

Visuals in Major Applications: Why, with Samples

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Information-Dense Visuals:

University Initiatives uses these in applications that have resulted in close to \$50M total awards, including the recent \$8M START educational research award from the USDE Office of Postsecondary Student Success Grant Program (PSSGP)

Visuals: Why



Major applications present condensed and complex material. Visuals -

- 1. Increase clarity of presentation.
- 2. Make economical use of precious space.
- 3. Are understandable to program officers and reviewers who are highly advanced readers.

FRESN@STA

Types of Visuals



- 1. Showcase 'pretty' graphs from external sources
- 2. Demonstrate research is aligned w/ program design
- 3. Map implementation (management, milestones, timeline)
- 4. Present evaluation plan (from data and methods to inputs and outcomes)
- 5. Analyze allocations (effort, budget)
- 6. Document meaningful comparisons (e.g., Valley vs. coastal California)



Pretty Graphs from External Sources: High Value (...but not mainstay)

The U.S. Department of Commerce's Bureau of Economic Analysis most recent information shows the personal income gap between citizens in Fresno County and the State of California or the U.S.:

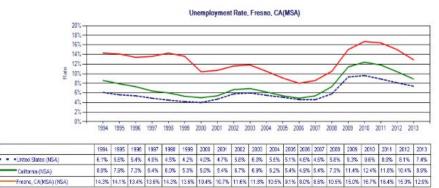




Pretty Graphs from External Sources: High Value (...but not mainstay)

RECON charts also show with clarity that chronic unemployment situation in Fresno County,

compared to both the State of California and the United States:



SA = Sessonally Adjusted, NSA = Not Seasonally Adjusted.

Source: Bureau of Labor Statistics (Haver Analytics) Data Updated 4/18/2014 Recessions: 301 - 11/01 and 12/07 - 6/09.



Mainstay Visuals

These present material that is integral to your application. These visuals tend to be high impact information, and each is adapted to the major application under development.



Research Sources Aligned w/ Program Design:

Two Samples of Tables Adapted for Individual Major Applications



Left Column: Best practices to support graduate students.

Right Column:
Discussion of
national research
recommendations
and evidence

iii. Table Summarizing RATIONALE: B	est Practices in Project Design Are Supported by
Research (note: list of research consulted	
Best Practices	Elaboration from National Research
Substantially reducing debt for students and in a manner sustainable for the university.	Debt has a negative impact on graduate school enrollment among Hispanic STEM students. For this reason, national postsecondary education organizations recommend student debt be
Note: It speaks well of CSU students that no CSU campus has a loan default rate greater than 6.7% (LAO, February 2017).	minimized. Hispanic students have an aversion to significant debt because they can be at greater risk of loan default. This prompts many to choose the relative low-cost, lower debt accumulation pathways of community colleges and/or HSIs (Dowd and Malcom, May 2012; NAS, 2011; Dowd and Coury, 2006). In a study of the impact of debt on enrollment in graduate study, of Hispanic students holding STEM bachelor's degrees, 51.3% were 'typical' borrowers and 20.8% were 'heavy' borrowers, and this had a negative impact on their decisions to enroll in graduate study. In sum, "debt can stifle post-baccalaureate educational opportunity" (Malcolm and Down, Winter 2012; quote, 294).
Academic supports with proven effectiveness are coupled with social integration activities in order to maximize benefits to target student population.	The best academic and social supports identified in literature—such as Affinity Research Teams, immersive summer research experiences, meaningful cohort activities—are offered to students from entry to exit; on-going graduate faculty advising keeps students on course. The experiences also encourage science identity salience that impacts positively graduate school enrollment. (See NAS, page 10, 2011; Merolla and Serpe, 2013)
Independent Evaluator has developed an evaluation plan tailored to Finish in Five, with a feedback loop to ensure results are integrated into on-going project management and with a data collection plan sufficient to meet demands of DOE reports and peer reviewed publication.	National research recommends institutions engage in customized research examining graduate education programs, especially levels of student success and satisfaction in course/instructor evaluation methodologies. Customized research assists each institution in identifying best practices that maximize the use of faculty resources while meeting the needs of the institution's student population. Such evaluation has the cumulative benefit of increasing student enrollment and retention.
Dedicated Graduate Faculty Research Advisors mentor students every step of the 4 + 1 disciplinary pathways, from	Hispanic students need to engage early in research and co-author posters and papers as well as journal articles with faculty as part of their out-of-

Left Column: Findings from Graduate Culture Task Force

Right Column: Program
Components
corresponding to each
finding in the Graduate
Culture Task Force report.

Reported Relevant Findings from the			How Proposed Project Addresses Relevant				
Graduate Culture Task Force: May 2009			Findings				
1.	Best practice institutions build community by having students across disciplines come together to connect and engage in scholarly activity.	1.	Dedicated library and research support will give online graduate students the same opportunity to engage in rich research and come together at conferences and symposia.				
2.	Faculty members are the lynchpin in graduate education and are central to the quality of graduate students' experiences and to student interest in enrolling in graduate programs.	Lance	Faculty members will receive training to be the highest quality teachers and mentors of online graduate students. Faculty and advisors will receive training specific to mentoring online graduate students, especially Hispanic, first				
3.	Fresno State graduate students want more interaction with faculty and fellow graduate students as well as more academic and career planning support, and a space dedicated to graduate education, so they are not so isolated in their programs' research areas.		generation, and/or low income. Online cyber cafés, chat rooms, study groups, and across-the-board support services will be central features in the new virtual online graduate campus and culture. A range of Peer Consultants (e.g., writing, statistics, research, computer skills) will be readily available. Students will be				
4.	Graduate culture is greatly facilitated at best practice institutions by having a space allocated for graduate student use (which Fresno State did not provide at the time, physical or virtual).	4.	supported to present research (individually or in teams) at research conferences and symposia. The proposed project creates a virtual online graduate campus and culture for students throughout the Valley, one replete with dedicated staff and services				

described

Implementation (Management, Milestones, and Timelines):

Two Samples of Tables Adapted for Individual Major Applications

Each program component is broken out, w/ quantifiable outcomes such as "60 new work-based opportunities annually"

v. Plan clearly and comprehensively describes the five-year plan to						
	10/1/2020-9/30/ 2021	10/1/2021-9/3 0/2022	10/1/2022-9/3 0/2023	10/1/2023-9/3 0/2024	10/1/2024-9/3 0/2025	Post-10/1/2025
Project Leadership			É.			
President (Chair) and Provost (PD) convene two meetings with project leadership (Deans, Co-PDs; College-based Coordinators) and with External Evaluator to 'get all stakeholders' on page and give full support to launch project (Y1) and maintain (Y2-Y5).	Fall convening held during month of October. Spring convening held during month of May.			Provost assumes responsibility to discuss progress and expansion with Academic Affairs Leadership Team ("AALT")		
Project Components						
Guided Pathways - Deans meet with College-based Coordinator to identify which departments have pathways and which departments need pathways; to improve current pathways and to develp new pathways; to disseminate to chairs, faculty, and advisors; disseminate to majors at orientations (college, departmental).	Guided pathways drafted - all departrments					Chair assumes responsibility to update departmental pathways and distribute to faculty and advisors through multiple venue (meetings, online) and at events such as orientation, outreach
Guided Pathways - Deans meet with College-based Coordinators to review evaluation findings related to all pathways; improve as needed				ways, annually ive disseminati		
"Plus" #1 - Affinity Research Teams - Deans meet with College-based Coordinator to plan faculty training and to recruit faculty who teach the lower division courses. Faculty training held in summer, with online, follow-up, year-long faculty learning community. Faculty implement Affinity Research Teams in two courses they teach.	Curriculum drafted. 30 faculty trained + 60 courses w/ res. exp.					The total of 150 faculty trained, with deliver in 300 lower division courses, exceeds minimum needed to ensure all STEAM students have at least on research experience Local profesional developments funds will t
"Plus" #1 - Affinity Research Teams - Deans meet with College-based Coordinators to review evaluation findings related to faculty training and success of Affinity Research Teams in courses; revise as appropriate		One summer institute with online, follow-up, year-long faculty learning community. 30 new faculty trained and 60 new courses w/ research experiences, annually.			trained and	used to train new faculty members
"Plus" #2 - Work-based Opportunities Deans meet with College-based Coordinator to draft plan to expand work-based opportunities. The three Colleges combine enroll 2,140 students annually (freshman and transfer). Given the timeliness degree completion (4 years / 8 semesters), a minimum of 268 work-based opportunities would need to be developed for every student to have at least one opportunity during their university journey.	Development plan drafted, approved. 60 new work-based opportunities					300 work-based opportunities developed (total).
"Plus" #2 - Work-based Opportunities Deans meet with College-based Coordinators to review evaluation findings related to work-based opportunities; revise as appropriate; annually thereafter	C. Brandell on	60 new work-based opportunities, annually				
"Plus" #3 - Collaborations w/ Employers - Deans meet with College-based Coordinator draft formal plan to increase collaborations with regional employers, including to identify research responsive to regional employers needs and priorities.	Development plan drafted, approved. 10 new collaborations established					50 work-based opportunities developed (total).
"Plus" #3 - Collaborations w/ Employers - Deans meet with College-based Coordinator draft formal plan to increase collaborations with regional employers, including to identify research responsive to regional employers		10 new collaborations established, annually				

Each key task has a milestone with a specific date to achieve

Tasks/Activities	Milestones	Timetable Immediate Convening: October, 1st week. Leadership Council rolls out initiatives: November 1-30, 2020	
Start Up Establish and convene Leadership Council	Convene Leadership Council; formalize its structures and communication roles; launch processes; by end of Year One, plans for all six components collected in unified Master Plan. First thorough review based on annual written evaluation report.		
Leadership Council launches a thorough, current needs assessment	Ensures project planning is informed and responsive to just-in-time assessment of capacity of university and of three Colleges.	Assessment Complete: December 1 Annually thereafter	
Coordinate work with Faculty Liaisons and 1st year course faculty, and hire project staff.	Recruit Faculty Liaisons, 1st year course faculty. Hire project assistants.	Oct 1-Nov 30. Staff start date: Dec 1, 2020 (latest)	
External Evaluator: Start-up Meeting. Stakeholders include Deans, Chairs, College-based Coordinators, and assigned analyst from Institutional Research Office. Evaluation Workgroup formed.	Evaluation Workgroups formed. Milestones that gauge effectiveness and progress of components and project as a whole understood by all stakeholders as well as how these will be used to assess project performance.	Evaluation Workgroup formed; Milestones: Nov 15, 2020 On-going, thereafter	
College-based Coordinators hold first of regular monthly meetings to plan six components: (i) guided pathways; (ii) WBLOs; (iii) ARGs; (iv) collaborations with regional employers; (v) career and financial planning for 1st year courses; (vi) building endowment	Plan for each component drafted and approved. Plans completed working with constituents as appropriate, e.g., college-based Directors of Development to secure matching funds or faculty to develop career and financial planning for permanent, first year course curriculum.	Plans, drafted and approved, Dec 1 Reviewed and updated each semester, thereafter	
Leadership Council working with College-based Coordinators collects plans for six components into unified Master Plan.	Gets all stakeholders on the same page; clarifies goals and objectives for components and project in its entirety; identifies roles and responsibilities including job descriptions; clarifies timeline for implementation	Master Plan, approved: January 1 - 31, 2021	

Evaluation (from data and methods to inputs and outcomes):

Three Samples of Tables Adapted for Individual Major Applications



Each key program component has data and method specified, along with analysis and utilization by CSU, Fresno

iii. Table Summary – Methods To Provide Performance Feedback and Permit Periodic Assessment Toward Outcomes						
Program	Data Co	ollection	Data Analysis	Utilization		
Component	Data	Method	Data Allalysis	Othization		
1 pathways implemented. from # of outreach events and follow up actions. Number review		Document review. Data from Office of Institutional Effectiveness. Budget review, especially financial return-on-investment.	from Office of Institutional enroll and persist over baseline/ previous year. Analysis of financial return-on-investment (e.g.,			
Implement High Impact Experiences	Annual usage of all experiences (Affinity Research Teams, Summer Research Experiences, cohort activities, internships). Student satisfaction with these experiences.	Tracking usage. Student survey results, feedback from student cohorts (collected by College-based Coordinators)	Increase in quantity until saturation level is reached for each discipline. Increase in quality of student response over baseline/previous year. Content analysis of student responses to improve experiences and to assess factors such as science efficacy, identity and values.	Analytics for each resource will be reviewed by the program personnel semi- annually. Student comments will inform additional enhancements.		
Graduate Faculty Research Advisors develop research experiences	# of graduate students with meritorious research projects. Feedback from students on satisfaction with research experiences (e.g., Affinity Research Teams, Summer Research Experiences).	Tracking # of research projects and follow-up presentations and publications. Tracking participation in Summer Research Experience. Feedback forms (available in-person and online) for students.	Increase in quantity of use until saturation level is reached for each discipline. Improve quality of research experience, based on feedback as well as any new evidence in national literature, for example, new findings from CUR on Affinity Research Group model.	Results of the evaluation will be discussed with and among Graduate Faculty Research Advisors. Results will be disseminated university-wide for graduate faculty in all disciplines.		
Graduate Faculty Development	Faculty attendance at Teaching Effectiveness Workshops; teaching	Records. Analysis of teaching materials for new strategies, practices,	Graduate faculty satisfaction with Workshops and with results in their classrooms	Make new teaching materials available to campus and to CSU.		

Note: For a five-year project, sponsors will want to see three outcomes: short-term, mid-term, and long-term

(1) The extent to which the proposed project demonstrates a rationale. [Logic Model]

LOGIC MODEL [THEORY OF CHANGE]

Inputs	Activities	Short-term outputs	Mid-term outputs	Long-term outcomes	
Leadership Group (Presidents, Provosts, Deans, PD, Key project stakeholders)	Hold biannual Convenings. Review and discuss program reports at biannual Convenings. Make recommendations.	Concrete recommendations from executive leaders, based on data and evidence in reports	Project has improved performance based on regular and informed recommendations from executive leaders	Refined final project, based on evidence and informed guidance from Leadership Team	
WHCC and WHCL PD, faculty, and staff (Imposter Phenomenon/ IP interventions)	Experts from professional societies lead professional development in IP interventions for faculty and staff.	Launch of IP interventions at WHCC and WHCL by well- trained faculty and staff.	Growing body of WHCCD faculty and staff trained in delivery of effective IP interventions.	A substantial body of well-trained faculty and staff to implement IP interventions across the West Hills colleges.	
Faculty, PD, and Key project stakeholders deliver bachelor's degree courses in Psych and Crim pathways, to good		1st courses launched at WHCC and WHCL with quality faculty and with good course availability and classroom location.	Delivery of upper division bachelor degree courses (Psych, Crim) at WHCC and WHCL satellite centers, with stable faculty, classrooms, and times.	Efficacious delivery of upper division bachelor degree courses (Psych, Crim) at WHCC and WHCL satellite centers.	
CSU Fresno project team; upper division WHCCD transfer students at CSU Fresno; CSU Fresno dorms, dining hall, and campus	Plan delivery of Summer Bridge Experience for WHCCD transfer students who have enrolled at CSU Fresno.	First SBE offered to build WHCCD transfer student social capital; sense of belonging; knowledge of academic resources, and expose to	Effective SBE tailored to WHCCD transfer student needs. Growing body of upper division WHCCD transfer students who are	An established and tested Summer Bridge Experience tailored to be effective with WHCCD transfer students.	

Who does what and when to assure sponsors that program supported by taxpayer dollars is being implemented with care.

Table Summarizing Title V- B Monitoring Procedures						
Regular Staff Meetings, Time & Effort Reports	Title V - B Project Director will meet monthly with staff; Dean; Graduate Student Ad Hoc Planning Committee; involve other faculty and staff as appropriate.	Time & Effort Reports, submitted monthly by all Title V - B personnel to Post-Award Office.				
Monthly Progress Reports; Monthly Budget Reports; Yearly Audits	Reports will reflect progress toward objectives; include problems, with remedies. Post-Award Office will prepare Monthly Budget reports for Project Director's review. Annual audits by external auditors.	Monthly Progress Reports completed by Project Director at end of month and submitted to Dean and Provost (who inform President). Budget reports: Post-Award Office. Audits: External Auditors				
Mid-Year (Formative) Report	Reports will identify progress toward activity objectives, problems, and remedies proposed to address problems.	Completed by the Project Director, CREAD; submitted to both Dean (Co-PI) and Provost (PI); they inform President (Chair), who discusses with the Community Graduate Advisory Council				
End-of-Year (Summative Reports)	These reports will summarize progress to date in meeting all objectives, include recommended actions for adjusting objectives or problems corrections. Published on Title V - B website.	Completed by Project Director, CREAD:submitted to Co-PI and PI; they submit to President, who discusses with the Council.				

Allocations: Effort and Budget

Three Samples of Tables Adapted for Individual Major Applications



Allocation is clarified for each budget line item with explanation of its purpose.

Category = +	% Total Budget	Purpose of Funds To Ensure Project Delivery and Sustainability
'People Costs' - rounded per	rcentages (%) include salary and fringe benefits.
Graduate Faculty Research Advisors	21%	Mentoring students along 4 + 1 pathways. Participating in "Teaching Effectiveness Workshops" and revising learning activities and materials to increase effectiveness with Hispanic students.
College-based Coordinators	24%	Manage cohort-based enrollment and activities, collect feedback from student cohorts.
College-based Project Assistants	3%	Logistical support so that valuable time of graduate faculty and coordinators is not expended on tasks that are routine but necessary
Tech Support	1%	Research projects will have correct tech set up
External Evaluation	8%	Thorough assessment, folded into on-going program management; supports program outcomes measures and social processes measures
External Experts: Teaching Effectiveness Workshops	4%	Annual and intensive faculty development to increase effectiveness with Hispanic learners
Guest Speakers	3%	Role models to inspire Hispanic students to follow their dreams and to strengthen their science identity
Four (4) community college partners	12%	Broaden transfer student pipeline through dedicated faculty mentors who provide clear course pathways
Graduate Student Summer Research Experiences	14%	Student participation in intensive, high impact research experiences, especially as these lead to quality graduate theses.
Graduate Students manage modest research budget	1%	Students gain practice in money management, reinforcing their financial literacy education.
Travel: Faculty	2%	Enhanced networking and dissemination
Travel: Graduate Students	4%	Students attend and/or present at conferences
Supplies	1%	Science supplies are adequate for research projects (e.g., growth media, molecular bio reagents)
Fees for Access	1%	Sufficient access to federally-funded specialized services and equipment at California campuses.

Charts shows well planned allocation of scholarships with detail (above + below)

TABLE. Number and Size of scholarships each year and during duration of grant

Each Fall, a cohort of 11 Scholars will be recruited, for \$10,000 scholarships x 2 years. Nine students who enrolled as freshmen or transferred to CSU, Fresno will be supported with 60% of Track 1 funds ("X"), and an additional two transfer students will be supported with 64% of Community College Collaboration Incentive funds ("Y").

U	20. (5.5) 12 10 10 45 (5.10)					·
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Cohort 1	9X1 + 2Y1	9X1+2Y1				11
Cohort 2		9X2+2Y2	9X2+ 2Y2			11
Cohort 3			9X3+ 2Y3	9X3+ 2Y3		11
Cohort 4				9X4+ 2Y4	9X4+ 2Y4	11
# scholarships	11	22	22	22	11	88
# students	11	22	22	22	11	44
1-year total	\$110,000	\$220,000	\$220,000	\$220,000	\$110,000	\$880,000

"X" (CSU, Fresno) = 9 scholarships x 4 cohorts x 2 years = 72 x \$10,000 = \$720,000 (60%)

"Y" (CC) = 2 scholarships x 4 cohorts x 2 years = 16 x \$10,000 = \$160,000 (64% of CC funds)



Left column: Detail on allocation of Key Personnel.

Right column:
Justification for that allocation.

Main Resource How It Provides Support for Key Project Activities Project Director Ensures constant coverage, commitment, daily responsibility and accountability to deliver the project. Delivers training, builds capacity of (100%) graduate faculty throughout departments and colleges. Develops, collaborates and/or coordinates development of all online resources and services. Ensures library research skills for graduate-level work are supported by a Dedicated Librarian (30% full range of offerings, with many online tutorials, guides, and tools for each main category of help, e.g., General Research Skills; Finding annually) Articles; Citing Sources; Using Databases; and General Orientation; available for one-on-one online chats with graduate students and maintains a questions forum; works one-on-one with graduate faculty to help integrate all library services, resources, and holdings into courses. Ensures that all online graduate students have the same opportunities as Graduate Mentor (20% annually) on-campus graduate students to participate in rich research experiences and to explore and apply to PhD programs and highly skilled jobs. Outreach Ensures effective outreach to Hispanic communities in the Valley. The Outreach Specialist, Imelda Santacruz-Dudley, is originally from Madera Specialist (100%) (Central Valley) and will bring valuable, lifelong experience in the Valley's Hispanic culture and communities to her work. Graduate Faculty Enables participation from graduate faculty. Faculty will be assisted in developing online courses responsive to Hispanic student needs; using Development pedagogy that promotes learning; evaluating online courses in terms of Support student learning outcomes; being effective in graduate level advising and mentoring; implementing course design to make learning more active, collaborative, and meaningful to nontraditional graduate students. Ensures full logistical support for campus-wide effort; ensures time of Dedicated Project project leadership is not whittled away by demands and tasks that could Assistant be handled by a dedicated project staff assistant. Graduate Students: Enables greater Hispanic student enrollment and persistence. Supports Direct Financial Hispanic student performance and recognition of achievements. Three forms of support: Assistance A. Participating in research conferences B. Working as Peer Consultants (writing, statistical, computer skills, push-in) C. Participating in career-related internships Library Electronic The electronic holdings to be acquired include but are not limited to-Holdings EBSCO EBook Subscriptions (cost effective; purchased at prices available to CSU system) EBook Subject Sets for new online graduate programs EArchives EResources Only electronic holdings that allow unlimited access with be acquired. Please see line items in Activity Detail Budget Form for exact purchases to be made.

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Don't forget comparisons: Program Officers and Reviewers may never have been to California or only think of coastal California (LA, Bay Area, etc.)

Three bottom rows: San Diego, San Francisco, and Los Angeles data clarifies the difference with 8 counties of San Joaquin Valley

County	High School Grad or Higher			Bachelo	Bachelor's Degree or Higher			y Level*
7.	ALL	White	Hispanic	ALL	White	Hispanic	High School Grad	Bachelor's Degree
Fresno	74.7%	92.2%	59.2%	20.1%	31.4%	8.9%	20.5%	5.2%
Kern	73.8%	74.4%	56.5%	15.8%	15.4%	6.7%	19.1%	4.5%
Kings	72.9%	90.4%	56.5%	13.0%	20.2%	5.6%	18.4%	3.4%
Madera	71.6%	74.3%	51.8%	13.8%	14.7%	6.5%	19.8%	7.7%
Merced	68.9%	75.6%	53.3%	13.8%	15.8%	6.1%	17.4%	5.6%
San Joaquin	78.4%	90.7%	61.9%	18.1%	23.2%	7.0%	15.3%	5.9%
Stanislaus	77.8%	80.7%	60.8%	16.7%	17.2%	7.3%	14.9%	5.5%
Tulare	68.6%	69.3%	53.3%	13.8%	14.2%	6.0%	23.0%	5.3%
			Con	parison Co	unties			
San Diego	86.7%	87.7%	67.6%	37.4%	38.3%	16.3%	14.2%	5.2%
Marin County (San Francisco)	93.2%	96.4%	68.1%	57.5%	62.2%	22.2%	11.0%	3.8%
Los Angeles	78.2%	94.5%	59.8%	31.2%	48.8%	11.8%	16.5%	6.5%

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