

An Assessment Tool of the (STEM)² Initiative

INTRODUCTION:

In July 2010, the California State University (CSU) was awarded a grant from Learn and Serve America (LSA) to expand service-learning opportunities in the disciplines of Science, Technology, Engineering and Mathematics (STEM) in order to increase student success and graduation in STEM. This initiative is called (STEM)². As a result, the CSU has embarked on an ambitious three-year initiative to increase the number of service-learning opportunities in STEM and ultimately institutionalize service learning in STEM departments across CSU's campuses.

This self-assessment rubric, adapted from the work of Andrew Furco, University of California, Berkeley, 1999 (revised in 2002, 2003, 2006) and based on the Kecskes/Muyllaert *Continuums of Service* Benchmark Worksheet, is designed to assist the 23 CSU campuses in gauging their progress through the LSA grant to institutionalize service learning in their campus STEM departments.

As the Furco model explains: "The rubric is structured by five dimensions, which are considered by most service-learning experts to be key factors for higher education service-learning institutionalization. Each dimension is comprised of several components that characterize the dimension. For each component, a three-stage continuum of development has been established. Progression from *Stage One: Critical Mass Building* to *Stage Three: Sustained Institutionalization* suggests that a campus is moving closer to the full institutionalization of service-learning."

DIRECTIONS:

Each CSU campus participating in any aspect of the (STEM)² LSA grant, must complete this self-assessment rubric at the beginning of the LSA grant program (due by January 31, 2011) and again at the end of the LSA grant program (due June 1, 2013). The rubric is designed to measure the status of a campus's level of institutionalization at a particular point in time. Thus, a "pre-" and "post-" assessment will allow the CSU to measure impact of the LSA grant. Please keep in mind that for the Pre-test assessment, we do not expect you to know everything happening in STEM service learning. A rating of "1" under "critical mass building" is appropriate with an explanation of "we do not know this information," when your office does not know this information.

The campus service-learning director is the primary facilitator of this assessment; the process for completing the assessment is flexible and should reflect the structures, resources and culture of each individual campus. Please assess your work across **ALL** STEM departments. The "explanation" section allows a campus to provide anecdotal information to explain any given assessment (i.e. the engineering department is advanced in this dimension, but other STEM departments are not; thus we have rated ourselves in the "critical mass building" area still).

NOTE: This rubric is only one tool among several that will be used to assess each campus's effort to advance service learning in STEM disciplines through the LSA grant program.

QUESTIONS: For questions, contact Erika Randall, LSA (STEM)² Coordinator, (562) 951-4787, erandall@calstate.edu.



An Assessment Tool of the (STEM)² Initiative

CAMPUS:
Primary Facilitator (Name, Title, Email):
Any Contributing Participants (Name, Title, Email):
Submitted By(Name, Title, Email):



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DIMENSION I: PHILOSOPHY AND MISSION OF SERVICE-LEARNING

A primary component of service-learning institutionalization in your Science, Technology, Engineering, and Mathematics (STEM) departments on your campus is the development of a definition for service-learning that provides meaning, focus, and emphasis for the service-learning effort in your STEM departments. How narrowly or broadly service-learning is defined on your campus will effect which campus constituents participate/do not participate, which campus units will provide financial resources and other support, and the degree to which service-learning will become part of the campus' institutional fabric.

<u>DIRECTIONS:</u> For each of the four categories (rows), highlight or circle the number in the continuum that best represents the CURRENT status of the development of a definition, philosophy, and mission of service-learning in your STEM departments.

	Critic	al Mass Bui	ilding	Qu	ality Buildi	ng	Sustaine	d Institutio	nalization	Explanation
DEFINITION OF SERVICE-LEARNING IN STEM DEPARTMENTS	There is no learning acr The term "s inconsistent of service at	oss STEM de ervice-learn tly to describ	epartments. ing" is used be a variety	There is an o definition for the STEM de some variand the application	r service-le partments, ce and inco	arning in but there is nsistency in	The STEM do formal, univ definition fo learning that operationalities aspects of se	ersally acce r high quali t is used cor ze many or	pted ty service- nsistently to most	
(circle one)	1	2	3	4	5	6	7	8	9	
STRATEGIC PLANNING	The campus official strat service-lear	egic plan fo		Although cer long-range g learning have campus, the formalized in plan for STEN will guide the these goals.	oals for ser e been defi se goals ha ito an offic M departm	vice- ned for the ve not been ial strategic ents that	The campus official strat- service-learr viable short- institutional department	egic plan fo ning, which range and l ization goal	r advancing includes ong-range	
(circle one)	1	1 2 3			5	6	7	8	9	



An Assessment Tool of the (STEM)² Initiative

ALIGNMENT WITH		vice-learning	•	Service-learr	_		Service-learn			
DEPARTMENTAL	=	-	spects of the	as a primary	-	-	primary cond		-	
MISSION	-	mission, it re		the campus'			Service-learn	_		
		•	e-learning is	learning is n			campus's off			
	-	uded in larg		campus; offi			strategic plan	-	larly in	STEM
			missions of	strategic pla	=	ırly within	departments			
(simple ana)	-	ıs, particula	rly within	STEM depart	tments.					
(circle one)	STEM dep	artments.								
	_	_	_	_	_	_	_	_	_	
	1	2	3	4	5	6	7	8	9	
ALIGNMENT WITH	Service-lea	arning stand	s alone and	Service-learr	ning is tied lo	oosely or	Service-learn	ing is tied	formall	v and
EDUCATIONAL		-	portant, high	informally to	•	•	purposefully	_		-
REFORM EFFORTS		orts on cam	_	profile effort	=	_	high profile		•	-
		artments/ c		STEM depart	-		STEM depart		-	
		-	tablishment	partnership	-	•	partnership e	-		•
	·=	communiti		of learning c			of learning co			
	_	ent of unde	-	improvemen		-	improvemen			:e
	-	faculty resea	•	teaching, fac	_		teaching, fac		_	
(circle one)	<u>.</u>	•	•		•	•		•	ŕ	
,				4	5	6	7	8	9	
	1	2	3							



An Assessment Tool of the (STEM)² Initiative

DIMENSION II: STEM FACULTY SUPPORT FOR AND INVOLVEMENT IN SERVICE-LEARNING

One of the essential factors for institutionalizing service-learning in higher education is the degree to which faculty members are involved in implementation and advancement of service-learning on a campus (Bell, Furco, Ammon, Sorgen, & Muller, 2000).

DIRECTIONS: For each of the four categories (rows), highlight or circle the number in the continuum that best represents the CURRENT status of STEM faculty involvement in and support for service-learning in STEM departments.

	Critica	l Mass Bui	lding	Qu	ality Build	ing	Sustained	I Institutio	nalizatio	ion Explanation
STEM FACULTY	Very few STE	M faculty	fully know	An adequate	e number o	f STEM	A substantial	number o	f STEM	
KNOWLEDGE AND	what service	-learning is	or	faculty mem	bers know	what	faculty meml	ers know	what se	ervice-
AWARENESS	understand h		-	service-lear	_	learning is an				
	is different fr	rom comm	unity	how service	-learning is	different	service-learn	_		
	service, inter	•		from commi	•	•	community s		-	
	experiential	learning ac	tivities.	internships,		experiential	other experie	ential learn	ing activ	vities.
(ainala ana)				learning acti	vities.					
(circle one)	_	1 2 3			_		_	_	_	
	1	2	3	4	5	6	/	8	9	
STEM FACULTY	Very few STE	M faculty	members	While a satis	sfactory nu	mber of	A substantial	number o	f influen	ntial
INVOLVEMENT AND	are instructo	rs, support	ers, or	STEM facult	y members	are	STEM faculty	members	particip	pate
SUPPORT	advocates of	service-lea	arning. Few	supportive of	of service-le	earning, few	as instructors	s, supporte	ers, and	
	support the	_		of them are		_	advocates of	service-lea	arning a	ind
	service-learn	_		service-learr	_		support the i			
	programs or			programs or			learning into			_
	scholarly and	-		scholarly an	-		or into their		arly and	
	Service-learn	_		An inadequa		-	professional	work.		
/ · / \		are sustained by a few faculty			EY STEM fa					
(circle one)	members on campus.			members are involved in service-						
				learning.						
	1	2	3	4	5	6	7	8	9	



An Assessment Tool of the (STEM)² Initiative

STEM FACULTY LEADERSHIP (circle one)	faculty members for advancing	none of the most influential STEI aculty members serve as leaders or advancing service-learning in the STEM departments. 1 2 3 In general, STEM faculty members are not encouraged to be involved in service-learning activities; few any incentives are provided (e.g., minigrants, sabbaticals, funds for conferences) to pursue service-learning activities; STEM faculty members' work in service-learning activities; ont usually recognized during their review, tenure, and			nly one or to TEM faculty e leadership otments' ser ort.	members to the	A highly respected, influential group of STEM faculty members serves as the STEM departments' service-learning leaders and/or advocates.				
	1	2	3	4	5	6	7	8	9		
STEM FACULTY	In general, ST	EM faculty	/ members	Although ST	EM faculty	members	STEM faculty	who are in	nvolved in		
INCENTIVES AND	are not encou	uraged to b	e involved	are encoura	ged and are	provided	service-learn	ing receive	recognition		
REWARDS	in service-lea	rning activ	ities; few if	various ince	ntives (e.g.,	minigrants,	for it during t	the depart	ment's		
	any incentive	s are provi	ded (e.g.,	sabbaticals,	funds for se	ervice-	review, tenui	re, and pro	motion		
	minigrants, sa	abbaticals,	funds for	learning con	nferences) to	o pursue	process; STE	M faculty a	re		
	conferences)	to pursue	service-	service-leari	ning activiti	es, their	encouraged a	and are pro	ovided		
	learning activ	ities; STEN	1 faculty	work in serv	ice-learning	g is not	various incen	itives (e.g.,	minigrants,		
	members' wo	ork in servi	ce-learning	always recog	gnized durii	ng their	sabbaticals, f	unds for se	ervice-		
			_	review, tenu	ure, and pro	motion	learning conf	erences) to	o pursue		
(circle one)	=	_	_	process.			service-learn	-	=		
(encie one)	promotion pr			'				J			
	1	2	3	4	5	6	7	8	9		



An Assessment Tool of the (STEM)² Initiative

DIMENSION III: STEM STUDENT SUPPORT FOR AND INVOLVEMENT IN SERVICE-LEARNING

An important element of service-learning institutionalization is the degree to which students are aware of service-learning opportunities in the STEM departments and are provided opportunities to play a leadership role in the development of service-learning in the STEM departments.

DIRECTIONS: For each of the four categories (rows), highlight or circle the number in the continuum that best represents the CURRENT status of student support for and involvement in service-learning in your campus STEM departments.

	Critica	l Mass Build	ling	C	Quality Buildi	ng	Sustaine	d Institut	ionali	zation	Explanation
STEM STUDENT AWARENESS	For STEM stu mechanism f about service resources, ar are available	or informing e-learning co nd opportun	g students ourses,	for informi service-lea and opport available to are sporad	e are some m ng STEM stud rning courses tunities that a o them, the m ic and concer	dents about s, resources, are nechanisms ntrated in	There are coordinated mechanisms (e.g., service-learning listings in the schedule of classes, course catalogs) that help STEM students become aware of the various service-learning courses, resources,				
(circle one)				flyers).	programs (e.	and opportu available to		at are			
	1	2	3	4	5	6	7	8		9	
STEM STUDENT OPPORTUNITIES	Few service-lopportunities students; onl service-learn available.	s exist for ST y a handful	of	service is in academic c only a certa in the STEN	rning options ntegrated in conses) are lian groups of Mepartment certain majorinos.	Service-learning options and opportunities (in which service in integrated in core academic courses) are available to STEM students in many areas throughout the STEM departments, .					
(circle one)	1	1 2 3			5	6	7	8		9	
STEM STUDENT LEADERSHIP	Few, if any, opportunities in the STEM departments exist for students to take on leadership roles in advancing service-learning			There are a limited number of opportunities available for STEM students to take on leadership roles in advancing service-learning			STEM students are welcomed and encouraged to serve as advocates and ambassadors for institutionalizing service-learning				



An Assessment Tool of the (STEM)² Initiative

(circle one)	in their depar	tment.		in their depa	artment.		in their depa	rtment.		
(circle one)	1	2	3	4	5	6	7	8	9	
STEM STUDENT	The campus I	nas neithe	r <u>formal</u>	While the ca	mpus offer	s some	The campus	has one or	more	
INCENTIVES AND	mechanisms (e.g., catal	ogued list	informal inc	entives and	rewards	formal mech	anisms in p	lace (e.g.,	
REWARDS	of service-lea	rning cour	ses,	(e.g., news s	tories in pa	per,	catalogued I	ist of servic	e-learning	
	special notati	on on stud	lents'	unofficial stu	udent certifi	icates of	courses, spe	cial notatio	n on	
	transcripts) no	or <u>informa</u>	<u>l</u>	achievemen	t) that enco	urage	students' tra	nscripts) th	at	
	mechanisms (e.g., news	stories in	and/or rewa	rd STEM stu	udents to	encourage a	nd/or rewa	rd STEM	
	paper, unoffic	cial studen	t	participate i	n service-lea	arning	students to	participate i	in service-	
	certificates of	achievem	ent) that	activities, th	e campus c	offers few or	learning acti	vities.		
	encourage or	reward ST	EM	no <u>formal</u> in	centives an	d rewards				
	students to pa	articipate	in service-	(e.g., catalog	gued list of s	service-				
(circle one)	learning activ	ities.		learning cou	rses, specia	I notation				
				on students'	transcripts).				
	1	2	3	4	5	6	7	8	9	



An Assessment Tool of the (STEM)² Initiative

DIMENSION IV: COMMUNITY PARTICIPATION AND PARTNERSHIPS

An important element for service-learning institutionalization is the degree to which the STEM departments nurture community partnerships and encourage community agency representatives to play a role in implementing and advancing service-learning in the STEM departments.

DIRECTIONS: For each of the three categories (rows), highlight or circle the number in the continuum that best represents the CURRENT status of community participation and partnerships in your STEM departments.

	Critica	al Mass Bu	ildina	Ou	ality Build	ina	Institution	alization	Explanation	
			9		unity Duna	9				- Apramatic
COMMUNITY	Few, if any,	community	agencies	Some, but n	ot the majo	ority of	Most commu	nity agenc	ies that	
PARTNER	that partner	-	_	community	=	· ·	partner with t			
AWARENESS	aware of the	e campus's	goals for	with the can	npus are a	ware of the	of the campus	s's goals f	or service-	
	service-learr	ning and th	e full range	campus's go	oals for ser	vice-learning	learning and t	_		
	of service-le			and the full	range of se	rvice-	service-learni	ng opport	unities that	
	that are avai	ilable to ST	EM	learning opp	ortunities	that are	are available t	o STEM st	udents.	
	students.			available to	STEM stud	ents.				
(circle one)										
	1	2	3	4	5	6	7	8	9	
MUTUAL	There is little	e or no und	lerstanding	There is som	ne understa	anding	Both the cam	pus and co	mmunity	
JNDERSTANDING	between the	e campus a	nd	between the	e campus a	ınd	representativ	es are awa	re of and	
	community	representa	tives	community	representa	tives	sensitive to ea	ach other's	s needs,	
	regarding ea	ich other's	needs,	regarding ea	ich other's	needs,	timelines, goa	ıls, resour	ces, and	
	timelines, go	oals, resour	ces, and	timelines, go	oals, resour	ces, and	capacity for d	eveloping	and	
	capacity for	developing	and	capacity for	developing	gand	implementing	service-le	earning	
	implementir	ng service-l	earning	implementir	ng service-l	earning	activities. The	ere is gene	rally broad	
	activities in S	STEM.		activities, bu	it there are	some	agreement be	tween the	e STEM	
				disparities b	etween co	mmunity	departments	and comm	nunity on	
				and STEM de	epartments	s' goals for	the goals for s	service-lea	rning.	
(circle one)				service-learr	ning.					
	1	2	3	4	5	6	7	8	9	



An Assessment Tool of the (STEM)² Initiative

COMMUNITY	Few, if any, o	portunitie	s exist for	There are a li	mited nun	nber of	Appropriate	community	agency
PARTNER VOICE &	community ag	gency		opportunities	available	for	representati	ves are forr	nally
LEADERSHIP	representativ	es to take o	n	community a	gency rep	esentatives	welcomed a	nd consiste	ntly
	leadership rol	es in advan	cing	to take on lea	dership ro	oles in	encouraged	to serve as	advocates
	service-learni	ng in STEM		advancing ser	vice-learn	ing in STEM	and ambass	adors for	
	departments;	community	y agency	departments	commun	ity agency	institutional	izing service	-learning in
	representativ	es are not		representativ	es are pro	vided	STEM depar	tments; con	nmunity
	consistently in	nvited or er	ncouraged	limited oppor	tunities to	express	agency repr	esentatives	are
	to express the	eir particula	ir agency	their particul	ar agency	needs or	provided sul	ostantial op	portunities
	needs or recr	uit student	and	recruit stude	nt and fac	ulty	to express tl	neir particul	ar agency
	faculty partici	pation in se	ervice-	participation	in service-	learning.	needs or red	ruit student	and
(circle one)	learning.						faculty parti	cipation in s	ervice-
							learning.		
	1	2	3	4	5	6	7	8	9



An Assessment Tool of the (STEM)² Initiative

DIMENSION V: DEPARTMENTAL SUPPORT FOR SERVICE-LEARNING

In order for service-learning to become institutionalized, the STEM departments must provide substantial resources, support, and muscle toward the effort.

DIRECTIONS: For each of the seven categories (rows), highlight or circle the number in the continuum that best represents the CURRENT status of STEM departmental support for STEM service-learning.

	Critica	l Mass Buil	ding	Qu	ality Buildir	ng	Sustaine	d Institutio	onalizatioi	n Explanation
COORDINATING ENTITY (circle one)	There are no STEM depart are devoted various camp the implement advancement institutionality learning.	ment leade to assisting ous constitu ntation, t, and	rs that the encies in	There are ST STEM departutilize service but the entite coordinate to provides ser constituency faculty) or lindepartments	tment leade re-learning a ty either doe hem exclusivices only to y (e.g., stude mited numb	rs who ctivities, es not vely or a certain ents, er of STEM	There are S STEM depa maintain a (e.g., comm clearinghou primarily to constituend implements and institut learning.	rtment lead coordinatination of the centure of the conture of assisting the conture of the contu	ders who ng entity er or e devoted he various	5
	1	2	3	4	5	6	7	8	9	
POLICY-MAKING ENTITY	The campus' influential po board(s)/cor recognize se essential edu STEM depart	olicy-making nmittee(s) c rvice-learnii ucational go	s lo not ng as an	The campus' influential posard(s)/cor service-learr educational departments policies have	olicy-making mmittee(s) r ning as an es goal for the s, but no for	g ecognize sential STEM mal	The campus's policy-making board(s)/committee(s) recognize service-learning as an essential educational goal for the STEM departments and formal policies have been developed or implemented.			
(circle one)	1	2	3	4 5 6			7 8 9			
STAFFING	There are no members on primary paid	campus w	nose	There is an a staff and/or campus who	faculty men	The campus houses and funds an appropriate number of permanent staff and/or faculty members who			ent	



An Assessment Tool of the (STEM)² Initiative

(circle one)	advance and service-learn			appropriate the advance institutional learning thr department appointmer	lization of se oughout the ts; however t nts are tempo oft money or	an support rvice- STEM heir prary or	understand who hold ap can support institutional learning in t	propriate t the advand ization of s	titles that cement an ervice-	
	1	2	3	4	5	6	7	8	9	
FUNDING	The campus' activities in S primarily by short-term g outside the i	STEM are su soft money rants) from	ipported (e.g.,	activities in both soft m grants) from campus as	s's service-le STEM are su oney (e.g., sh n sources out well as hard the campus.	pported by nort-term tside the money	The campus activities in primarily by campus or c department	STEM are s hard fundi irectly fron	upporteding from th	ne
(circle one)	1	2	3	4	5	6	7	8	9	
ADMINISTRATIVE SUPPORT	The campus' leaders have understandir in STEM, ofte other campu such as comi	little or nong of service of service of service of service of the	e-learning g it with efforts,	leaders have of service-le they do little learning a v	s's administra e a clear und earning in STI e to make se isible and im campus's wo	erstanding EM, but rvice- portant	The campus leaders und service-learn actively coo learning a vi part of the c	erstand and ning in STEI perate to m sible and ir	d support M, and nake servion portant	ce-
(circle one)	internship pr	ograms.	3	4 5 6			7 8 9			
ENGAGED STEM DEPARTMENT STATUS	The STEM de considered buniversity co	y the broad	der	The STEM departments are considered to be emerging engaged departments by the			The STEM d considered engaged de	o be advar	nced	



An Assessment Tool of the (STEM)² Initiative

	engaged de	partments.		broader univ	versity con	nmunity.	broader uni	versity com	nmunity.		
(circle one)	1	2	3	4	5	6	7	8	9		
EVALUATION & ASSESSMENT	There is no ounderway for account for quality, and learning actions.	or STEM dep for the numb impact of so	oartment oer, ervice-	An initiative number, qua service-learr place throug departments	ality, and in a sing activity the second in	mpact of ties taking te STEM	An ongoing place to acc quality, and learning act place throu department	count for the limpact of stitution in the stitution in the State of th	e number, service- are taking		
(circle one)	1	2	3	4	5	6	7	8	9		