ORIGINAL PAPER Open Access

Advancing research opportunities and promoting pathways in graduate education: a systemic approach to BUILD training at California State University, Long Beach (CSULB)

Guido G. Urizar Jr[1*†], Laura Henriques[2†], Chi-Ah Chun[1], Paul Buonora[3], Kim-Phuong L. Vu[1], Gino Galvez[1] and Laura Kingsford[4]

From The Annual Diversity Program Consortium Meeting 2015, and subsequent annual meetings
National Harbor, MD, USA. 27-28 October 2015

Abstract

Background and purpose: First-generation college graduates, racial and ethnic minorities, people with disabilities, and those from disadvantaged backgrounds are gravely underrepresented in the health research workforce representing behavioral health sciences and biomedical sciences and engineering (BHS/BSE). Furthermore, relative to their peers, very few students from these underrepresented groups (URGs) earn scientific bachelor's degrees with even fewer earning doctorate degrees. Therefore, programs that engage and retain URGs in health-related research careers early on in their career path are imperative to promote the diversity of well-trained research scientists who have the ability to address the nation's complex health challenges in an interdisciplinary way. The purpose of this paper is to describe the challenges, lessons learned, and sustainability of implementing a large-scale, multidisciplinary research infrastructure at California State University, Long Beach (CSULB) – a minority-serving institution – through federal funding received by the National Institutes of Health (NIH) Building Infrastructure Leading to Diversity (BUILD) Initiative.

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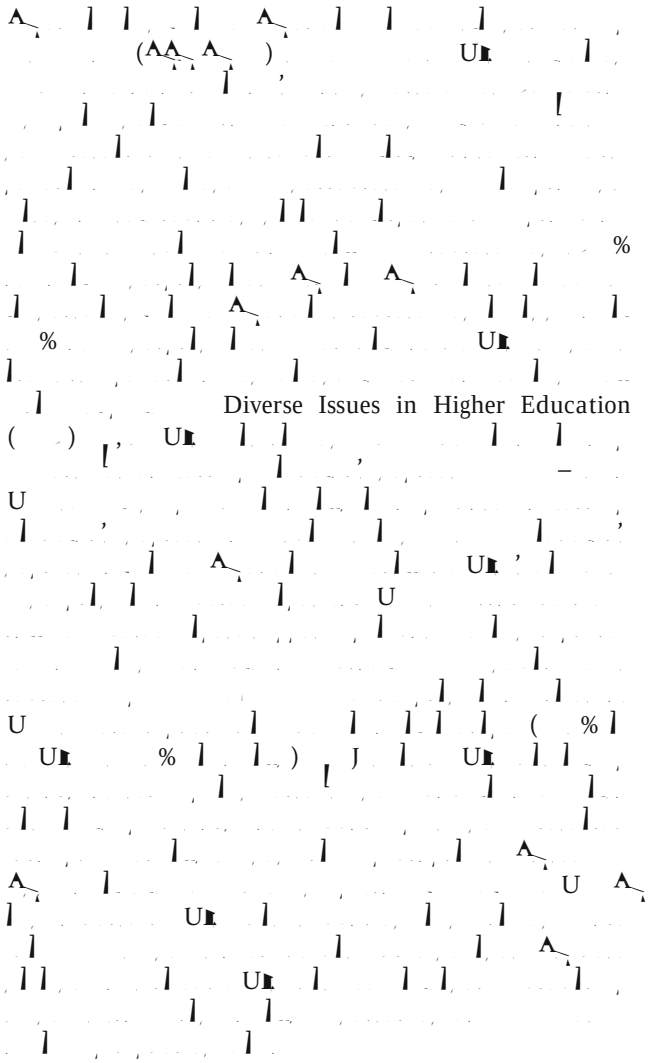
* Correspondence: guido.urizar@csulb.edu



Diverse Issues in Higher Education

Planning for CSULB BUILD (the AHORA initiative)

builds a unique alliance between the different health research disciplines at CSULB in order to bring together often disparate areas of science

Career Exploration

Introduction to Research Methods

Introduction to Health Disparities

Scientific Research Communication

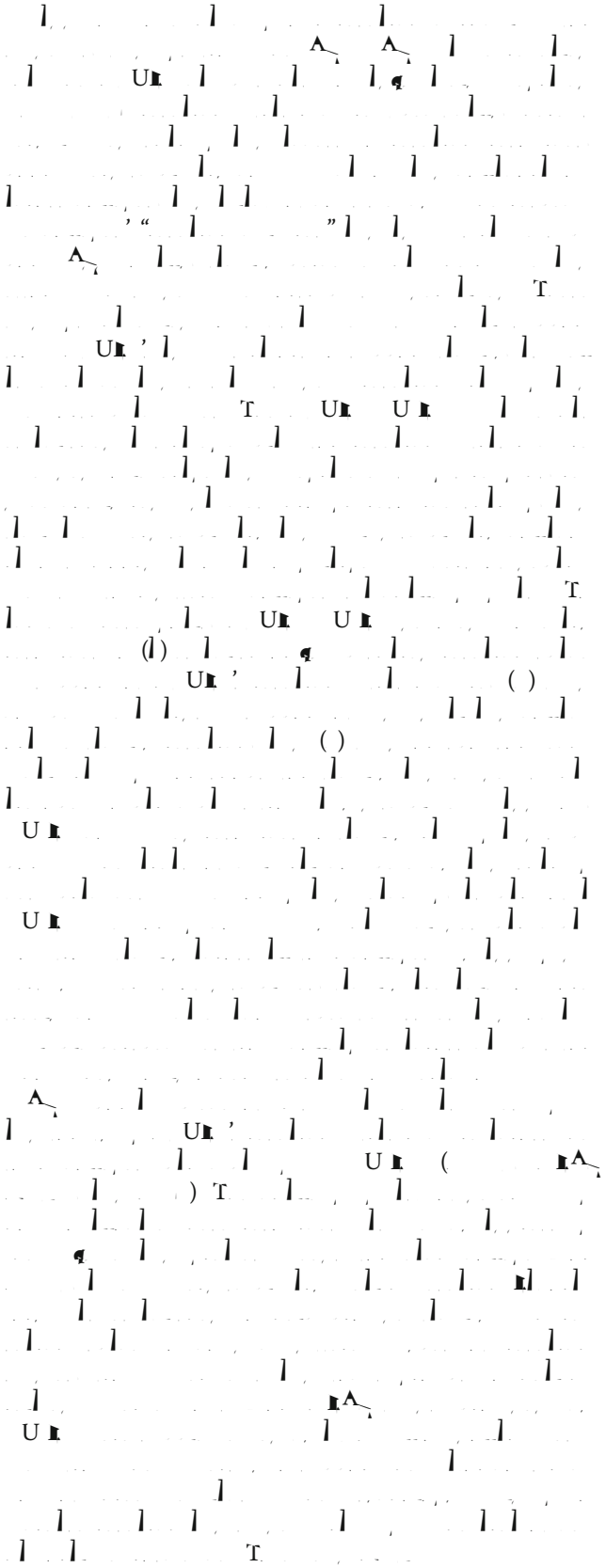
Advanced Research Design & Methods

the Introduction to Research Methods

please see

for an overview of student learning goals across the courses

Fortifying the research infrastructure



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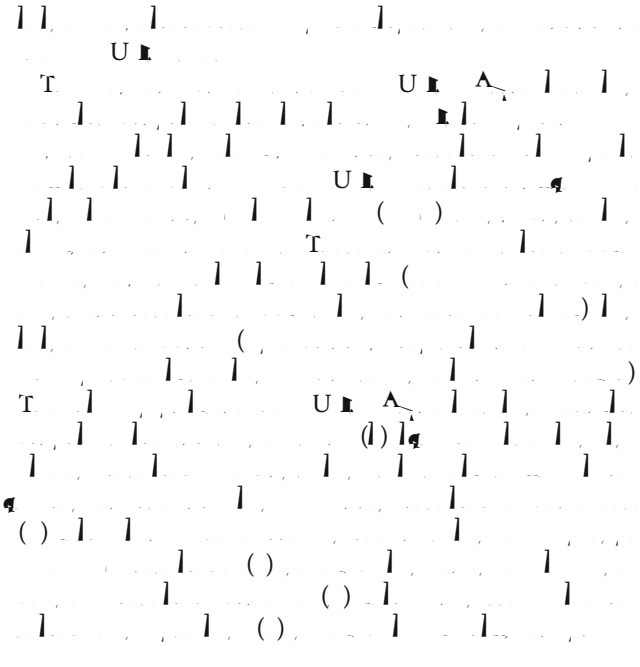


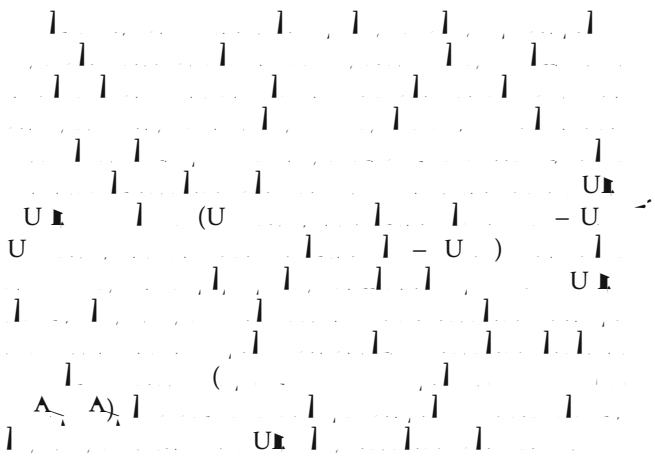
Learning community seminar

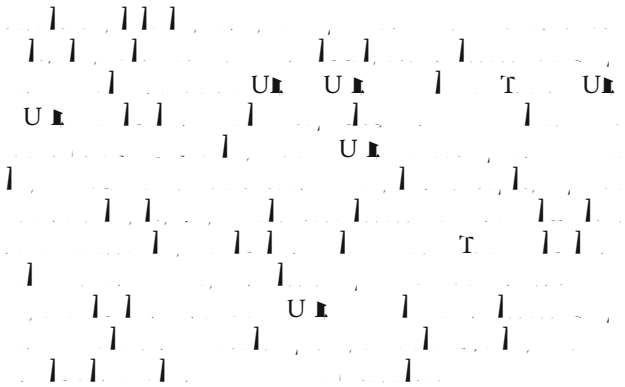
why

what

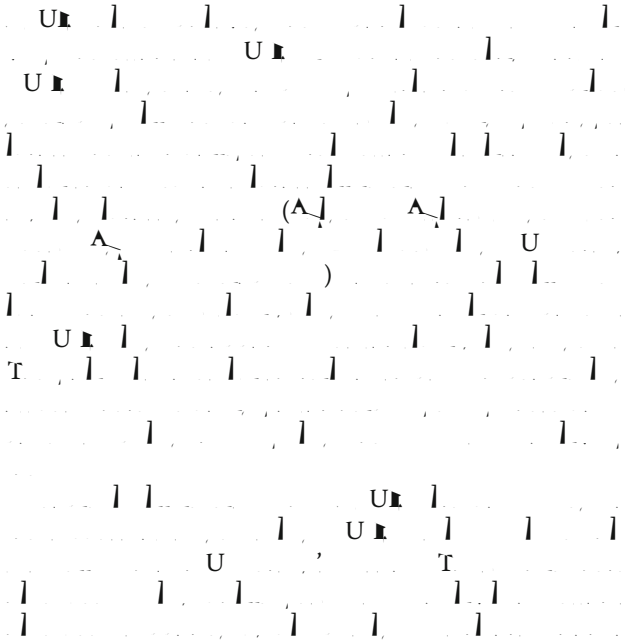
teers In Service To America –

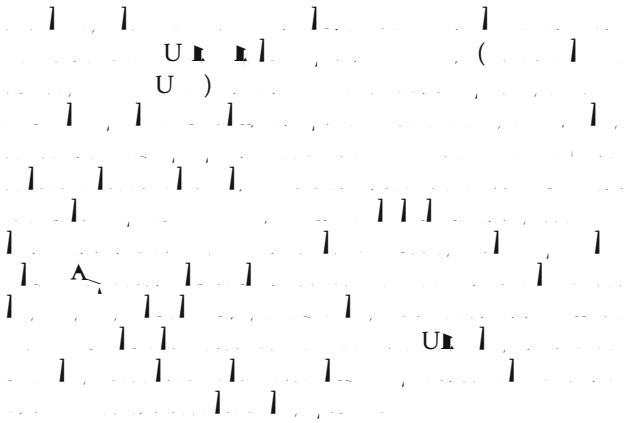
Pipeline partnerships





Institutionalization efforts for sustainability





Additional files

Additional file 1: Selected list of past and current student research training programs at California State University, Long Beach (CSULB). This file includes a selected list of past and current student research training programs at CSULB by program name, dates of operation, program methods and objectives, and key findings and results. (DOCX 22 kb)

Additional file 2: Overview of student learning goals and skill development from research curriculum at California State University, Long Beach (CSULB). This file includes an overview of the student learning goals for each of the courses developed to be part of the BUILD (and campus) research curriculum. (DOCX 22 kb)

Acknowledgements
We thank the National Institutes of Health, the campus administrators and staff at CSULB, our advisory board members, and our community college and research partners, as well as our BUILD faculty mentors, our BUILD team, and students and their families for all of their contributions to make the CSULB BUILD initiative a success.

Funding
Work reported in this publication was supported by the National Institutes of Health Common Fund and Office of Scientific Workforce Diversity (USA). Publication of this article was funded by the CEC awards U54GM119024 and U54GM119024–03:S1 administered by the National Institute of General Medical Sciences (NIGMS). This work was supported by grants administered by NIH-NIGMS under Award Numbers: UL1GM118979; TL4GM118980; RL5GM118978. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

Availability of data and materials
Not a data-based article.

About this supplement
This article has been published as part of BMC Proceedings Volume 11 Supplement 12, 2017: The Diversity Program Consortium: Innovating Educational Practice and Evaluation Along the Biomedical Research Pathways. The full contents of the supplement are available online at https://bmcproc.biomedcentral.com/articles/supplements/volume-11-supplement-12.

Authors' contributions
This manuscript included writing contributions by all of the authors representing their different roles on the CSULB BUILD initiative. The first two authors (Urizar and Henriques) provided extensive work in writing different sections of the manuscript while providing final edits to make sure that all sections met journal guidelines. All authors have read and consented to the authorship on this version of the manuscript.

Authors' information
Guido G. Urizar Jr. (BUILD Principal Investigator), Chi-Ah Chun (BUILD program director, Student Training Core), Kim Vu (BUILD program director, Institutional Development Core), and Gino Galvez (CSULB BUILD evaluation consultant) are in the Department of Psychology at California State University, Long Beach (CSULB). Laura Henriques (BUILD community college coordinator) is in the Department of Science Education at CSULB. Paul Buonora (BUILD program director, Research Enrichment Core) is in the Department of Chemistry and Biochemistry at CSULB. Laura Kingsford (BUILD Principal Investigator) is the Dean of the College of Natural Sciences & Mathematics at CSULB.

Ethics approval and consent to participate
The CSULB BUILD Initiative was conducted in full compliance with ethical standards and approved by the Institutional Review Board at California State University, Long Beach.

Consent for publication
Not applicable

Competing interests
There are no conflicts of interest in this manuscript with any of the authors in any way.

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Author details
[1]Department of Psychology, California State University, Long Beach, CA 90840, USA. [2]Department of Science Education, California State University, Long Beach, CA 90840, USA. [3]Department of Chemistry & Biochemistry, California State University, Long Beach, CA 90840, USA. [4]College of Natural Sciences & Mathematics, California State University, Long Beach, CA 90840, USA.

Published: 4 December 2017

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