.15	
DIOIOGICAL SCIENCES	5.05	5.70	5.,7	5.70	7.07	5.00	5.51	
Phycial Sciences (PS)	2.57	2.50	3.15	3.00	3.07	3.14	3.21	
PS-LAB	3.25	2.75	3.50	3.50	3.25	3.50	3.25	
PS-LEC	3.29	3.57	3.71	3.71	3.29	3.50	3.57	
Arts	3.84	4.27	4.29	4.09	3.61	3.56	3.83	
Humanities	4.00	4.50	4.50	4.39	3.65	3.67	3.77	
Social Sciences	4.44	4.46	4.42	4.49	4.01	3.99	4.21	
Lee Long Learning and Self- Development	3.98	4.39	4.49	4.33	4.02	3.95	4.02	





- American government and politics courses are perceived as helping students achieve diversity outcomes more in the new GE program than in the previous program.
- Likely a result from the new GE program including departments other than HIST and POLS in those areas. Ethnic studies departments report strong enrollments in those courses.

Changes that appear not so compelling



- Civic learning (CL) in this sample does not appear to have strengthened from the student perspective
- Is it the student's learning?
 - Unclear of learning activities' purposes?
- Is it the instruction?
 - Too little time or not clear on the CL outcomes?



What's next?

- Identify partnerships with other units (like Center for Engagement) to combine these data with other available data, direct evidence, etc.
- The student perception data are being provided to programs to compare with (or prompt collection of) direct evidence of student learning
- Programs undergoing program review can respond to this information, either in the self study or in their annual assessment reports
- A developmental process is designed into the reporting





Appendix 1. Course GE assessment rubric/report * 1

	11	Student Phas		ase 1¤	Phase 2 Evaluation of student work by program offering course			Phase 31	n
	proposal (y/n)β¤	perception s of in all courses in the GE area of this course helped them achieve the GE outcomes. Survey data provided by IR. #	s of in all courses in the GE Syllabus analysis \$\mathbb{I}\$					Program- improve- ment ^{II}	п
GE Outcomes ¶	ropo				Needs- improvement [‡]	Satisfactory	Commendabl e [‡]	ц	п
For ¶ XXXY #####¶ GE Area: ¶ (see below listing)	Is this outcome in the course pr		The GE- outcome- in the course- proposal- is-clearly- listed in the syllabus.	Assessment of the outcome is evident in the syllabus#	The average student shows little achievement in this outcome.	The average student achieves satisfactory achievement in this outcome #	The average student achieves well above satisfactory achievement in this outcome.	Changes made to the course to improve student achievemen t#	e·
Oral Communication (Block A1)#	п	п	п	н	п	п	п	п	p
Written Communication (Block A2) A2)	п	п	п	ц	п	п	п	п	n
Critical Thinking and Composition (Block A3)	п	п	п	ц	н	п	п	ц	D
American Institutions#	н	п	п	п	ц	п	п	п	p
B1 Physical Science	п	п	H	н	п	п	п	п	p



And then

- The summary reports will be used for the GE program review to describe the program's success in addressing GE program outcomes and ILOs
- These reports will also be used to locate strengths and weaknesses that can be addressed by curricular changes.
- And curricular changes in the GE program can be implemented

What ideally happens in assessment







Questions?

Contact us at:

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Marrying Student Survey Data with Institutional Data for a Stronger Assessment Analysis

A GE Assessment Collaboration between Faculty & Institutional Research

Mihaylo Assessment Conference, CSUF April 20, 2018

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*Part of this presentation is excerpted from one previously presented with Dr. Wayne Tikkanen, former Faculty Director of GE Assessment Cal State LA



Session Learning Outcomes

- Attendees will be able to describe an example of faculty and administration/staff collaboration and identify at least two ways such collaboration can improve assessment projects.
- Attendees will be able to identify the value that can be added by collaborating with institutional research office staff, who have knowledge of, and access to, institutional data and analysis tools, as well as training in methods and statistics.
- Attendees will be able to identify available institutional data and explain how it can be leveraged to improve data collected from a survey and/or incorporated into other assessment projects.

Context: New GE Program & Conversion to Semesters Implemented Fall 2016



- Many GE outcomes resembled those in the previous program, falling into the categories of our institutional learning outcomes (ILOs)
 - Knowledge: Mastery of Content and Processes of Inquiry
 - Proficiency: Intellectual Skills
 - Engagement: Local and Global Communities
 - Transformation: Integrative Learning
- Several GE areas (e.g., American Government and Critical reasoning) were no longer restricted to the discipline area previously assigned
- Added requirements:
 - Civic learning (2 courses)
 - Refined the diversity requirement
 - Writing intensive courses (2 courses)

Student Perceptions of GE Learning Outcomes Achievement: Survey Design & Administration



- Population and Sample
 - 2010 No sampling: ALL students who had enrolled in any lower division GE course (2010 Winter, Spring and Fall quarters)
 - 2015 & 2016 Students who had taken at least one lower division GE course in Fall and received grade of D or better (36% & 30%, respectively)
- Response Rates: **2010** 10-12% **2015** 15% **2016** 16%
- GE Course selection:
 - Instructions directed student to respond about a GE course she/he had taken:
 2010 & 2015 Respondent's selection
 2016 Administrative sampled selection
 - 2015 & 2016 Provided opportunity for respondent to submit answers for a 2nd GE course she/he had taken (optional); Respondent's selection
- Demographic Data
 - 2010 No demographic data collected
 - 2015 Demographic questions added to the survey
 - 2016 Leveraged Institutional data; demographic questions removed

Survey Design & Administration: Leveraging Institutional Data



- Unique link sent to each student enabled us to utilize institutional data
 - Becomes confidential rather than anonymous
 - Shortens the survey omit demographic questions, class standing, major, etc.
 - Improves consistency of the data with officially reported data
 - Improves quality of the data cleaner data, less missing data
 - Provides access to more data respondents grades, GPA, time-to-degree
 - Assists with the incentive drawing process



Yields

		2015	2016
	Invitations sent	3400	3087
individuals	overall response rate	15% (13% after cleaning)	16% (before & after cleaning)
	responses (cleaned data)	453	498
	total courses submitted	571	579
courses	number of second courses submitted	118	80
	number of courses (cleaned)	545	548



GE Outcomes Survey Questions

5 (strongly agree), 3 (neutral), 1 (strongly disagree)

GENERAL GE OUTCOMES - SURVEY QUESTIONS					
	Helped me organize and express ideas in written English				
The class I am describing in this survey:	Helped me organize and express ideas in oral English				
	Helped me reason critically across a variety of disciplines				
	Helped me apply basic concepts in quantitative reasoning				
	Provided me with knowledge necessary for participation in American society and government				
	Provided me with knowledge and skills for lifelong understanding and self-development				
	Helped me develop my writing skills with useful feedback on one or more writing assignments				
Please indication your level of agreement with how this	Natural Sciences				
course has helped you understand the distinct perspectives (values and ways of acquiring new knowledge) and major achievements in:	Arts and Humanities				
	Social Sciences				



Diversity & Civic Learning Outcomes Survey Questions

5 (strongly agree), 3 (neutral), 1 (strongly disagree)

DIVERSITY & CIVIC LEARNING OUTCOMES - SURVEY QUESTIONS					
	Helped me understand ways in which gender, race, ethnicity, and class intersect with each other				
The class I am describing in this survey:	Helped me appreciate diversity				
	Helped me develop respect for others				
	Helped me develop a greater awareness of ethical and social concerns.				
	I can explain how research can contribute to solving social problems.				
lease indicate your level of agreement with the following statements about this course: (Addressing NEW civic learning outcomes)	I can explain how using the steps of the problem solving process can contribute to solving social problems.				
	I am committed to making a difference in society more than I was before taking this class.				

Faculty Preliminary Results Approach CALSTATE LA

- Review of mean scores: looking for patterns, changes
- Preliminary exploratory analysis
- Prompt ideas for further direct assessment methods
- Comparisons of:
 - GE Subject Areas with traditional GE outcomes and
 - GE Subject Areas with Diversity & Civic Learning GE Outcomes
- Looking for and asking:
 - What results are surprising? Not so surprising?
 - What do we expect from GE courses?
 - Are the students getting that?
- Specific Questions on GE curriculum design changes
 - American Government and History: courses offered by more disciplines
 - How would this change perceived achievement in the GE outcomes (and perhaps others)?
 - Added requirements
 - Civic learning (2 courses, one in lower division GE)
 - Does the requirement make a significant difference in GELO achievement?
 - Refinement of the diversity requirement
 - What impact does that have on student perceptions of GELO achievement?



0			← 01	HER OUTCOM	ΛES →			
	All survey takers I	all 2015			Agreement with:			
Course Area	Helped me understand ways in which gender, race, ethnicity, and class intersect with each other	Helped me appreciate diversity	Helped me develop respect for others	Helped me develop a greater awareness of ethical and social concerns.	I can explain how research can contribute to solving social problems.	I can explain how using the steps of the problem solving process can contribute to solving social problems.	I am committed to making a difference in society more than I was before taking this class.	
Written Comm	4.18	4.3	4.18	4.31	3.87	3.68	3.79	
Oral Comm	3.77	4.12	4.42	4.1	3.7	3.56	3.7	
Critical Reasoning	4.44	4.61	4.5	4.22	4.18	4.29	4.53	
Quant and Math Reason g	_							
American & C Gov't	3.86	3.86	3.88	4.03	3.83	3.73	3.77	
BIOL Scie			~ - /		^			
PHYS Sciences	3.06	3.53	3.88	3.47	3.65	3.76	3.88	
Applied Sciences	3.29	3.71	4	4	3.86	3.14	3.29	
Arts & Humanities (Literature)	4	4.19	4	3.69	3.44	3.25	3.31	
Arts & Humanities (Arts)	3.47	3.63	3.47	3.79	2.89	3	2.95	
Arts & Humanities (Philosophy)	3.58	4.17	4.08	3.92	3.17	3.25	3.58	
Social Sciences	4	4.18	4.34	4.27	4.05	4	3.93	
Social Sciences	4.55	4.55	4.03	4.7	3.33	5.00	5.55	
Life Long Larning	4.05	4.32	4.29	4.34	3.83	4.15	4.09	



All survey takers F 201		OTHER OUTCOMES			Agreement with:		
Course Area	Helped me understand ways in which gender, race, ethnicity, and class intersect with each other	Helped me appreciate diversity	Helped me develop respect for others	Helped me develop a greater awareness of ethical and social concerns.	I can explain how research can contribute to solving social problems.	I can explain how using the steps of the problem solving process can contribute to solving social problems.	I am committed to making a difference in society more than I was before taking this class.
Written Comm	4.23	4.34	4.34	4.40	4.32	4.18	3.97
Oral Comm	3.95	4.28	4.44	4.13	4.23	4.20	3.87
Critical reasoning	4.15	4.30	4.39	4.24	4.05	4.14	4.00
(Jant and Wath Neasoning	3.20	J. 4 U	3.03	3.37	3.33	4.03	3.07
AM-US GOVT	4.43	4.23	4.37	4.57	4.07	4.14	3.82
AM-US HIST	4.55	4.55	4.52	4.52	3.98	3.98	4.15
Diological Sciences	5.05	5.70	5.77	5.70	7.01	5.55	5.51
Phycial Sciences (PS)	2.57	2.50	3.15	3.00	3.07	3.14	3.21
PS-LAB	3.25	2.75	3.50	3.50	3.25	3.50	3.25
PS-LEC	3.29	3.57	3.71	3.71	3.29	3.50	3.57
Arts	3.84	4.27	4.29	4.09	3.61	3.56	3.83
Humanities	4.00	4.50	4.50	4.39	3.65	3.67	3.77
Social Sciences	4.44	4.46	4.42	4.49	4.01	3.99	4.21
L [†] e Long Learning and Self- Development	3.98	4.39	4.49	4.33	4.02	3.95	4.02



Faculty Preliminary Results

- American government and politics courses are perceived as helping students achieve diversity outcomes more in the new GE program than in the previous program.
- Civic Learning (CL) in this sample does not appear to have strengthened from the student perspective



Results with Statistical Analysis: Confirmatory American Government & History

Comparison of Select GE Categories on Diversity and Civic Learning Outcomes

GE Categories: American Institutions (2015) and American - US History (2016)

GE Outcome	Year	N	Mean	Std. Deviation	Sig
Understand Gender, Race, Ethnicity &	2015	66	3.86	1.201	
Class Intersections	2016	56	4.55	0.807	***
Appreciate Diversity	2015	66	3.86	1.162	***
Appreciate Diversity	2016	56	4.55	0.807	
Davidan Daanashfan Ollasia	2015	65	3.88	1.206	***
Develop Respect for Others	2016	56	4.52	0.874] """
Develop Awareness of Ethical & Social	2015	65	4.03	1.118	**
Concerns	2016	56	4.52	0.809	
Agreement with "I can explain"					
how research can contribute to solving	2015	66	3.83	1.061	
social problems	2016	55	3.98	0.991	
how using the steps of the problem	2015	66	3.73	1.016	
solving process can contribute to solving social problems	2016	55	3.98	0.952	
I am comitted to making a difference in	2015	66	3.77	1.120	
society more than I was before taking this class	2016	55	4.15	0.970	

- The differences in mean scores on the Diversity Outcomes between these 2015 and 2016 GE course categories are statistically significant
- The Civic Learning Outcomes are not significant

^{*}p<.05 **p<.01 ***p<.001



Results with Statistical Analysis: Confirmatory CAL STATE LA Lifelong Learning Courses

Comparison of Select GE Categories on Diversity and Civic Learning Outcomes

GE Category: Lifelong Learning (2015 and 2016 - remained the same)

GE Outcome	Year	N	Mean	Std. Deviation	Sig
Understand Gender, Race, Ethnicity	2015	69	4.06	1.042	
& Class Intersections	2016	66	3.98	1.088	
Appreciate Diversity	2015	69	4.32	0.849	
Appreciate Diversity	2016	66	4.39	0.802	
Develop Respect for Others	2015	69	4.32	0.813	
Develop Respect for Others	2016	67	4.49	0.637	
Develop Awareness of Ethical &	2015	69	4.33	0.852	
Social Concerns	2016	66	4.33	0.791	
Agreement with "I can explain"					
how research can contribute to	2015	70	3.84	0.895	
solving social problems	2016	60	4.02	0.854	
how using the steps of the problem	2015	70	4.11	0.808	
solving process can contribute to solving social problems	2016	60	3.95	0.891	
I am comitted to making a difference in society more than I was before	2015	70	4.07	0.873	
taking this class	2016	61	4.02	0.904	

^{*}p<.05 **p<.01 ***p<u><</u>.001

Statistical analysis confirms that none of the differences in mean scores on Diversity and Civic Learning Outcomes are significant for the Lifelong Learning courses



Results with Statistical Analysis: A different picture

Diversity & Civic Learning Outcomes - Overall Comparison of 2015 and 2016

GE Outcome	Year	N	Mean	Std. Deviation	Std. Error Mean	Sia.
GE Outcome	2015	542	3.90	1.161	0.050	Sig
Understand Gender, Race, Ethnicity & Class Intersections	2016	546	4.06	1.074	0.030	. *
	2015	542	4.11	1.013	0.044	*
Appreciate Diversity	2016	546	4.24	0.992	0.042	1 ^
Develop Respect for Others	2015	538	4.14	0.981	0.042	**
	2016	542	4.31	0.869	0.037	
Develop Awareness of Ethical &	2015	540	4.10	1.021	0.044	*
Social Concerns	2016	544	4.23	0.941	0.040	
Agreement with "I can explain"						
how research can contribute to	2015	534	3.76	1.038	0.045	**
solving social problems	2016	522	3.95	0.925	0.040	
how using the steps of the problem	2015	534	3.75	1.028	0.044	**
solving process can contribute to solving social problems	2016	521	3.94	0.911	0.040	
I am comitted to making a difference	2015	534	3.78	1.055	0.046	*
in society more than I was before taking this class	2016	521	3.93	0.969	0.042	

There is a statistically significant change between the 2015 and 2016 surveys on Diversity and Civic Learning (CL) Outcomes

^{*}p<.05 **p<.01

Analysis with Institutional Data: Potential Variables



	COURSE	GRADES				
Course Grade	Frequency	Percent	Cumulative Percent			
missing	143	13.1	13.1			
А	275	25.2	38.2			
A-	144	13.2	51.4			
В	162	14.8	66.2			
B-	81	7.4	73.7			
B+	128	11.7	85.4			
С	63	5.8	91.1			
C-	18	1.6	92.8			
C+	52	4.8	97.5			
D	12	1.1	98.6			
D+	9	0.8	99.5			
F	1	0.1	99.5			
NC	1	0.1	99.6			
RD	3	0.3	99.9			
WU	1	0.1	100.0			
Total	1093	100.0				

						Std.
		Ν	Minimum	Maximum	Mean	Deviation
j	Valid N	948	0.0	4.0	3.222	0.7714

STUDENT'S COLLEGE OF MAJOR					
	SURV	SURVEY_YR			
COLLEGE	2016	2017	Total		
Arts & Letters	95	76	171		
Business & Economics	53	74	127		
Education	11	12	23		
Engineering, Computer Science & Technology	45	63	108		
Health & Human Services	143	136	279		
Natural & Social Sciences	145	150	295		
Undeclared/ Undecided	53	37	90		
Total	545	548	1093		

COLLEGE	Frequency	Valid
GROUP	rrequericy	Percent
AL_ED	283	25.9
BE_ET	235	21.5
HHS	279	25.5
NSS	295	27.0
Total	1092	100.0
Missing	1	
Total	1093	



Analysis with Institutional Data

Comparison of Select GE Categories on Diversity and Civic Learning Outcomes Student Grouping by College of Major

GE Outcome	College	N	Mean	Std. Deviation	Sig
Appreciate Diversity	BE_ET	234	4.03	1.100	*
Appreciate Diversity	HHS	278	4.28	0.940	
	BE_ET	233	4.06	1.045	
Develop Respect for Others ¹	HHS	275	4.35	0.855	**
	NSS	290	4.29	0.927	*
I am comitted to making a difference in society more than I was before	BE_ET	226	3.70	1.077	*
taking this class	HHS	269	3.98	0.948	
*p<.05 **p<.01 ***p <u><</u> .001					

¹The statistically significant differences in means are between BE_ET and each of the other two colleges listed; thus the significance level indicated for each of these is in reference to BE_ET.

 There were no statistically significant differences in GELO means found between student groups by College of Major for the rest of the Diversity and Civic Learning Outcomes. **Statistical** analysis identifies which College of Major groupings have statistically significant different mean scores on some Diversity and Civic Learning **Outcomes**



What's next?

- Continue more robust analyses of the data, including student course grade data, retention, time-to-degree
- Share the results of these analyses with the academic programs
 - To compare student perceptions with direct evidence of student learning
 - Prompt collection of direct evidence (annual assessment projects & reports)
- Identify partnerships with other units (like Center for Engagement) to combine these data with other available data, direct evidence, etc.
- Develop more direct assessments for the overall GE program assessment (embedded assignments, shared rubrics)



Questions & Discussion



Session Learning Outcomes Revisited

- Describe one example of faculty and administration/staff collaboration on assessment.
- Identify at least two ways this collaboration can improve assessment projects.
- What value is added to assessment projects by collaborating with your institutional research office?
- Identify what institutional data are available to support assessment efforts.
- How can these data be leveraged to improve data collected from a survey or incorporated into other assessment projects?



Appendices

Challenges in GE instruction and assessment



- Faculty participation
 - Many GE courses are taught by lecturer faculty employed parttime at several campuses
 - Full time faculty sometimes feel more committed to other areas of their discipline and may not regard GE courses as seriously
- Distributed curriculum
 - The GE learning outcomes (GELOs) are addressed by programs spanning many disciplines
 - Can be difficult to gather evidence on a regular basis
 - GE courses span many areas and sub-disciplines
 - Upper and lower division courses (800+ now at Cal State LA)
- Most courses address several GE outcomes

Survey Data Collection & Incentives



ADMINISTRATION WINDOW (~2 weeks)

- Fall 2015 Launched 3rd week of Winter Quarter, after course add/drop period Wednesday, January 20 – Wednesday, February 3, 2016
- Fall 2016 Launched 2nd week of Spring Semester, coordinated w/other surveys Saturday, January 28 – Monday, February 13, 2017

INCENTIVES

- FIVE \$50 Barnes & Noble Gift Cards
 - TWO Drawings After the first week (two gift cards) & at close of survey
 - Midnight deadline to submit the survey to be entered into drawings
 - Mail-in entry option (without completing the survey)

EMAILS

- 2015 Invitation & two reminders planned; Revised & sent more reminders (5) as we monitored responses
- 2016 Invitation & four (4) reminder emails
 - Responses spike after each reminder
 - Mid-Survey Drawing provides opportunity to announce 1st round winners with a reminder = BEST response spike after this email!
 - "Final" (2 days before end) AND a "Last Chance" (last day, midnight deadline)



Population & Sample

- Population: Students who had taken at least one lower-division GE course in Fall and received grade of D or better
- Sample: **2015** 36% of the population; **2016** 30% of the population

STUDE	NT LEVEL	N	Frosh	Soph	Junior	Senior
2015	Рор	9,503	58%	19%	12%	11%
2015	Sample	3,400 58%		19%	13%	10%
	Pop	10,275	58%	18%	12%	12%
2016	Sample	3,085	57%	19%	12%	13%

RACE /		20	15		2016					
ETHNICITY	Pop N	Pop %	Samp N	Samp %	Pop N	Pop %	Samp N	Samp %		
NATIVE AMER	8	0.1%	5	0.1%	8	0.1%	1	0.0%		
ASIAN	1318	13.9%	484	14.2%	1395	13.6%	407	13.1%		
BLACK	350	3.7%	114	3.4%	391	3.8%	110	3.6%		
HISPANIC	6381	67.1%	2296	67.5%	7004	68.2%	2092	67.8%		
INTERNATIONAL	614	6.5%	217	6.4%	674	6.6%	216	7.0%		
TWO+ RACES	172	1.8%	63	1.9%	171	1.7%	64	2.1%		
UNKNOWN	232	2.4%	84	2.5%	219	2.1%	71	2.3%		
WHITE	428	4.5%	137	4.0%	413	4.0%	126	4.1%		
TOTAL	9503	100.0%	3400	100.0%	10275	100.1%	3087	100.0%		

Respondent Demographics

151

6

8

119

Grand Total

UNKNOWN

WHITE

Grand Total

347

5

14

334

70%

45%

64%

74%



Fall 2016							student level			
		F	M		total			N	%	
		% within	% within			% total				
	n	Ethnicity	n	Ethnicity	n	Ethnicty	freshman	300	55%	
NATIVE AMER	0		0		0	0%	sophomore	115	21%	
ASIAN	56	74%	20	26%	76	15%	junior	66	12%	
BLACK	8	50%	8	50%	16	3%	senior	67	12%	
HISPANIC	227	71%	91	29%	318	64%	total	498	100%	
INTERNATIONAL	27	57%	20	43%	47	9%				
TWO+ RACES	9	75%	3	25%	12	2%]			
UNKNOWN	7	70%	3	30%	10	2%				
WHITE	13	68%	6	32%	19	4%]			

30%

55%

36%

26%

Fall 2015								student level	
	fe	emale	male		to	tal		N	%
	n	% within Ethnicity	n	% within Ethnicity	n	% total Ethnicty	freshman	264	58%
NATIVE AMER	0		1		1	0%	sophomore	91	20%
ASIAN	52	71%	21	29%	73	16%	junior	55	12%
BLACK	12	80%	3	20%	15	3%	senior	42	10%
HISPANIC	226	76%	72	24%	298	66%	total	452	100%
INTERNATIONAL	19	70%	8	30%	27	6%			
TWO+ RACES	6	100%	0	0%	6	1%			

498

11

22

453

2%

5%

Please indication your level of agreement with how this course has helped your understand the distinct perspectives (values and ways of acquiring new knowledge) and major achievements in:

	written English	oral English	reason critically across a variety of disciplines	basic concepts in quantitative reasoning	Participation in American society and government	Natural Sciences	Arts and Humanities	Social Sciences	lifelong CAUNDET LA standing and self developmen t
Written Comm	4.34	4.02	4.08	3.89	3.55	3.33	3.79	3.49	4.18
Oral Comm	4.35	4.44	4.09	3.86	3.88	3.26	3.65	3.59	4.33
Critical Reasoning	4.61	4.39	4.67	4.72	4.39	4.06	3.94	3.82	4.39
Quant and Math Reasoning	3.37	3.37	3.96	4.41	3.04	3.81	2.85	3.12	3.67
American & CA Gov't	3.62	3.44	3.68	3.42	4.06	3.26	3.58	3.86	3.80
BIOL Sciences	3.45	3.45	3.73	3.95	3.19	4.05	3.57	3.76	3.52
PHYS Sciences	3.59	3.53	3.63	4.00	3.19	4.59	3.24	3.56	3.88
Applied Sciences	3.86	3.57	3.71	3.86	3.43	3.57	3.71	3.43	4.00
Arts & Humanities (Literature)	4.06	4.06	3.94	3.50	3.40	2.88	4.13	3.19	3.88
Arts & Humanities (Arts)	3.26	3.05	3.21	3.26	2.95	2.53	4.05	2.79	3.42
Arts & Humanities (Philosophy)	3.58	3.42	3.92	3.58	3.42	2.92	3.75	3.00	3.92
Social Sciences	3.95	3.91	4.18	4.11	3.89	3.82	3.75	3.91	4.30
Social Sciences (D)	3.75	3.70	4.10	3.65	4.10	3.26	3.84	3.58	4.15
Life Long Learning	3.91	3.91	4.29	3.97	3.48	3.17	3.53	3.56	4.50
ENGL 102 (research written comm)	4.46	4.34	4.26	4.23	3.97	3.88	4.24	4.06	4.4



	All survey	participan	ts in Fall C	UARTER 2	015					
		← 0	OUTCOME	s →			and perspe			
Course Area	written English	oral English	reason critically across disciplines	quantita-tive and math reasoning	American and CA government	Natural Sciences	Arts and Humanities	Social Sciences	lifelong under- standing and self-develop- ment	Develop writing skills with useful feedback
Written Comm	4.34	4.02	4.08	3.89	3.55	3.33	3.79	3.49	4.18	4.33
Oral Comm	4.35	4.44	4.09	3.86	3.88	3.26	3.65	3.59	4.33	4.33
Critical Reasoning	4.61	4.39	4.67	4.72	4.39	4.06	3.94	3.82	4.39	4.06
Quant and Math Reasoning	3.37	3.37	3.96	4.41	3.04	3.81	2.85	3.12	3.67	3.3
American & CA Gov't	3.62	3.44	3.68	3.42	4.06	3.26	3.58	3.86	3.8	3.76
BIOL Sciences		2.45	2 72	2.05	2.42		^ = -	2.70	2.52	2.05
PHYS Sciences	3.59	3.53	3.63	4	3.19	4.59	3.24	3.56	3.88	3.47
Applied Sciences	3.86	3.57	3.71	3.86	3.43	3.57	3.71	3.43	4	3.57
Arts & Humanities (Literature)	4.06	4.06	3.94	3.5	3.4	2.88	4.13	3.19	3.88	4.06
Arts & Humanities (Arts)	3.26	3.05	3.21	3.26	2.95	2.53	4.05	2.79	3.42	2.95
Arts & Humanities (Philosophy)	3.58	3.42	3.92	3.58	3.42	2.92	3.75	3	3.92	3.83
Social Sciences	3.95	3.91	4.18	4.11	3.89	3.82	3.75	3.91	4.3	3.8
Social Sciences (D)	3.75	3.7	4.1	3.65	4.1	3.26	3.84	3.58	4.15	3.85
Life Long Learning	3.91	3.91	4.29	3.97	3.48	3.17	3.53	3.56	4.5	3.89



All survey participants Fall SEMESTER 2016

← OUTCOMES →

Understand perspectives & achievements in:

	2010												
Course Area	written English	oral English	reason critically across disciplines	quantita- tive and math reasoning	American and CA governme nt	Natural Sciences	Arts and Humanities	Social Sciences	lifelong under- standing and self- develop- ment	Develop writing skills with useful feedback			
Written Comm (41)	4.51	4.37	4.23	4.06	3.77	3.59	4.03	3.91	4.34	4.51			
Oral Comm(35)	4.41	4.39	4.20	4.15	3.66	3.50	3.58	3.63	4.29	4.28			
Critical reasoning(46)	4.33	4.07	4.37	4.15	3.96	3.65	3.98	3.93	4.37	4.41			
Quant and Math		- ^ -			2 22	- ^^							
Reas oning (30)													
AM-L GOVT(30)	4.10	4.00	4.20	3.90	4.53	3.79	3.64	4.29	4.24	3.93			
AM-LS HIST(56)	4.27	4.09	4.34	4.18	4.55	3.78	4.11	4.11	4.46	4.16			
Biol Sulunus (27)	J.55		5.75	<u> </u>	J.55		J.J.	 .	<u> </u>	J.52			
Phys Sciences (14)	3.00	3.00	3.00	3.14	2.79	3.50	2.86	2.93	3.14	3.14			
Arts (45)	4.04	3.86	4.11	3.82	3.60	3.20	4.39	3.24	4.04	3.87			
Humanities(44)	3.95	3.89	4.27	4.11	3.89	3.26	4.12	3.65	4.27	3.89			
Social Sciences (100)	4.08	4.00	4.24	4.11	4.06	3.62	3.92	4.07	4.36	4.02			
Life Long Learning and Self-Development (66)	1 /11/	4.02	4.08	4.11	3.65	3.77	3.78	3.67	4.27	4.00			

Fall 2010 Results



Outcomes

	Fall 2010: % Agree and Strongly Agree with stateme nts	Helped me to organize and express ideas in written English	Helped me to organize and express ideas in oral English	Helped me to reason critically across a variety of disciplines	Helped me understan d and apply basic concepts in quant reasoning	Provided knowledg e&values for participati on in Am soc/gover nment	Helped me understan d distinct perspectiv es&achiev ements in natural and physical sciences	Helped me understan d distinct perspectiv es&achiev ements in social sciences	d distinct perspectiv	Helped me to understan d and appreciat e diversity and to develop respect for others.	Helped me to develop a greater awarenes s of ethical and social concerns.	Provided opportuni ty to develop writing skills with significant writing assgn'mnt (5 - 19 pages)	Provided knowledg e & skills for lifelong understan ding and self-developm ent
S	A1 written comm.												
reas	A2 oral comm.												
Ф	A3 critical thinking												
ourse	A4 quant. Reasoning												
0	Am Inst				-:-:-:-:-:-:-:-:								
Ŭ	B1 Biol Sci w/lab												
	B2 Phys. Sci w/ lab												
	B3 app. Nat.												
	C: Arts & Humanities						11111111111111111111111						
	D social sciences												
	Legend	100- 85%	70-84%	55-69%	40-54%	25-39%	10-24%	% Strongly Agree + Agree		indicates content area directly addresses outcome			