



Project POPPY: Preparing Observational Practitioners through Partnerships Yearlong

CSUMB Reform, Project POPPY: Preparing Observational Practitioners
through Partnerships Yearlong

A Proposal for the Teacher Quality Partnership Grant Program

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University Corporation at Monterey Bay

Dr. Erin M. Ramirez



California State University
MONTEREY BAY

Project POPPY

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Project Narrative

Rationale

The California State University (CSU) is a network of 23 campuses whose central mission is educator preparation. The CSU prepares 10% of the nation's teachers and is the single largest preparer of teachers for the state of California and the nation. Even so, teacher recruitment and training in California has not met the evolving demand for highly-qualified teachers (Commission on Teacher Credentialing, [CTC] 2018). In fall 2017, 80% of California K-12 districts reported teacher shortages, with more than 90% of said districts stating shortages worsened from the previous school year (Sutcher, Carver-Thomas, & Darling-Hammond, 2018). This is exacerbated in high-poverty districts that serve vulnerable, underrepresented minority students with large concentrations of English Learners (EL) and students of color (Learning Policy Institute, 2016). CSU Monterey Bay's (CSUMB) tri-county service area (Monterey, San Benito, and Santa Cruz) reflects this need as 80,000 students in Monterey County, 41% are classified as ELs and 72% of students are economically disadvantaged.

While California's Central Coast has an overwhelmingly large K-12 minority student population, only 38% of elementary and secondary teachers are underrepresented populations (Ed-Data, 2018). Further, Monterey County schools serve the second highest percentage (41.2%) of students identified as ELs in California and the highest number of migrant students in the US; however, the graduation rate for ELs is 68.9%, below the state average of 71.4%. These data highlight an urgent need for LEAs in Monterey County to respond to issues of educational access and opportunities for ELs and the teachers who serve them. This need is magnified in Science, Technology, Engineering, and Mathematics (STEM) fields and literacy/bilingual after the passage of Proposition 58 which reinstated bilingual education in California.

Alarming, California ranks first in the nation in terms of Americans lacking basic literacy skills at 23% and almost last in terms of spending per pupil in K-12 ranking 46 of 50 (NCES, 2013). To address the needs of our county, CSUMB formed a community partnership, The Bright Futures Education Partnership, to foster progress in education outcomes for local students and improve the pipeline of talent within Monterey County. This partnership utilizes community resources and CSUMB as a catalyst for improvement of educational outcomes using data to drive decisions. The partnership stemmed from Monterey County's illiteracy rates; the 6th lowest in the state among those 16 years of age or older at 28% (NCES, 2013). Based on data from the Bright Futures Education Partnership, 3% of Monterey County's ELs are meeting grade level standards in math and only 5% are meeting grade level standards in English Language Arts (ELA). Further, only 3% of Monterey County's ELs complete California's A-G requirements (courses students must pass with a C). Thus, it is imperative to support the educational needs of ELs in our tri-county region by preparing a teaching workforce that reflects the population we serve, and is highly-qualified to teach STEM, ELA, computer science, and bilingual.

Contextually, the Central Coast region covers a wide geographic area that includes most of the Salinas Valley, also known as the 1,000 sq. mi. "salad bowl of the world." In spite of its \$4 billion agriculture industry, and proximity to Silicon Valley, this region has low socioeconomic status. In Salinas 76.6% are Hispanic, up to 46% of individuals live below the poverty line, and those without a secondary education form a plurality or majority of residents (U.S. Census, 2016). This trend continues when examining the county as a whole with only 5% of the population earning a Bachelor's degree or higher, and only 11% achieving a high school diploma or its equivalency; below the state average of 15% (U.S. Census, 2017). Lower rates of literacy and lack of educational achievement have led to 14.7% of households in Monterey

County living below the poverty line, well above the national average of 10.5%. The alarming lack of literacy has led to our tri-county area representing the top 3 counties in California throughout 2018 in terms of unemployment at 10.1% Monterey and 6.9% for both Santa Cruz and San Benito. Shockingly, this is more than double the national average (3.6%) and well above the California average at 4.3% (Labor Market Division of the California Employment; 2019).

Additionally, the illiteracy rates coupled with unemployment has led to an increase in crime and gang violence. Research shows that improving schools will lead to increased graduation rates, which in turn, will lower crime/incarceration rates and improve the nation's economy (Alliance for Excellent Education, 2014); with the biggest impacts of lack of education associated with murder (Lochner & Moretti, 2003). In Salinas, this has been felt the hardest as over the past 3 years Salinas has consistently been ranked the deadliest city in California with a murder rate of 25.29 per 100,000 people, and more shockingly, 9th in the nation for cities of at least 100,000. For comparison, over this same period Chicago had a murder rate of 17.52, Philadelphia had a rate of 17.86, and the closest city in California was Oakland at 20.33 murders per 100,000 residents (FBI Uniform Crime Reporting Program, 2015; 2016; 2017). Therefore, the need to attract and retain quality teachers is of the utmost importance to address the county's illiteracy rates, ensure economic growth, and sustainability for future generations.

A particular challenge we face is attracting and retaining high-quality teachers to the region's rural schools, especially in STEM and bilingual fields; forcing many schools to hire underprepared teachers with substandard credential (i.e., individuals who have not demonstrated subject-matter competence for courses they are teaching). In California, about 8.5% of teachers leave the profession or state each year, and another 8% go to teach at another school. About two

thirds of attrition tends to be pre-retirement, but since 34% of teachers statewide are age 50 and older, retirements will continue to be an important factor in some locations over the next decade.

Teachers in Title I schools and in schools serving high proportions of students from low-income families and students of color all have higher rates of teacher turnover. The shortfall in teacher attrition and recruitment in California led to 7,839 classrooms with a teacher holding a provisional permit and another 4,922 classrooms with an intern candidate during the 20172018 academic year (California CTC, 2019). An intern candidate has yet to start preservice teacher coursework, but is issued a provisional intern credential for 2 years to serve as the teacher of record while attending an IHE. Although enrolled in coursework, the intern must "learn on the fly" which provides K-12 students with underprepared teachers. Even more concerning is the issuing of provisional permits has increased by 4,946 (58.4% change) over the past five years, with the number of intern credentials issued increasing by 2,311 (88.5% change; see Figure 1).

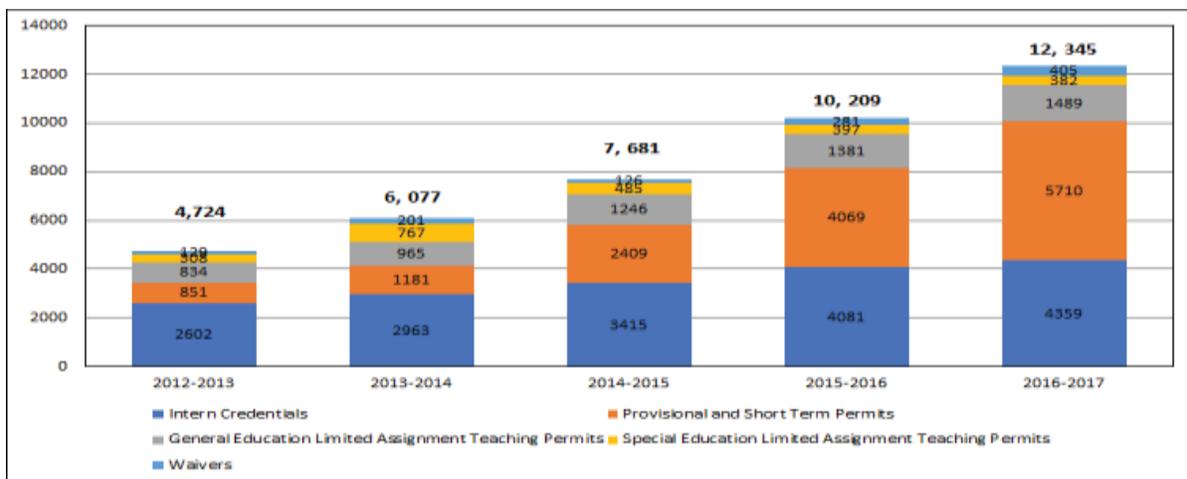


Figure 1. Substandard Permits and Credentials More Than Doubled from 2013-2016.

Since both of these options put unprepared and substandard provisionally-credentialed teachers into the classroom, the longer these shortages continue the more likely the achievement gap will grow; particularly as research has long demonstrated that a student with even one ineffective teacher may not catch up to his peers for up to three years, and a student with three

bad teachers in a row will rarely catch up at all (Sanders & Rivers, 1996). Sadly, the teacher shortage has impacted Monterey County even more drastically, with the percent of change over the past five years in issuing provisional permits increasing by 307.41% and intern credentials by 103.51% (California CTC, 2019). As students continue to struggle to make adequate progress, the need to ensure that all students have fully credentialed teachers is critical to closing the achievement gap; particularly in STEM, ELA, and our vast EL and minority populations.

Absolute & Competitive Selection Priorities

Absolute Priority. CSUMB Reform: Preparing Observational Practitioners through Partnerships Yearlong (POPPY) Project addresses *Absolute Priority: Partnership Grants for the Establishment of Effective Teaching Residency Programs* (Appendix E). Building on initial reform efforts to two post-baccalaureate credential programs (elementary and secondary education), and includes all requirements. Our proposal includes the following goals:

1. Recruit teachers from underrepresented populations and high-need subject areas (STEM fields, special education [SPED] computer science, bilingual education) so that eligible partnerships can hire highly-qualified teachers to serve hard-to-staff rural and remote schools in our tri-county area;
2. Design a cohort-based rigorous 18 month residency program grounded in the principles of practice-based teacher preparation through transformative curricular changes inclusive of the NIA reform components, and provide integrated and continuous support for prospective teachers by tightly aligning university coursework and the yearlong clinical experience; through engagement of the three key members within the co-teaching triad (mentor teacher, clinical coach [university supervisor], and university faculty) in sustained, collaborative, and intensive professional development;

3. Implement in collaboration with partner districts and the Monterey County Office of Education (MCOE) a two-year formalized induction program inclusive of the reform elements for residency programs to provide an educator support system that includes individualized high-quality mentoring, structured observations, instructional rounds, and continuous, sustained, and practice-based professional development inclusive of the reform elements in the absolute priority to promote teacher development, retention, and K-12 student achievement;
4. Develop through sustained collaboration with our partner districts, high-quality professional development (PD) for prospective, new, and in-service teachers around the essential reform elements; including but not limited to, K-12 literacy skills across the subject areas (particularly STEM, SPED, and computer science), the implementation of literacy/reading instruction and assessment to provide individualized instruction with an emphasis on English Language Development (ELD) integration, and bilingual instruction to enhance teacher practice and improve K-12 student achievement;
5. Use the practices of improvement science to engage in continuous improvement and program reform using teacher performance and K-12 student success data to achieve goals 1-4; while also engaging partner district leadership in the improvement science cycle creating systematic sustained efforts in continuous improvement across both the IHE and the LEAs, leading to reformed teacher instructional practices and increased student achievement.

This proposal is also designed to address the Competitive Preference Priority 1 (CPP1) *Increasing the Number of Educators Prepared to Deliver Rigorous Instruction in Science, Technology, Engineering, or Math (STEM) fields with a Focus on Computer Science.*

Competitive Preference Priority 1. STEM Education is infused in Goals 1-4 (workplan, Appendix J) and letters of support from CSUMB: College of Science, School of Computing & Design, Makerspace, Center for Academic Technology (CAT); and outside entities: Monterey Bay Aquarium, Center for the Advancement of Instruction in Quantitative Reasoning (CAIQR), and 100Kin10 (Appendix I). For Goal 1 and Outcome 1.1 (increase by 7% each year the number of graduates who are highly-qualified and prepared to teach in high-need subject areas including STEM, computer science), our project activities strive to recruit and train more highly-qualified educators in STEM, with focus on computer science. Recruitment efforts include augmenting already established field experiences to include pathway into teaching for computer science.

In addition, program reform includes development of computer science credential program to be implemented by Year 4 in order to specifically address this teacher shortage area. California launched the state's Computer Science Standards in September 2018. CSUMB will use years 1-3 to: align university coursework to computer science standards; work in close collaboration with undergraduate faculty in College of Science and School of Computing and Design (letters of support; Appendix I) to develop course sequence for credential program; integrate Teacher Performance Expectations (TPE) in each class within program; receive approval California Commission on Teacher Credentialing (CTC; approval takes 6-12 months) to offer a credential in computer science; design sustained high-quality PD for prospective and inservice teachers around the computer science standards; and implement recruitment strategies to begin enrolling students into the computer science credential program by Year 4.

Goals 2-4 include sustained, high-quality, evidence-based (aligned with 34 CFR 77.1) PD for STEM educators, including PD provided to prospective and mentor teachers throughout the yearlong clinical experience (Goal 2), new teachers during the two-year induction program (Goal

3), and in-service teachers through literacy across the subject areas training (Goal 4). Moreover, to build capacity, increase sustainability, and expand the scalability of our project beyond the funding period, CSUMB faculty will co-design and co-deliver high-quality, sustained, and evidence-based PD to support the teaching of rigorous STEM standards (Wojnowski & Pea, 2013) with district coaches, instructional leads, and administration. By leveraging the expertise of both CSUMB and district faculty, we increase buy-in from teachers and create a platform where districts can continue to use the PD experiences long after the funding period is complete.

Literacy PD within STEM will include Novel Engineering and MakerSpace, with teachers receiving ongoing, sustained feedback from partnership literacy coaches. Further, our logic model (Appendix G) identifies the STEM PD and is informed by research findings, suggesting that the project component will lead to relevant outcomes. Through these recruitment and evidence-based PD strategies, our project will (1) improve K-12 student achievement in STEM (emphasis on computer science) and (2) increase the number of highly-qualified educators prepared to deliver rigorous instruction in STEM fields; simultaneously increasing the number of highly-qualified prospective teachers from underrepresented populations.

Background of IHE

Overview of campus. CSUMB was founded in 1994 on the former Fort Ord military base by educators and community leaders. Current faculty build on that legacy as we explore innovative ways to meet the needs of a new generation of students while simultaneously powering the Monterey County economy. CSUMB is a public university and is one of 23 campuses in the CSU system, the largest four-year public university system in the United States.

The university serves over 7,500 students, many of whom are first-generation college students. At CSUMB we pride ourselves on making higher education accessible to traditionally

underserved and low-income populations. Seventy-two percent of our students receive some form of financial aid. Further, CSUMB is a designated Hispanic-serving university with approximately 47% of its student body identifying as Latino/Hispanic and 57% of our students are first generation students (Institutional Assessment and Research, 2018). Additionally, CSUMB is unique, having made service learning a required element of the academic program. The goal is to help CSUMB students become multicultural community builders: students who are able to work sensitively and effectively in a diverse society. The university is organized into six colleges, offering 24 undergraduate degrees with over 30 included concentrations, more than 30 minors, seven graduate degrees, and four credential programs. The colleges relevant to this proposal: College of Education; College of Science; School of Computing and Design.

Overview of credential programs. The College of Education at CSUMB has two distinct departments: Liberal Studies and Education and Leadership. The Liberal Studies department prepares undergraduate students, particularly elementary education candidates. The Department of Education and Leadership is entirely post-baccalaureate and offers three teacher credential programs (elementary, secondary, and SPED), one administrative services credential (Principal Credential), one authorization program (Bilingual Authorization), and two masters degrees (Masters of Arts in Education and Masters of Science in School Psychology).

All credential programs in California are governed and evaluated by California CTC. The CTC is responsible for setting the standards for educator preparation, accrediting preparation programs, and licensing educators. All CSUMB's credential programs are fully accredited through CTC, meet all State certification and licensure requirements that promote teacher quality and student academic achievement, align with student achievement standards under section

1111(b)(1) of the ESEA, and adhere to the qualifications described in section 614(d)(1)(B) and 612 (a)(14)(C) of the Individuals with Disabilities Education Action (IDEA; Appendix A).

LEA Needs Assessment

CSUMB will partner with 48 elementary, middle, and high schools across 8 districts in the rural and high-need settings that stretch 85 miles along California's agricultural corridor from Santa Cruz County (North) to King City (South Monterey County). Much like the California poppies that bloom along the scenic byways with little to no water or nourishment, the core mission of our partner districts is to help educate future generations to bloom through the most dire of circumstances (see rationale). Appendix D shows these high-need qualifying districts and the number of students ($n = 49,687$ total) and teachers ($n = 2,030$ total) served in each district.

Results from our partner district needs assessment (see Appendix C) reveal all 8 districts reported that teachers working in rural and remote high-needs schools do not have access to high-quality sustained PD around cross-disciplinary literacy, STEM, Universal Design for Learning (UDL), Project Based Learning (PBL), supporting ELs, differentiating for students with Individualized Education Plans (IEPs), and supports to meet rigorous state standards including CCSS-ELA, CCSS-M, English Language Development (ELD), and NGSS.

When surveyed about the highest need, administrators stated, "Model lessons; academic coaching; PD in implementation of standards; integrating NGSS across content areas; PBL; coach training for mentors; placement of residents in districts; and incentives for mentor teachers to attend PD." In addition, our partners serve a significant number of limited English proficient students and thus administrators ($n = 6$) stated that a high-need recruitment area was bilingual education. Further, even though Monterey County serves the second largest EL population in California (41.2%), only 38% of teachers are underrepresented populations (Ed-Data, 2018).



Consequently, all eight high-need partner district administrators called for “support in recruiting underrepresented STEM teachers” and identified a struggle to find “Math ($n = 4$), English ($n = 4$), Science ($n = 6$), and SPED ($n = 8$) teachers.” Furthermore, all 8 high-need district partners expressed “an interest in engaging in the continuous improvement cycle.” Using data from our partner districts

as rationale, we created five goals around: recruitment, teacher residency, induction, PD, and continuous improvement to meet the unique needs of our partner districts.

Quality of the Project Design (40 points)

Overview of initial reform. CSUMB's Department of Education and Leadership, housed within the College of Education, has been supported in recent teacher preparation reform through a grant funded by S. D. Bechtel Jr Foundation and our efforts to connect with National Center for Teacher Residencies (NCTR) to work towards a residency model (see letters of support; Appendix I). Through our work on these projects, we have begun to build continuity between teacher preparation and the clinical experience. Below are some of our initial reform efforts:

- Piloted a district partnership model to help facilitate the clinical experience for our candidates through our work with NCTR and a local school district: Monterey Peninsula Unified School District. Although this district does not qualify as high-needs for the purposes of TQP, this systematic partnership with NCTR will continue as we onboard new partner districts in this current application. Utilizing NCTR will ensure that our partnership model builds capacity and sustainability for the future. Further, we will use key takeaways from the initial reform effort and carry them into the current project.

- Created and piloted a STEM observational rubric to improve the quality, depth, and accuracy of coaching feedback provided to prospective teacher by their clinical coach.
- Designed and implemented a clinical coach workshop series including: 1) norming and calibration around the STEM observational rubric, 2) defining qualities of effective feedback on STEM instruction, 3) providing PD in research-based practices included in the STEM observational tool, and 4) coaching in learning-focused supervision (Lipton & Wellman, 2013) to improve the quality, depth, balance, and accuracy of the mentoring and feedback provided to prospective teachers

Next steps for reform. Although our credential programs have experienced recent advancement, we are not complacent or satisfied. Moving forward, we plan to create continuity and coherence through the development of a teacher preparation continuum in order to prepare highly-qualified teachers to teach a linguistically and culturally diverse student body and in teacher shortage areas. Our reform efforts are grounded in the following:

- Create pathways to teaching for students from underrepresented populations and teacher shortage areas (in particular, computer science, STEM, bilingual, ELA, SPED)
- Create, sustain, and enhance deliberate partnerships grounded in reformed curriculum and yearlong clinical experiences that are tightly aligned to provide consistent and integrated support for candidates
- Transform prospective teacher education curriculum across credential and authorization programs through the Teacher Educator Practice Framework (EPIC, NCTR, TeacherSquared, U.S. PREP, & TeachingWorks, 2016)

- Implement in collaboration with the Monterey County Office of Education a two-year, formalized induction program grounded in high-quality mentoring, collaboration, continuous improvement, and data-driven reflection
- Provide sustained, collaborative PD in CCSS-ELA, CCSS-M, ELD, NGSS, Multi-Tiered Systems and Supports (MTSS), evidence-based practices, supports for students with IEPs, and literacy integration across the subject areas for all relevant stakeholders

As we work with our high-need partner districts in building coherence in teacher preparation and meeting the needs of district partners, K-12 student success will guide our reform efforts.

Our vision for teacher preparation reform prioritizes establishing deliberate and sustainable partnerships across multiple contexts and stakeholders to promote a collaborative view of teacher preparation. Historically in teacher preparation, universities “partner” with local schools for the purpose of placing prospective teachers in the field. However, these placements often feel disjointed from teacher education coursework and are more out of convenience rather than resulting in the *mutual* interests of both the teacher preparation program and the district. Prospective teacher learning may occur; however, this learning may be out of chance rather than design. We seek to transform this view by engaging prospective teachers in a rich learning environment that fosters an integrated approach to triad experiences (see workplan; Appendix J).

The theoretical framework that encompasses the triad experience of teacher education is rooted in constructivism, with its central tenet that students actively construct meaning through their experiences (Doolittle & Camp, 1999) and said experiences do not occur in isolation, but rich social environments (Vygotsky, 1978). Conceptually, a teacher candidate constructs meaning through their respective experiences characterized by complex interactions between the cooperating teacher, clinical coach, and university methods courses (see Figure 2). As part of our

exceptional approach, we seek to embrace this view and work towards a system of integrated support for our candidates in which CSUMB coursework, field experiences, and coaching opportunities are all aligned to provide the most robust learning and teaching experiences for our candidates; which in turn provides the most rigorous teachers to support our K-12 students.

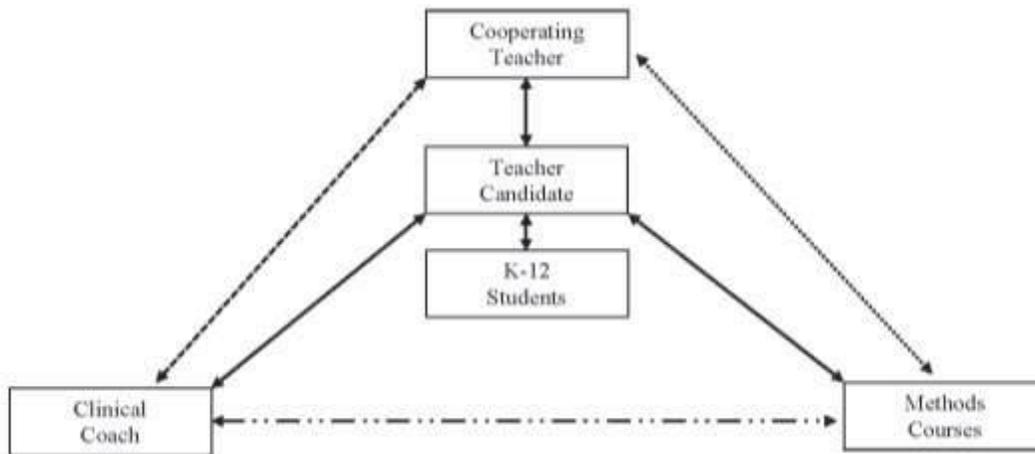


Figure 2. Model of interactions within student teaching experience for teacher candidates.

We believe that in order to truly meet the needs of our partner districts, we must continue to collaboratively set recruitment priorities and goals to attract diverse teacher candidates that reflect the population of our tri-county area; while simultaneously continuing to support new teachers through induction reforms to ensure we are best meeting the needs of the K-12 students we serve. The Department of Education and Leadership places great value on providing higher education services to historically underserved populations. Within the department we strive to bring non-traditional and underrepresented students into education; which can be seen in the variety of "grown your own" programs and partnerships we engage throughout our 85 mile rural and remote service area. One such reform is the initial establishment of King City cohort (located in South Monterey) in which CSUMB faculty and Clinical Coaches meet candidates in various schools throughout King City as a way of providing higher education services in a rural area.

Our exceptional approach views new teacher preparation through the Teacher Educator Practice Framework. In 2016, five newly-formed Teacher Preparation Transformation Centers began collaboration around teacher preparation and best practices for improving K-12 student outcomes. These Centers—EPIC/Massachusetts Department of Elementary and Secondary Education, NCTR, TeacherSquared, U.S. PREP, and TeachingWorks—are developing, piloting and scaling effective teacher preparation practices to ensure more teacher candidates graduate ready to improve student outcomes. At CSUMB we have collaboratively engaged in work with TeachingWorks and NCTR. Building off our work with Deborah Ball (Founding Director) at TeachingWorks and Sarah Cohen (Associate Director) of NCTR, we seek to transform teacher preparation at CSUMB (see letters of support; Appendix I). This framework requires three areas the IHE implements in tandem to support development of teacher candidates (see Figure 3).

PLAN					
Design rigorous learning experiences	Bridge theory and practice	Assess what novices know and are able to do		Construct Coherent Learning Experiences	
IMPLEMENT					
Establish productive learning environments	Communicate and maintain rigorous expectations	Make the work teachers do explicit	Provide multiple opportunities for practice	Provide targeted and continuous feedback	Promote principles of diversity, inclusion, equity, and social justice
IMPROVE					
Use data to improve novice teacher practice			Improve through continuous learning		

Figure 3. Teacher Education Practice Framework (Massachusetts Dept of Ed. et al., 2018).

By transforming our teacher preparation program to include the Teacher Education Practice Framework we seek to become the first IHE in our region to not only talk about the act of teaching, but provide prospective teacher candidates the opportunities to practice teaching in a safe and supportive learning environment. This revolutionary approach to university methods instruction will also increase recruitment, train and retain high-quality teachers, and improve the

educational outcomes of K-12 students as our graduates will have practiced instructional moves both in university courses and a yearlong residency model long before they enter the classroom.

Our exceptional approach includes the deliberate partnering at all levels of teacher education, taking an interdisciplinary approach to teacher preparation. In California, an undergraduate major is separate from a teaching credential, which is completed at the post-baccalaureate level. New teacher induction, content or education master's degrees, optional advanced credentialing, and continued PD are also done separately. Each of these silos exist primarily as separate, individual entities. Synergy between the undergraduate subject matter preparation and the post-baccalaureate credential program is necessary for true reform.

Partnering with the College of Science, the School of Computing and Design, and departments within these colleges, our proposal truly speaks to the interdisciplinary approach we view teacher preparation. This university-wide collaboration allows us to develop content-rich field experiences, particularly targeting teacher shortage areas, and creating pathways to education for underrepresented students. Our partnerships extend into eight high-need, rural and remote partner districts located north, south, and east of our campus with an emphasis on not only supporting the learning of prospective teachers throughout the yearlong residency clinical experience (see Goal 2 in workplan; Appendix J), but also extending collaboration into a two-year induction program (see Goal 3 in workplan) and in-service teacher PD (see Goal 4 in workplan). Moreover, partnering with MCOE is crucial to creating continuity in teacher support from the residency year into the first two years of teaching in the induction program and beyond.

Further, we plan to expand this collaboration to our courses, engaging in a coteaching model where faculty from different areas teach the same content through an interdisciplinary approach (see Goal 2 in workplan). For example, in a SPED course one instructor is a content

specialist (i.e., English methods instructor) and the other is a SPED specialist. These different content experts can model how SPED supports can be integrated into general education, and provide perspectives from each of the respective fields. We believe this addition to our program will not only provide a model of coteaching for our candidates, but also provide an exceptional approach to showcase how general education teachers can provide supports for students with IEPs and those with limited English proficiency. By bringing faculty from each area together to coteach, prospective teachers will gain valuable insights into this differentiation process from both disciplines simultaneously; truly revolutionizing the experience of interdisciplinary learning, while also modeling successful coplanning, coteaching, and coassessing.

We believe that teacher preparation is an iterative, cyclical relationship that extends throughout the longevity of the individual teacher's career and requires collaborative partnerships to result in teacher and student learning. We assert that through these deliberate partnerships and concern for the local context of high-need partner districts, a model for teacher preparation can be developed for the state and nation (see workplan; Appendix J). Our belief is that the learning cycle does not end once a teacher candidate finishes our program, instead we seek to actively engage our former graduates in continuous, sustained PD and learning opportunities; such as the creation of new teacher professional learning communities (PLC), alumni clubs, and edTALK events to build capacity and sustainability (see workplan).

To truly meet the needs of our unique K-12 student population, we must utilize MTSS and the "whole child" approach to education. Traditionally, education reform focused on interventions solely designed to improve academic achievement; however, the demands of the 21st century require a new approach to education to more adequately address the needs of students (ASCD, 2018). Moreover, due to the extreme crime, illiteracy, and unemployment rates

in our tri-county area educators must be equipped to work with students who often experience: homelessness, violence, gang threats, and often trauma as a result of circumstances. Therefore, the traditional model of solely academic interventions does not support our K-12 service area. Thus, we must adapt curriculum to provide prospective and practicing teachers support on how to utilize MTSS and embrace the *whole child* approach. MTSS is an integrated, comprehensive framework using CCSS, differentiated learning, socio-emotional learning, student-centered learning, individualized student needs, and the alignment of systems necessary for students' academic, behavioral, and social success. We see our job at CSUMB to work with high-needs partner districts to engage practicing and prospective teachers into this framework for providing students' supports thoroughly, to help meet the unique needs of the K-12 students we serve.

We view our work through the lens of continuous improvement. At CSUMB, we engage in the continuous improvement cycle when designing, planning, and executing program changes. Not only do we engage in the improvement cycle, but we seek to engage our partner districts in the fundamental principles of continuous improvement work. The continuous improvement framework (see figure 4) has 5 parts and encompasses two notions: (1) decisions should be based on data and evidence, and (2) a continuous improvement process is fundamental to engaging in and sustaining improvements in school and district practice (Hale et al., 2017). Stemming from ESEA and amended by ESSA, the broad goal of continuous improvement is to establish and support continual improvement based on data. These processes are continuous, systemic, and cyclical and seek to improve practice as a means to advancing students' academic achievement.

Within continuous improvement work, the process begins with a problem and then engages in a systematic testing of potential solutions; all based on measurable goals (see Goal 5 in workplan; Appendix J). This process is iterative with data collected, analyzed, and discussed

frequently so adjustments can be made, and then the process occurs again. The five stages within the framework do not occur in isolation, thus figure 4 uses shading to represent how each area leads to the next (Hale et al., 2017). Further, this work is predicated on the notion that initial efforts often begin small, building capacity, and then expand over time as refinement occurs.



Figure 4. Evidence-Based Improvement Cycle (Hale et al., 2017).

One of the most important components of continuous improvement work is that all decisions are based on synthesis of evidence and reflection; something that occurs at each step in the framework. Not only will we use continuous improvement to inform our work on Goals 1-4 (Continuous Improvement Data Team; see Org Chart), but we will create sustainability and expansion by engaging our partner district administration in this process as well (Continuous Improvement District Team; see Org Chart). By creating PD around improvement science and then working one-on-one with partner district administration in two continuous improvement cycles a year, we will be able to create a shift from solution-based thinking, to problem-based thinking; thus creating a system in which long-term change and reform is possible.

We believe in creating lifelong learners through continuous professional development for both teaching candidates, in-service teachers, administrators, and IHE faculty members.

Traditional reform work often focuses on one particular stakeholder, but we reject this traditional “top down” frame of thinking and thus our reform efforts cut across stakeholders and promotes

lifelong learning for all. To truly integrate coursework and field experiences, as well as the importance of each member of the coteaching triad (Figure 3), we believe PD and learning must occur for all stakeholders; and that this learning should not occur in isolation. As such we believe that teacher candidates, in-service teachers, mentor teachers, administrators, clinical coaches, and university faculty must engage collaboratively in robust professional learning experiences that promote interaction among and between stakeholders (see Goal 4 in workplan; Appendix J).

(i) The extent to which the proposed project demonstrates a rationale (per 34 CFR77.1 [c]).

Our logic model (Appendix G) and work plan (Appendix J) identify key project components informed by research and evaluation findings that suggest that the project components are likely to improve relevant outcomes, demonstrating a strong rationale for our project. For example, the sustained PD in STEM that is provided to prospective, new, mentor, and in-service teachers as a part of Goals 2-4 is grounded in research-based models underlying systemic reform (Wojnowski & Pea, 2013). Furthermore, Goal 4 of our project includes sustained PD on the essential components of reading instruction including sustained workshops and follow-up literacy coaching sessions. Both the content and structure of the literacy workshops and the practices implemented by the literacy coaches will be selected based on practices illustrated in the research (Deussen et al., 2007) with attention given to evidence-based practices (Kamil et al., 2008; Kosanovich & Foorman, 2016). Furthermore, the teacher mentoring that occurs as a part of the yearlong clinical experience, two-year induction model, and literacy coaching includes clear criteria for the selection of teacher mentors, high-quality training of mentors, structured observations, time for collaboration, and the promotion of empirically-based practice and scientifically-valid research as defined by What Works Clearinghouse. Finally, our proposal includes all NIA reform elements (see Appendices B & E).

(ii) The extent to which the goals, objectives, and outcomes to be achieved by the proposed project are clearly specified and measured.

In our workplan all goals, objectives, and outcomes are specific and measurable and have associated activities, timeline, responsible parties, and milestones (Appendix J). The outcomes allow for setting baseline values and examining improvements. All outcomes are aligned with 3 acceptable inputs (ratio, percentage, or value). Some measurement tools include: scores on standardized assessment (e.g., edTPA, Smarter Balanced Assessment Consortium [SBAC]), quantitative/qualitative feedback on STEM/TPE rubrics, and data from EdQ Center (a CSU-wide center that compiles database providing teacher preparation programs access to ongoing annual surveys of current graduates, alumni, and employers of CSU-trained teachers). Further, continuous improvement and faculty/partnership research will include focus groups, valid and reliable surveys, and coding of artifacts to measure progress. Moreover, Goal 5 serves two strategic purposes: 1) engage the Continuous Improvement Data Team (Org Chart; Appendix J) in using improvement science to ensure Goals 1-4 are met, and if processes break down data-driven reform occurs (logic model; Appendix G); and 2) use the Continuous Improvement District Team to work with partners to guide them in continuous improvement cycles to build capacity and increase sustainability for data-driven reforms beyond the funding period.

(iii) The extent to which the proposed project is designed to build capacity and yield results that will extend beyond the period of Federal financial assistance.

The long-term success of the project and continuing operations beyond the period of federal funding have been built into the work plan (Appendix J), budget, and program management plan. First, we have “matching” funds from each partner district and support letters from each detailing the level of contribution and services partner districts will be “matching” onto the TQP grant (Appendix I). First, if partner districts find value in the services provided

through the partnership, districts will be inclined to provide “match” allocations to maintain services. Second, we will be co-creating and co-delivering all of our PD (see Goals 2-4 of workplan) with district leads, coaches, Teacher on Special Assignment (TOSAs), and other teacher leaders over the duration of the project; with all workshops left with the districts.

One of the major outcomes of this project will be to build capacity and sustainability for reform across the 23 campus CSU system. We will disseminate findings to nationwide audiences (i.e., educational conferences) building capacity for all teacher educator networks, but we also seek to specifically disseminate findings to 23 CSU campuses to ensure reform efforts happen across the CSUs; the single-largest preparer of teachers in the nation. Further, the Leadership Team will engage districts to build local capacity for delivering PD. For example, if a district has resources to provide PD on Wednesdays, we could capitalize on this structure and provide PD within this structure with district teachers compensated by already-existing district funds. Similarly, the Department of Education and Leadership will engage in program and department wide discussions around the reallocation of funds and redefining roles (e.g., clinical coach). For example, a clinical coach’s job could be redefined to include one less yearly observation replaced with a PD workshop to enhance their ability to provide high-quality mentoring.

Our project also invests in people across the 5 years; leveraging our existing resources (e.g., Center for Reading Diagnosis and Instruction) and faculty (e.g., 11 faculty members representing the arc of educational services, from content specialists to school psychologists) to provide services. For example, instead of investing heavily in having an outside entity such as TeachingWorks come in and train faculty we will utilize our three current TeachingWorks fellows to train faculty. This not only helps reduce budget costs, but it demonstrates to both CSUMB faculty and district personnel that we have capacity to achieve our project goals with

our existing resources. By building capacity for clinical coaches (for example), when funding is gone these coaches will still implement the research-based mentoring practices they developed.

Our project work plan (Appendix J) indicates a number of milestones that describe curriculum revisions and structures, sustainable services, and other features specifically intended for the continuation of activity beyond funding. Examples include: revised curriculum and institutionalized practices whereby curriculum is annually reviewed and revised to align with high-leverage practices, the needs of prospective teachers and high-need partner districts, online modules providing PD to a variety of stakeholders, and a TPE rubric used to coach prospective, mentor, and in-service teachers on the integration of best practices into K-12 classrooms. Not only will resources be developed that can continue to be implemented past the funding period, but an infrastructure for collaboration and continuous improvement will have been established.

Finally, the Executive Council, Leadership Team, Continuous Improvement Data Team, and Continuous Improvement District Team will have a standing agenda item on sustainability. Collaboration with other TQP awardees through the TQP-TA Center will help generate ideas regarding building capacity and sustainability. Moreover, we intend to actively network with all CSU campuses to provide key learnings, and exceptional progress towards our goals to build capacity and sustainability across all 23 CSU campuses (Goal 2 of workplan; Appendix J).

(iv) The extent to which the proposed project represents an exceptional approach for meeting statutory purposes and requirements.

Our vision for reform is grounded in deliberate and sustainable partnerships, valuing the individual needs of each partner district and recognizing the mutual benefits to working collaboratively to transform teacher preparation. Partnership components include collaborating on partner district hiring needs to inform credential program admission decisions, creating a shared vision and goals for the project, ensuring coursework alignment with the clinical

experience, communicating frequently with structured time spent in schools, among others (Luczak et al., 2016). Further, integrating the Teacher Educator Practice Framework (EPIC et al., 2016) represents an exceptional, transformative, and evidence-based shift from the traditional teacher preparation model. Moreover, our work to include and train district administrators on improvement science represents a novel approach to influencing change within LEAs.

Furthermore, our exceptional approach creates continuity across the arc of a teacher's career by developing pathways from community colleges/undergraduate majors, to a yearlong residency that is tightly aligned to coursework, coupled with integrated and sustained support and feedback during yearlong residency, with continued support through two-year induction program, and sustained evidence-based PD through the duration of one's teaching career.

Description of the program. Our partners have declared 5 goals grounded in measurable outcomes with specific activities and milestones identified (workplan, Appendix J). These mutually-created goals, the backbone of our partnership, show promise to creating deliberate and collaborative continuum of teacher preparation resulting in high levels of teacher and student learning. As our project evolves, we will collaboratively engage in data-driven improvement to revise and enhance project goals, outcomes, and activities, ensuring the delineation of clear roles and responsibilities for *mutual* benefit. Further, our partnership focuses on sustainability efforts, including leveraging resources and developing structures that will continue to support the *mutual* needs of all partners beyond project funding. Through our collaborative efforts, our partnership has the capacity and resources to meet the following project goals and objectives.

GOAL 1: Recruit teachers from underrepresented populations and high-need subject areas (STEM fields, special education, computer science, bilingual education) so that eligible

partnerships can hire highly-qualified teachers to serve hard-to-staff rural and remote schools in our tri-county area

Goal 1 objectives and outcomes. Results from local needs assessment indicate all 8 high-need partners are in need of highly-qualified STEM, SPED, computer science, and bilingual teachers (Appendix C). In alignment with CPP1, we will recruit and graduate more highly-qualified teachers to meet the needs of hard-to-staff schools in California's most rural and remote areas and teachers who reflect the cultural and language heritage of California's rural settings. Recruitment initiatives include: (1) identifying barriers leading to lower enrollment of teacher candidates; (2) creating a recruitment plan in consultation with HR representatives from high-need partners, community colleges, CSUMB recruitment specialist, faculty, and campus centers (e.g., Office of Inclusive Excellence [OIE]); and (3) fostering sustainability of recruitment efforts through creation of marketing/curricular materials and university infrastructure.

These reform efforts are essential to meet the needs of our K-12 students in our partner district schools. When teachers are from the same communities as their students they are much more likely to understand their students' challenges, they are also more likely to remain teaching in the same schools, developing expertise and gaining experience (Gandara & Hopkins, 2010). Although, school districts in our service area have been predominantly Hispanic for decades, they are now becoming so almost exclusively (e.g., the Alisal Union School District increased from 91% Hispanic to 96% Hispanic in 2015-16; Arguez and Rahaim, 2017); yet, the percentage of teachers who are Hispanic in our service region is only 14.9% (ED-Data, 2018). Moreover, diversity among teachers can provide significant benefits to students (Cherng & Halpin, 2016). Connections to students and families, as well as a desire to serve as a role model, are important narratives for Hispanic students considering teaching (Ocascio, 2014). Further, diversity in the

STEM teacher workforce boosts the academic performance of underrepresented minority students, including improved reading and math test scores, improved graduation rates, and increases in aspirations to attend college (Learning Policy Institute, 2018).

To attract more teachers from underrepresented populations, we seek to make pathways into teaching more manageable through a variety of mechanisms (workplan; Appendix J). For example, California has one of the most rigorous requirements to earn a teaching credential (e.g., achievement of TPEs and ISTE [technology] standards, edTPA, RICA [reading instruction assessment]); however, even before entering into a preparation program, California requires prospective teachers to pass a series of exams (e.g., CBEST, CSET) in order to be eligible for entry into a program. Each of these tests have multiple sections around basic skills (i.e., CBEST) of reading, mathematics, and writing; and highly-specific content knowledge (i.e., CSET). As many of our students are ELs, often candidates from underrepresented populations have difficulty succeeding on these standardized tests and cannot enter into the teaching profession.

This is exceptionally true in STEM fields, particularly science, as there are 4 separate science CSETS students must pass (on top of the CBEST exams) to enter into a STEM credential program. One way to aid ELs and other students who struggle on standardized tests is to obtain CSET waivers for students who graduate from CTC accredited undergraduate program that establishes subject matter competency with course completion; thus, waiving the CTC requirement of CSET. At CSUMB we currently have waivers for our English and Math credential programs, but not science; leading to a disproportionate number of students across content areas. During all 5 years we will work to systematically break down barriers to enrollment; such as obtaining waiver in science to help recruitment of underrepresented teachers. Goal 1 outcomes include the following:

- Outcome 1.1: Starting in Year 2, increase by 7% each year of the project the number of graduates who are highly-qualified and prepared to teach in high-need subject areas including STEM, computer science, SPED, and bilingual education
- Outcome 1.2: Starting in Year 2, increase by 7% each year of the project the number of highly-qualified prospective teachers from underrepresented populations

Reform Elements (6)(i) and (ii): Development of admissions goals and priorities that are aligned with the hiring objectives of the LEA partnering with the program and applicants that reflect the communities in which they will teach as well as consideration of individual from underrepresented populations in the teaching profession.

Recruitment of STEM teachers. The STEM recruitment plan will include: partnering with CSUMB's MakerSpace and Monterey Bay Aquarium to offer high-quality early field experiences, developing targeted recruitment materials, developing a computer science credential, and partnering with service learning at CSUMB to create pathways into STEM education. Further, we will leverage existing resources at CSUMB (see resource table below) as well as outside entities (letters of support; Appendix I) to design and execute a comprehensive recruitment strategy targeting underrepresented populations and hard to staff teaching positions.

Leveraging the already-existing recruitment efforts of RISE and MAESTRO (two current grant projects in the College of Science and Education), we will expand these efforts by creating pathways for computer science majors to pursue a career in teaching. The School of Computing and Design and the Department of Education and Leadership will collaboratively develop a prospective teacher program that empower candidates with basic skills for teaching computer science in an inclusive manner through early field experiences. Utilizing the Makerspace at CSUMB, interdisciplinary faculty will create these experiences to introduce undergraduate

STEM majors (including computer science) to the field of teaching. CSUMB will also establish by Year 5 a computer science credential, addressing the need of high-need partner districts to hire teachers with the appropriate skills in computer science. See Appendix J (workplan) for additional details about our STEM recruitment activities and Appendix I for letters of support.

Recruitment of special education (SPED) teachers. Recruitment efforts for the SPED program will include advertising pathways to a credential in SPED to paraeducators in high-need partner districts. We will recruit paraeducators through the help of MCOE and their Aspiring Classified Employees into Teaching (ACEIT; see letter of support, Appendix I), a state-funded career pathway program for classified employees that covers tuition, fees, and books associated with enrolling in credential program. Further, department faculty will partner with undergraduate service learning to recruit undergraduates who are interested in SPED careers into teacher credential pathways. See workplan in Appendix J for more activities and milestones.

Recruitment of bilingual education teachers. In 2016, California voters approved the expansion of bilingual programs under Proposition 58. This increase in public demand for bilingual education has not been met with increased numbers of qualified bilingual educators. In 2015-2016, California authorized just 700 new bilingual teachers, which is less than half the number of bilingual educators the state authorized in the 1990s, when bilingual education was at its peak (Carver-Thomas & Darling-Hammond, 2017). To meet this need, we will attract prospective teachers to our Bilingual Authorization Program (Spanish-English Emphasis), program by working with CSUMB's Monterey Institute for English Learners (MIEL; see letter of support, Appendix I). In consultation with MIEL staff, we will develop a recruitment plan and materials to create a fully online version of our Bilingual Authorization Program in order to

support full-time teachers in adding a bilingual authorization to their current credential. For more activities and milestones related to bilingual education, please see the workplan in Appendix J.

Recruitment of individuals from underrepresented populations. For the recruitment of teachers from underrepresented populations our efforts focus on the issues that teachers of color encounter, in order to develop a curriculum and environment that meets the needs of and retains these teachers (Gorski, 2009; Ingersoll & May, 2011). Activities include conducting needs assessments to determine issues that impact individuals from underrepresented populations from pursuing teaching. Further, we will partner with OIE to create marketing materials and events to attract, retain, and support prospective teachers from underrepresented populations (letter of support; Appendix I). Although it is important to increase the number of applicants from underrepresented populations in teaching, we want to embody inclusive practices so that these prospective teachers feel welcomed on campus and can create inclusive environments for their K-12 students. See Appendix J (workplan) for additional activities and milestones.

Reform Elements: (II)(b)(2)(i), (ii), and (iii): Recruit residency applicants with (i) strong content knowledge or record of accomplishment in the field or subject area to be taught; (ii) strong verbal and written communication skills; and (iii) other attributes linked to effective teaching.

To ensure we are meeting the needs of our high-needs rural and remote partner districts, we will invite districts to be a part of the interview process for incoming residents. Further, we will design specific criteria and contracts for residents to ensure that stipend recipients represent all key reform areas mentioned in the NIA. Through writing samples and interviews with potential residents we will assess and rank candidates on their content knowledge, verbal and written communication, and dispositions necessary for teaching. In consultation with partner districts we will establish a threshold criteria for entrance into the 18 month residency program.

Moreover, to ensure residents successful completion of the Master's Degree and teaching commitment after graduation, all residents will sign contracts detailing said commitments. This will ensure that residents embody all the critical reform elements (see workplan, Appendix J).

GOAL 2: Design a cohort-based rigorous residency program grounded in the principles of practice-based teacher preparation through transformative curricular changes inclusive of the NIA reform components, and provide integrated and continuous support for prospective teachers by tightly aligning university coursework and the yearlong clinical experience; through engagement of the three key members within the co-teaching triad (mentor teacher, clinical coach, and university faculty) in sustained, collaborative, and intensive professional development

Goal 2 objectives and outcomes. Research has overwhelmingly demonstrated that the single-most influential factor within schools that impacts student success is the K-12 classroom teacher (Adnot, Dee, Katz, & Wyckoff, 2017; Chetty, Friedman, & Rockoff, 2011). The same notion can be applied to the role of mentor teachers in training and facilitating the learning of teacher candidates. Many studies have demonstrated that candidates self-report their field experiences are the single most integral aspect of their preparation program (Ronfeldt et al., 2013). However, the field of teacher education has struggled to identify what mentor teachers need to know and be able to do, how they should be prepared and supported, and when and how to collect data on their practices to strengthen and improve their practice (NCTR, 2018). This lack of coherence has led to a breakdown in the continuity of the roles within the triad (i.e., Mentor Teacher, Clinical Coach, and Methods Course) of teacher education for candidates.

Reform Element (f)(9);(I)(II): Support an effective pre-service teaching residency program described in paragraph II (a) that integrates pedagogy, classroom practice, and teacher

mentoring; and engages teaching residents in rigorous graduate-level coursework leading to a master's degree while undertaking a cohort-based guided teaching apprenticeship alongside a trained and experienced mentor teacher, with continued support through the induction program

The theoretical framework that encompasses the triad experience of teacher education is rooted in constructivism, with students actively constructing meaning through their experiences (Doolittle & Camp, 1999) and said experiences occur in rich social environments (Vygotsky, 1978). Bandura explained this notion as observational learning, or the idea that one learns through a four-step pattern of attention, retention, reproduction, and motivation (1977). Conceptually, a candidate constructs meaning through their experiences characterized by interactions between the mentor teacher, clinical coach, and university courses (see Figure 1). Further, studies demonstrate teacher candidates self-report their mentor teachers are the most integral contributor to their feelings of preparedness (Matsko, Ronfelt, Nolan, & Reininger, 2018). These studies found teacher candidates mentored by more effective teachers achieve higher observational ratings of their own teaching. Thus, it becomes paramount that we develop comprehensive PD experiences to train, support, and improve practices of our mentor teachers.

Further, McDonald and colleagues (2013) argue for a revised approach to preparing teachers. In order for prospective teachers to move from passive absorption to active engagement and application of teaching theory, they need to practice. In these practice-based settings, teaching experiences are coordinated with university coursework and preservice teachers are closely mentored using the learning cycle (Lampert et al., 2013; McDonald et al., 2013; Figure 5). Research examining the effects of practiced-based approaches to teacher education has found positive impacts in teacher preparedness (Zeichner, 2009), teaching efficacy and student gains (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2009), understanding of teaching practices

(Bottoms, Ciechanowski, & Hartman 2015), and self-reported gains in confidence and positive teaching experiences (Wilcox-Herzog & McLaren, 2012). At CSUMB we are re-envisioning our method courses, where prospective teachers practice teaching instead of learning about teaching.

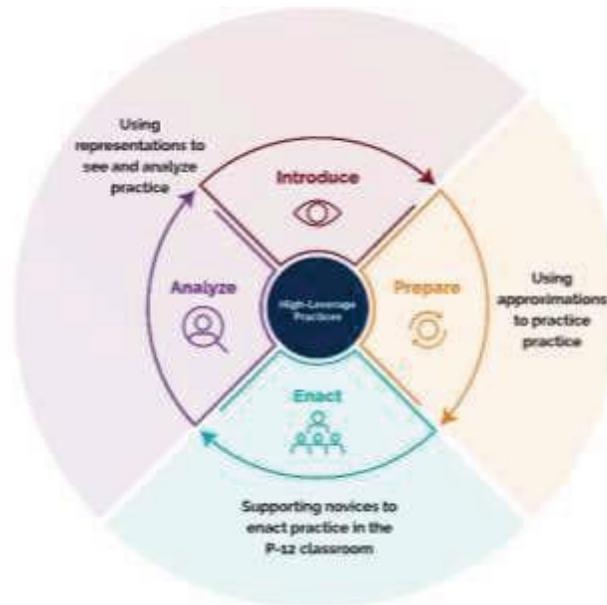


Figure 5. The learning cycle as applied to prospective teacher education (Lampert et al., 2013; McDonald et al., 2013)

Goal 2 outcomes include:

- Outcome 2.1: Plan and implement a cohort-based rigorous 18 month residency program that includes a yearlong intensive clinical experience placing candidates in remote and rural partner schools with 65% in year 2, and building capacity to 85% by year 4
- Outcome 2.2: By year 2, provide 45% of candidates integrated and consistent support from all three members of the coteaching triad (mentor teacher, clinical coach, university faculty) through a tight alignment between clinical practice and rigorous graduate level coursework by triangulating various data sources (edQ completer data, TPE observation tool scores, exit surveys, syllabi audits) with a 10% increase each year for a total of 75% by year 5

- Outcome 2.3: In collaboration with partner districts, by year 2 100% of mentor teacher selection, based around key reform elements, will be created and implemented to select mentor teachers in rural and remote districts
- Outcome 2.4: Design a PD series in collaboration with partner liaisons based around the principles of practice-based teacher education for all three members of the coteaching triad; in year 2 train 55% of coteaching triads, with an increase of 15% each year, for a total of 100% in year 5
- Outcome 2.5: Reform university coursework to reflect all essential reform components, including but not limited to: instruction that engages students with different learning styles; the integral aspects of reading instruction, ELD integration, inquiry based STEM learning, differentiation for all learners, data-driven instruction and practice-based teaching 3 courses per program ($n = 6$ total) reformed each year
- Outcome 2.6: By year 3, achieve improvement in evidence-based practices of preservice teachers as made evident by a 100% adoption of the newly developed observational TPE rubric by candidates, clinical coaches, university faculty, and mentor teachers

Absolute priority 1: Required reforms. High-need partner districts and MCOE will inform CSUMB's existing knowledge base about performance areas that need development, and through thought-partnering on teacher preparation curriculum, revisions will occur. All revised course syllabi will be shared at Executive Council meetings (org chart; Appendix J) and feedback will be provided for additional revisions. Further, in collaboration with district liaisons we will create mentor teacher interviews to ensure all mentor teachers meet all reform requirements. Additionally, we will co-create and co-deliver high-quality, evidence-based PD for all mentor teachers to ensure they are provided the supports to further mentor teacher candidates.

Reform Elements (b)(2)(i)(ii): Use empirically-based practice and scientifically valid research about teaching and learning so all prospective teachers understand and can implement research-based teaching practices in classroom instruction and knowledge of student learning methods.

CSUMB will leverage the expertise of faculty resources and the CAIQR (see letter of support; Appendix I) to train colleagues to understand and convey to their prospective teachers empirically-based practice and scientifically-valid research (as exemplified by the Institute for Educational Services) and its applicability to teaching in high-needs partner districts with limited English proficient and low-income students. Annually, faculty will examine course syllabi and assessments for empirically-based practices and scientifically-valid research, making revisions to be in alignment with this goal. In addition, faculty will create an observation tool on the California TPEs which are empirically-based practices that California states all teachers should be able to perform by the end of their credential program. Further, by year 2 a Gradual Release of Responsibility document will be created to tightly align coursework and clinical experience to provide consistent and integrated support for candidates from all three members of the triad (mentor teacher, university faculty, clinical coach; see workplan, Appendix J). Prospective teachers will be assessed on their ability to employ these strategies through the required edTPA.

Reform Element (b)(2)(iii): Possess skills to analyze student achievement data and other measures of student learning and use such data and measures to improve classroom instruction.

CSUMB will call upon faculty, and as needed, external consultants, to update colleagues across the department to understand and convey to residents skills to analyze student data to improve instruction. Particular attention will be given to formatively and summatively assessing student learning in regards to CCSS-ELA, CCSS-M, and NGSS. Additional assessment skills will focus on bilingual literacy assessment and diagnosis of reading challenges for limited

English proficient learners, using practices in *National Literacy Panel on Language-Minority Children and Youth* (August & Shanahan, 2006). Faculty will produce updated syllabi, in consultation with partner districts, and adopt curriculum resources that convey skills to analyze student data to improve instruction. In addition to course reform, the yearlong clinical experience will be reformed by providing PD to clinical coaches and mentor teachers in data-driven instruction so that mentors can support prospective teachers in regards to this Absolute Priority Reform Element (see Goal 2 in workplan, Appendix J). In addition, prospective teachers will be expected to demonstrate their ability to use data to improve classroom instruction on the edTPA. *Reform Elements (f)(6)(7): Prepare general education teachers to teach students with disabilities, including training related to participation as a member of IEP teams and prepare general and special education teachers to teach students who are limited English proficient*

Recent state-reform to credential program curriculum have included a focus on meeting the needs of all students. Although our prospective teachers are introduced to this empirically-based practice and scientifically-valid research, there are few opportunities built-in to coursework and the clinical experience to implement these practices and receive targeted feedback and coaching on these practices. Addressing this reform element, we will create an integrated model in which prospective teachers from our elementary and secondary credential programs will engage with prospective teachers from our SPED program. Opportunities to practice differentiated instruction and UDL will occur when coplanning since the SPED prospective teachers bring a wealth of knowledge in differentiated instruction but sometimes struggle with UDL, a framework deeply embedded in our elementary and secondary programs.

These coteaching opportunities will continue in the clinical experience through strategic cohort placements in high-need partner districts in which prospective students from credential

programs will be placed at the same school site. This collaboration will culminate in an end-of-the year Mock IEP event (workplan). Faculty with expertise in IDEA and the function of IEP teams, will teach candidates of teacher preparation programs the knowledge and skills teachers will need to convey participation skills for IEP team. This Mock IEP event will also be extended to simulate a conference for supporting limited English proficient students with disabilities.

Reform Element (b)(2)(vi): Can successfully employ effective strategies for reading instruction using the essential components of reading instruction (phonemic awareness; vocabulary development; reading fluency, oral reading skills; and reading comprehension strategies).

Faculty experts of the CSU Center for the Advancement of Reading and Writing (CAR-W; see letter of support, Appendix I) will train CSUMB faculty in effective strategies for reading instruction, including knowledge of assessments and their use, the effective use of national reading programs and their interventions, and the means to provide specialized assistance to students with particular needs, especially limited English proficient students. Following this training, faculty will update and improve reading instruction for prospective teachers in all credential programs, including improvements to course syllabi and instructional resources. Faculty will also learn to assess and evaluate prospective teacher acquisition of reading instruction skills. The clinical experience will be enhanced by providing prospective teachers from all three credential programs an opportunity to attend yearlong literacy PD and work with literacy coaches in consultation with the high-need partner district (see Goal 4 in workplan).

Reform Elements (f)(9); (I)(II): Support an effective pre-service teaching residency program described in paragraph II(a) that integrates pedagogy, classroom practice, and teacher mentoring; and engages teaching residents in rigorous graduate-level coursework leading to a master's degree while undertaking a cohort-based guided teaching apprenticeship alongside a

trained and experienced mentor teacher, with continued support through the induction program

Reform to the clinical experience. CSUMB has made recent improvements to the yearlong clinical experience by (1) developing and implementing a STEM Observation Tool grounded in high-leverage teaching practices, (2) yearlong PD for clinical coaches in mentoring, quality feedback, and learning focused supervision (Lipton & Wellman, 2013), (3) piloting of a partnership model with MPUSD, and (4) incorporating the *Teacher Educator Practice Framework* into the methods courses of three TeachingWorks Fellows. Although we have made advancements in yearlong clinical experience, the proposed project would allow us to enhance these components of the clinical experience and expand to additional high-need districts.

Deliberate and sustainable partnerships. Through previous piloting of a partnership model supported through a S.D. Bechtel Jr grant and work with NCTR, the partnership model shows promise in developing a joint vision to teacher preparation and establishing mutually beneficial relationships about clinical experience placements and high-need partner district needs. Bridging teacher preparation courses and the field, our project expands the partner model to 8 rural and remote districts encompassing 48 schools seeking to support teacher preparation and ongoing teacher learning through cohort placements, coteaching during the yearlong clinical experience, context-specific PD, data-driven decision making, and partnership liaison support.

High-quality mentoring. With the recent increase in the time prospective teachers spend in their clinical experience and through the creation of a residency model, prospective teachers in our teacher preparation program engage in more face-to-face time in the field than they do in their credential coursework. Mentor teachers and clinical coaches play a pivotal role in the development of the prospective teacher. Therefore, we will provide yearlong, evidence-based PD to all three member of the triad (mentor teacher, clinical coach, and university faculty) to ensure

that they have the content and pedagogy knowledge needed, and are trained in coaching and providing effective evidence-based feedback to ensure high-quality mentoring.

GOAL 3: Implement in collaboration with partner districts and the Monterey County Office of Education a two-year formalized induction program inclusive of the reform elements for residency programs to provide an educator support system that includes individualized high-quality mentoring, structured observations, instructional rounds, and continuous, sustained, and practice-based professional development inclusive of the reform elements in the absolute priority to promote teacher development, retention, and K-12 student achievement.

Goal 3 objectives and outcomes. In order to better support new teachers, CSUMB will create and implement a two-year induction program (in consultation with high-need partner districts and MCOE) where recent program graduates will continue to be supported by our teacher preparation programs in order to promote higher rates of retention and K-12 student achievement. This induction model will engage new teachers in targeted PD via PLC emphasizing empirically-based instructional practices and instructional interventions aligned to CCSS-ELA, CCSS-M, ELD, and NGSS. Coteaching opportunities with university faculty and instructional rounds (City, Elmore, Fiarman, & Teitel, 2009) will support new teachers in technology integration, learning process and assessment of learning, and using data to drive instruction. In the interest of continuous improvement, CSUMB will use teacher and student data to determine efficacy of credential programs and make program reforms based on areas for growth, drawing on improvement science (Bryk, Gomez, Grunow, & LeMahieu, 2015). Outcomes for Goal 3 will include the following:

- Outcome 3.1: Beginning in Year 3 (in partnership with existing induction programs and high-need districts), create and implement a two-year induction program for 25% of new teachers hired in high-need partner districts; annually increase to 100% participation of graduates hired in high-need partner districts by Year 5
- Outcome 3.2: Attain a retention rate of 80% or higher for new teachers hired in local and high-need partner districts three years after date of hire and demonstrate an increase in teacher preparedness to implement empirically-based, effective teaching skills
- Outcome 3.3: New teachers in the developed induction program will show 10% higher levels of K-12 student achievement than new teachers who did not participate in the program, as measured by Smarter Balanced state testing
- Outcome 3.4: Beginning in Year 2, annual data from statewide new teacher surveys (CSU-EdQ) will inform teacher credential program, resulting in 3 courses per program ($n = 6$ total) reformed each year
- Outcome 3.5: Create a consistent and integrated support network for 50% of new teachers through the linkage of the culmination of the residency program and the induction year through the implementation of individualized development plans to provide personalized supports centered around residents' strengths and weaknesses relative to the teaching performance expectations; annually increase to 100% by year 5

Reform Elements (g)(3); (I)(c)(3); (II)(a)(7): Design and implement an induction program to support all new teachers who are prepared by the teacher preparation program to provide networking opportunities and professional development to further develop new teachers' teaching skills, and train mentors to work with new teachers; including the development of skills

in instructional and behavioral interventions derived from empirically based practice and scientifically valid research through not less than the residents' first two years of teaching

CSUMB will work with high-need partner districts to collaboratively develop a two-year induction model for program graduates and all new teachers. The induction program will include the formation of a committee of stakeholders to determine the model (grounded in coteaching, coaching, and instructional rounds) and implementation of the program. The program will be piloted in Year 2 with one partner district and continuous improvement data will be collected and analyzed to measure the efficacy of the model (including survey and teacher observation data) before expanding to an additional partner district each year of funding. In addition, the induction program will be refined and revised based on continuous improvement data and in communication with high-need partner district input to best meet the priorities and needs of the K-12 students in each rural district. Dissemination of this model to other CSU campuses in Years 4 and 5 will provide additional support for new teachers statewide and ensure sustainability of practice beyond the project period. See the work plan in Appendix J for additional details regarding activities and milestones associated with the two-year induction program.

GOAL 4: Develop through sustained collaboration with our partner districts, high-quality professional development for prospective, new, and in-service teachers around the essential reform elements; including but not limited to, K-12 literacy skills across the subject areas (particularly STEM, special education, and computer science), the implementation of literacy/reading instruction and assessment to provide individualized instruction with an emphasis on ELD integration, and bilingual instruction to enhance teacher practice and improve K-12 student achievement

Goal 4 objectives and outcomes. In response to a local needs assessment (Appendix C), all 8 high-need LEAs indicated a need for cross-curricular PD, specifically linking science/math and literacy within the subject areas. CSUMB will engage teachers from high-need partner districts in sustained PD around literacy skills across the subject areas with an emphasis on STEM. CSUMB will also engage teachers and prospective teachers from high-need partner districts in professional growth around literacy skills across the subject areas with an emphasis on STEM education; including computer science. Teachers will be supported via literacy coaches engaged in sustained, data-driven, and classroom-focused PD efforts emphasizing the essential components of literacy instruction and assessing students in order to provide differentiated instruction to address CCSS-ELA, ELD, and NGSS. The coaching role will be developed for local implementation and coaches will be selected based on practices illustrated in the research providing strong rationale (Deussen, Coskie, Robinson, & Autio, 2007).

Reform Element (f)(10)(b11): Support in-service PD and activities by regularly evaluating the impact these activities have on increased teacher effectiveness and improved student achievement; with the findings of the evaluations used to improve the quality of the PD

One of the key aspects to successful PD reform efforts is the notion of continuous improvement coupled with constant needs assessments. As such, each year of the project will begin with a needs assessment for all partner districts that will drive the PD and focus for that year's continuous improvement work. This serves two purposes: 1) it provides the most current needs of the district for targeted specific reform efforts, and 2) it demonstrates the commitment of CSUMB to the true nature of the partnership model. Instead of simply creating one PD series for all eight partner districts, CSUMB will cater PD towards the needs of each unique district. This helps to build capacity, strengthen the partnership, and work towards a model of

sustainability that will continue beyond the funding period. Moreover, all PD experiences will culminate with an exit survey and/or product (e.g., NGSS aligned lesson plan, hands-on activity design, literacy lesson plan) that will be assessed to determine efficacy of the PD. As survey data are analyzed and copies of artifacts collected, the Continuous Improvement Data Team and faculty will work together to revise and refine PD experiences. This cycle will continue each year to ensure the sustainability of all PD reform elements well beyond the funding period.

Outcomes for Goal 4 will include the following:

- Outcome 4.1: Provide high-quality, classroom-focused, evidence-based sustained PD series in key areas identified by high-need rural and remote LEA partners and university colleagues to support learning and achievement for all K-12 students, to include support in the integration of technology, implementation of Common Core State Standards, STEM, computer science, and NGSS in addition to other topics identified in district needs assessments; with two workshops developed per year and building capacity to ten workshops by year 5
- Outcome 4.2: Provide online and hybrid models of PD that can be sustained after federal funding and designed to be accessible to rural and remote teacher residents, co-teachers, inductees, and mentors/academic coaches who support educators new to teaching and colleagues in teacher preparation pathways; with two workshops developed per year and building capacity to ten workshops by year 5
- Outcome 4.3: Utilize collaborative technologies to facilitate networked professional learning communities (PLC) in year 2 for two districts per year (8 districts total by year 5) consisting of each partner district's committed project personnel and university colleagues to engage in

continuous improvement, including data-driven decision making to impact classroom instruction and subsequent K-12 student achievement

- Outcome 4.4: In consultation with partner districts provide high-quality sustained PD series for teacher leaders, administration, principals, and other school leaders in effectively facilitating communication with relevant stakeholders starting in year 2 for two districts per year (8 districts total by year 5)
- Outcome 4.5: Provide high-quality, classroom-focused, sustained PD series in key areas identified by high-need rural and remote LEA partners and university colleagues to support learning and achievement for all K-12 students, including those with disabilities or developmental delays, to include support in the integration of universal design for learning, positive behavioral interventions and supports, and multi-tier system of supports to differentiate instruction and supports for all students; develop in year 1 and implement one learning series per year (i.e., based around one reform element) for a total of four in year 5
- Outcome 4.6: In close collaboration with partner district leaders design and implement classroom-focused, high-quality, intensive PD experiences that encompass evidence-based highly-effective practices for integrating literacy/reading across the curriculum to improve student's academic achievement; teachers who experience the PD will show 10% higher levels of K-12 student achievement than those who did not participate, as measured by benchmarks on the Smarter Balanced Assessment Consortium

Sustained professional development on teaching literacy across the subject areas.

CSUMB will co-create and co-deliver sustained opportunities and provide training for teachers and prospective teachers in teaching literacy across the subject areas including the development of curriculum. In order to achieve this outcome, CSUMB literacy faculty and district literacy

coaches will develop curriculum for elementary, secondary, SPED, and bilingual authorization programs to include specific trainings for teachers and prospective teachers on literacy instruction across the subject areas (see Goal 4 workplan, Appendix J). Curriculum and school-site experiences will be developed in collaboration with faculty from STEM and computer science content areas and in consultation with ELD faculty within the College of Education.

In addition, partner district need will guide the content of the literacy workshops and continuous coaching. Participation in literacy components and projects will be tracked via attendance at ongoing PD, literacy coaching logs, and collection of created literacy curricular materials. Integrated literacy PD will also include Novel Engineering and the MakerSpace. Revisions to PD will be made annually based on analyzed data from participant surveys and interviews. A gradual scale-up of services to high-need partner districts will occur, beginning Year 3 with one high-need partner district and scaling up to two partner districts thereafter.

Sustained, classroom-focused professional development in NGSS and STEM. Science is both a body of knowledge and a set of linked practices for developing knowledge and the application of transdisciplinary concepts (Penuel, Allen, Coburn, & Farrell, 2015). With NGSS at the classroom implementation stage, the problem facing educators, elementary through high school, is that few teachers have ever taught STEM effectively. The academic rigor and expectations of NGSS are less familiar to many future science teachers than conventional or traditional teaching practices and require shifts in content and pedagogy, which are consistent with shifts for teaching the CCSS for English Language Arts and mathematics (NRC, 2012).

One of the biggest shifts in pedagogy comes with the experiential learning activities, such as Learn by Doing, that are associated with STEM teaching. Three primary benefits to students have been identified for Learn by Doing or Making: fostering and supporting students'

participation in science environments, supporting academic/disciplinary development, and creating communities of learners (Stornaiuolo and Nichols, 2016). Active learning experiences deliberately expand and challenge personal and professional attitudes of students while providing access to content and skills. While Learn by Doing develops students' personal identity as a scientist (Halverson and Sheridan, 2014), these inquiry activities also cultivate an iterative or growth mindset (Martin, 2015). Therefore, it becomes essential that K-12 teachers are able to integrate NGSS into classroom teaching, but also the associated Learn by Doing activities.

CSUMB faculty from the College of Science and the Department of Education and Leadership will co-create and co-deliver sustained, intensive, PD for teachers centered on the tenets of NGSS and Learn by Doing. Leveraging existing resources at CSUMB, such as the Makerspace, prospective, new, and practicing teachers will be exposed to PD experiences that engage them in the Learn by Doing process. Moreover, CSUMB will also work collaboratively with outside entities, such as the Monterey Bay Aquarium and the New Bechtel Family Center for Ocean Research, to co-create and co-deliver PD for prospective, new, and practicing teachers in STEM related practices and how to incorporate and fully utilize the NGSS in their K-12 classrooms. By engaging teachers and clinical coaches in these PD opportunities, particularly experiences across the triad, CSUMB seeks to increase K-12 teachers understanding of NGSS and how to integrate hands-on activities into their classrooms (see workplan, Appendix J).

GOAL 5: Use the practices of improvement science to engage in continuous improvement and program reform using teacher performance and K-12 student success data to achieve goals 1-4; while also engaging partner district leadership in the improvement science cycle creating systematic sustained efforts in continuous improvement across both the IHE and

the LEAs, leading to reformed teacher instructional practices and increased student achievement

Goal 5 objective and outcomes. With ESEA and then ESSA districts were encouraged to use evidence-based decision-making when attempting to solve educational issues. However, these laws came with no other support for administrators; leading school leaders to perpetuate a “magic bullet” concept of improvement where the solution propels improvement work, not a systematic assessment of problem (Hale et al., 2018). These quick fixes often show improvement for one group, but not necessarily for all and they ignore the underpinnings of the problem. Instead of focusing on the solution, districts must approach educational issues by systematically assessing needs, constructing hypotheses about potential shortfalls, implementing interventions with fidelity, analyzing local outcomes, and adapting when necessary.

One such approach to reform work is grounded in improvement science (Bryk et al., 2015). A continuous improvement process starts with the problem, rather than the solution. It includes addressing a discrete issue or problem by systematically testing potential solutions while tracking well-defined and measurable goals. The process is meant to be iterative--data are collected, analyzed, and discussed frequently so that adjustments can be made to the intervention or program, and then data are collected and analyzed once again. In addition, the scale of the initial effort often begins small and expands over time as the intervention is refined.

Reform Element (g)(2): Provide district and school level administration sustained, intensive, evidence-based professional development in understanding and using multiple forms of scientifically valid data to drive instructional decisions.

The CSUMB Leadership Team will use teacher and student data to determine efficacy of credential programs and make program reforms based on areas for growth, drawing on an

improvement science approach (Bryk et al., 2015). As our project evolves, we will collaboratively engage in data-driven improvement cycles to revise and enhance project goals, outcomes, and activities, ensuring the delineation of clear roles and responsibilities for mutual benefit. Furthermore, our partnership focuses on sustainability efforts, including leveraging resources and developing structures that will continue to support the mutual needs of all partners beyond project funding. Additionally, starting in year 2, the Continuous Improvement District Team will begin onboarding district administration (2 districts per year) to the continuous improvement work through collaborative and sustained PD surrounding improvement science. This aligns with all eight districts reporting that they want and need, "support in engaging in the continuous improvement cycle and making data-driven decisions" (Appendix C). This team will work one-on-one with partner district administration to aid in their understanding and use of scientifically valid data sources (e.g., SBAC data, ELPAC data) to drive instructional decisions.

Through this reform effort and sustained collaboration across the IHE and LEA the infrastructure for continuous improvement efforts will continue long after the period of funding has concluded. Outcomes for goal 5 will include the following:

- Outcome 5.1: District partner instructional personnel and university faculty will use data to inform instructional decisions to close achievement and opportunity gaps to achieve 100% targets for all outcomes under goals 1-4
- Outcome 5.2: District partner instructional personnel and university faculty will utilize collaborative technologies to facilitate networked professional learning communities (PLC) between the Continuous Improvement District Team and partner districts by meeting four times per year to assess progress and make data-driven reforms to adequately achieve aim statements during continuous improvement cycles

- Outcome 5.3: Starting in year 2, create collaborative, sustained, and intensive PD opportunities for partner district personnel to engage in the continuous improvement cycle (2 partner schools a year; 8 schools by year 5) to increase sustainability of reform efforts past the funding period (See workplan in Appendix J for all reform efforts for Goal 5)

Adequacy of Resources (20 points)

Reform Element (e)(1)(2)(3): Commitment of the resources of the partnership to the activities assisted under this program, including financial support, faculty participation, and time commitments, and to the continuation of the activities when the grant ends

One goal of the project is to institutionalize an approach to teacher preparation that extends beyond the federal funding. For example, establishing a reformed 18 month residency model that includes a yearlong clinical placement and intensive master's degree coursework. Furthermore, project milestones include the development and implementation of resources that surpass the federal funding period; a few examples include: (1) advisement materials to establish "grow your own" pathways from high school through community college, (2) computer science credential and pathways, (3) online and hybrid courses, (4) induction program, (5) transformational reform of coursework, (6) evidence-based rubrics for TPE and STEM instruction, (7) revolutionary approaches to PD that stay with districts post-award, (8) new teachers clubs in high schools throughout the districts, (9) alumni club, and (10) partner district administration utilizing improvement science to solve educational inequalities (see Appendix J).

Similarly, by cementing deliberate and sustainable partnerships with eight high-need partner districts (48 schools) that are mutually beneficial, partner districts will find value in this partnership and district and university funding can be reallocated in order to continue these partnerships post federal funding. For each goal of the workplan, Appendix J, an activity related

to sustainability has been identified. For example, we will conduct a stakeholder assessment for sustainability of the induction model, and a sustainability plan will be developed.

In order to ensure equal access and treatment for eligible project participants who are members of underrepresented groups, we will partner with high-need partner districts, community colleges, and CSUMB programs to implement the following:

- Develop high school and community college pathways to teaching, including (1) teaching clubs, (2) online and hybrid courses for place bound students, (3) recruitment specialist, and (4) strategies partnerships with the Service Learning Institute so that undergraduate students gain access to early field experiences and can transition seamlessly into a fifth-year teacher preparation program at CSUMB;
- Coordinate with the CSUMB's OIE to develop marketing and curricular materials that utilize images and language representative of a diverse set of ethnicities, races, and cultures;
- Create a CTC approved science waiver to recruit STEM teachers;
- Include faculty and staff from the on-campus MakerSpace and College of Science in the development of targeted STEM pathways, recruitment strategies, and curricula materials for students of color and underrepresented populations;
- Restructure credential program orientation workshops and informational sessions for prospective teachers, mentor teachers, and clinical coaches to include bias training and/or social justice curriculum; and
- In collaboration with OIE, offer annual bias training and social justice workshops to Department of Education of Leadership faculty and staff

(i) The adequacy of support, including facilities, equipment, supplies, and other resources, from the applicant organization or the lead applicant organization.

The support for this project exceeds adequacy across all five goals, drawing on both internal resources at CSUMB and external resources from a variety of entities and district partners (see letters of support; Appendix I). First, the layout of CSUMB facilities encourage collaboration and CSUMB's inter-disciplinary notion and the support of hands-on, interactive learning is embedded in everything we do. Equipment at CSUMB MakerSpace, innovative technology and maker resources will support the integration of STEM across the curriculum. Residents have access to Swivl cameras, IPADs, and Taskstream (a secure online platform for compiling resources) to capture classroom instruction and allow critical reflection, mentoring, and feedback grounded in classroom data. Zoom video conferencing available to residents will enable communication, collaboration, and PD to rural and remote high-need partner districts.

Further, the integration of 11 faculty members in the Department of Education and Leadership as well as faculty in College of Science and School of Computing and Design (see letters of support; Appendix I) to help meet the goals of the project demonstrates the commitment across CSUMB to all reform elements within the NIA (see Appendices B & E). Moreover, a number of CSUMB entities have pledged support not only to the successful achievement of all the goals, but each entity has offered unique contributions to the project that are aligned to one or more of the project goals (resource table below). In addition, Dean Alvarado from the College of Education and Department Chair Dr. Draper Rodriguez both state in their letters of support (see Appendix I) that CSUMB is able to match from non-federal funds the 1:1 required percentage up to budgeted amount annually.

(ii) The relevance and demonstrated commitment of each partner in the proposal project to the implementation and success of the project.

Partnerships are the core of our proposal. Our proposal includes multiple partnerships at different levels of teacher preparation including within the university (org chart; Appendix J);

outside of the university through our 8 high-need partner districts, MCOE, and other entities; and collaboration across CSUs (org chart, Appendix J; letters of support, Appendix I). At each level, partner representatives collaborate to maximize the quality of the services received by prospective, new, master, and in-service teachers and the K-12 students. Through these partnerships, we will identify roles and delineate clear responsibilities to ensure the meeting of *mutual* needs. Further, coteaching is embedded throughout our project and we recognize the expertise content and education specialists bring to teaching and the local knowledge base of high-need partner districts. Through collaborative curriculum development, instruction, sustained PD, and mentoring, mutual and localized interests can be pursued and achieved (Appendix J).

Additionally, CSUMB faculty with literacy and ELD expertise, MIEL Director, and faculty from STEM content-areas will collaborate with TOSAs, coaches, administrators, and partner district teachers to develop and implement co-created and delivered PD to support high-quality practices, evidence-based instructional strategies, and data-driven decision making in district classrooms to raise student achievement. Moreover, to provide additional support for general education teachers, PD series will be created to address differentiation for students (particularly those with developmental delays, emergent bilinguals, gifted, and LTELs) and data-driven instructional decision making and reflection to improve student outcomes.

Not only will CSUMB be partnering with a multitude of entities on campus, districts, and beyond but we have obtained match commitments from entities that span the spectrum of resources. At CSUMB, the Dean of the College of Education and the Chancellor's Office have pledged match support. Moreover, each of our 8 partner districts and MCOE have provided match support and pledged resources in terms of facilities, personnel, equipment, and supplies. Additionally, external entities such as the Monterey Bay Aquarium have pledged match support.

Finally, entities such as TeachingWorks, S. D. Bechtel Jr Foundation, NCTR, and others have provided letters of support (Appendix I) that speak to past and current reform efforts at CSUMB, and the abilities of the Leadership Team to achieve the goals of this project.

Table 1. Internal and External Resources

GOAL	CSU Monterey Bay Resources	External Resources
GOAL 1- Recruitment	<ol style="list-style-type: none"> 1. College of Science 2. Mini-Corps 3. Makerspace 4. EduCorps 5. Monterey Institute for English Learners (MIEL) 6. Math/Science Teacher Initiative (MSTI) 7. Office of Inclusive Excellence (OIE) 8. Teacher Recruitment Project 9. NSF Rural Integrated STEM Education (RISE) Project 10. USDE MAESTRO project 	<ol style="list-style-type: none"> 1. Community College partners 2. MCOE Aspiring Classified Employees into Teaching (ACEIT) 3. District Partner Personnel 4. 100K in 10 5. Californians Dedicated to Education Foundation (CDEF) 6. Center for Advancement of Instruction in Quantitative Reasoning (CAIQR)
GOAL 2- Residency	<ol style="list-style-type: none"> 1. Dept. of Education & Leadership 2. Field Placement Coordinator 3. Makerspace 4. Center for Teaching Learning & Assessment (TLA) 5. Personal Growth & Counseling Center (PGCC) 6. Center for Academic Technologies (CAT) 7. Center for Reading Diagnosis & Instruction 	<ol style="list-style-type: none"> 1. National Center for Teacher Residencies 2. Monterey Bay Aquarium 3. Teaching Works 4. District Partner Personnel 5. Center for Advancement of Reading and Writing (CAR)
GOAL 3- Induction	<ol style="list-style-type: none"> 1. Dept. of Education & Leadership 2. CAT 3. TLA 4. Makerspace 5. Center for Reading Diagnosis and Instruction 6. MIEL 7. College of Science 	<ol style="list-style-type: none"> 1. Monterey County Office of Education 2. District Partner Personnel
GOAL 4- Professional Development	<ol style="list-style-type: none"> 1. College of Science 2. CAT 3. TLA 4. Center for Reading Diagnosis and Instruction 5. MIEL 6. PGCC 	<ol style="list-style-type: none"> 1. Monterey Bay Aquarium/Ocean Ed 2. District TOSA's/Coaches/"Leads" 3. TeachingWorks 4. Bechtel Foundation 5. 100K in 10 6. CDEF 7. CAIQR 8. CAR
GOAL 5- Continuous Improvement	<ol style="list-style-type: none"> 1. Continuous Improvement Teams 2. Dept. of Education & Leadership 3. MIEL 4. CAT 5. Bright Futures Collective Impact Initiative 	<ol style="list-style-type: none"> 1. CSU Chancellor's Office Educator Quality Center (EdQ) 2. District Academic Coaches 3. District Partner Personnel 4. Bechtel Foundation

Quality of the Management Plan (20 points)

We envision broad and significant improvements in teacher preparation for prospective, new, mentor, and in-service teachers; one county office of education; eight high-need rural LEAs; and two colleges and various centers on campus. In recognition of the scope and complexity of this undertaking, we have developed a project management organization and structure intended to achieve all of the goals and objectives of the project and to meet all statutory reforms and improvements stipulated in the application (see org chart, Appendix J).

Leadership team. [REDACTED], Assistant Professor and Secondary Education Program Coordinator at CSUMB, will serve as **Project Investigator (PI)** and chair of the leadership team. [REDACTED] will be responsible to the U.S. Department of Education for the achievement of project goals delineated in the work plan (Appendix J) and the prudent use of resources. Other members will include **Co-Principal Investigator (Co-PI)** – [REDACTED] [REDACTED], Assistant Professor and Elementary Education Program Coordinator. [REDACTED] [REDACTED] - Special Education Program Coordinator will be the SPED representative. To address the inter-disciplinary nature, [REDACTED] will be the College of Science representative and will bring her STEM and computer science background. [REDACTED], the senior member of the department with a track record of 30 years of grant funded project administration, will serve as advisor to the PI and provide mentoring. The leadership team also includes a **Residency and Professional Development Manager** - [REDACTED], and Field Placement Coordinator- [REDACTED].

Prioritizing the partnership is essential to reforming teacher preparation, our Leadership Team will also include high-need partner districts. All high-need district partners will be represented by a **partnership liaison**, designated by their superintendent, to collaborate with the Residency and Professional Development Manager and support the partnership. In addition, a

district lead (i.e., administrator from each district) and a **district HR representative** will also be on the Leadership Team. The Leadership Team will meet **quarterly**, and the core leadership team (PI, Co-PI, Residency and Professional Development Manager) will meet **weekly**.

To help meet the five goals of project POPPY, two continuous improvement teams will be utilized for the duration of the project. The first team, **Continuous Improvement Data Team** will be dedicated to utilizing improvement science to cyclically and systematically assess the progress made towards Goals 1-4; revising and reforming processes as needed (see logic model; Appendix G). The Continuous Improvement Data Team will include: PI, Co-PI, Residency and Professional Development Manager, the external evaluators-Thomas P. Miller Associates (TPMA), and essential College personnel not funded by the grant-field placement coordinator, and credential analysts. The Continuous Improvement Data Team will meet with the Leadership Team **quarterly** to determine a data collection plan to inform improvement work. Finally, reports from TPMA will contribute to data collection and program improvement decisions.

The second continuous improvement team will be the **Continuous Improvement District Team** that will be dedicated to working individually with partner district administration to onboard them to improvement science. Each year two districts will engage in the continuous improvement cycle with a CSUMB faculty lead (i.e., 2 districts per year, 8 districts across 5 years). The Continuous Improvement District Team will consist of the PI, [REDACTED], an Education Leadership and Administration faculty member (see resume for research agenda), Residency & Professional Development Manager, and district administrators and liaisons.

Due to the large arc of the reform work (e.g., reading instruction; computer science; mentor teacher training) and the all-encompassing nature of CSUMB faculty; the leadership and continuous teams reflect a multitude of individuals with various areas of expertise. [REDACTED]

██████████ will oversee the entire project as the PI utilizing her expertise and experience in/as: literacy instruction, designing PD, TeachingWorks Fellow, methodologist, MAE course development, recruitment as an EduCorps Campus Leader (CSU Chancellor's Office organization dedicated to recruiting teachers from underrepresented populations), and Continuous Improvement Lead (CIL) on previous grant work to ensure all targets are met or exceeded each year of the project. As CIL for the past 3 years ██████████ has engaged in numerous continuous improvement cycles with one partner district to create measurable goals and outcomes and has collected, analyzed, and presented data to a multitude of stakeholders, from grant sponsors to teachers. ██████████ will bring her experiences and expertise in/as: STEM and Maker education, designing PD, cognitive coaching, TeachingWorks Fellow, NCTR liaison, and Project Lead on previous grants to work towards achievement of all goals. Ms. Sophia Vicuña will use her past 20 years of grant-funded research, reform, and development to work in tandem with the PI to ensure all activities are being completed as projected (workplan, Appendix J) and annual targets are met or exceeded for the duration of the project.

Executive council. ██████████, Full Professor and Chair of the Department of Education and Leadership, will chair the Executive Council as it oversees the project, evaluates its effectiveness, and determines changes to be made in meeting goals and objectives of workplan. The Executive Council includes the members of the leadership team; Chair of the Department, representatives from campus centers (see org chart, Appendix J), district administrator from each of the 8 partner districts, and representative from MCOE. The Executive Council manifests the partnership, and includes all key constituencies in the project.

The Executive Council will meet **twice each academic year** to review the progress of the grant and provide input to the annual report to be submitted to the U.S. Department of Education,

which will include GPRA performance measures and Higher Education Act Section 204(a) objectives and measures. At each session, the executive council will receive reports of progress from (1) each high-need district partner – reporting on K-12 student success, (2) TPMA – the external evaluator, (3) the Continuous Improvement Data Team, and (4) the Continuous Improvement District Team. Based on this information, the executive council will provide direction to the leadership team and engage in data-driven strategic planning. A standing agenda item for all executive council meetings will be building capacity and sustainability.

Partnership team meetings. Valuing the individual needs and voice of each partner district, **monthly partner district meetings** will occur. Representatives at these meetings will include Leadership Team – including district lead and partnership liaison – and three teachers (candidate, mentor, new) from each high-need partner district. Monthly partnership team meetings will focus on grant initiatives, evaluation of the effectiveness of these initiatives, impact on student and teacher learning, and strategic planning for continuous improvement.

The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks.

A detailed project work plan (see Appendix J) has been developed and outlines project goals and outcomes with *clearly* defined activities, responsibilities, timelines, and milestones. The work plan will be reviewed **bi-annually** by the Executive Council to collaboratively identify progress made and revisions needed. The workplan includes the careful sequencing of project activities, distributing activities across all five years. In addition, clearly defined responsibilities are evident through the decision to engage multiple teams (e.g., Leadership Team, Continuous Improvement District Team) to help meet the outcomes for each goal. Furthermore, the work plan includes timelines that identify a range for completion (e.g., Fall 2022-Spring 2024) for each activity (e.g., in close collaboration with the reading directors and district instructional

coaches, design PD series centered around best practices for reading instructions) with milestones identifying clear products or services created with specific deadlines to ensure success (e.g., Creation of two workshops co-developed by Spring 2023; Launch fall workshop, Fall 2023; Launch spring workshop, Spring 2024; Collect data on efficacy of workshops, Spring 2024; Analyze data and revise and revise as needed, Summer 2024). Through this careful planning, we are confident in our ability to achieve the outcomes of the Project POPPY.

Quality of the Project Evaluation (20 points)

Thomas P. Miller and Associates (TPMA), the external evaluator, will use a mixed-methods approach to evaluate Project POPPY. This method will offer both quantitative data to measure progress on CSUMB's Teacher Quality Program and GPRA and HEA performance measures, as well as qualitative data to provide richer context on fidelity of implementation and factors contributing toward progress on defined measures. While the main evaluation plan will utilize descriptive data analysis mechanisms, TPMA also will use quantitative data to conduct a Quasi-Experimental Design (QED) using propensity score matching or other mechanisms for controlling for covariates across groups, coupled with logistic and linear regression methods to assess the extent to which Project POPPY contributed to improved candidate and student outcomes, compared to teacher preparation programs at other CSUs that are not using residency models and targeted PD. Assuming suitable comparison groups for a QED, TPMA will compare findings on metrics such as representation of teachers from underrepresented populations; candidate performance on measures of proficiency (such as California's edTPA assessment); candidate retention in partner districts; and K-12 student achievement in partner districts.

(i) The extent to which the methods of evaluation will provide valid and reliable performance data on relevant outcomes.

TPMA will collect, analyze, and report on valid and reliable performance data on relevant outcomes. The evaluation design will be finalized after reviewing project goals, activities, and metrics, as well as evaluation questions, to ensure that quantitative and qualitative data collection methods are appropriate for obtaining the most useful data for measuring project performance. Through the outcomes evaluation, TPMA will collect quantitative data on both program and GPRA measures. For the process evaluation, TPMA will collect qualitative and quantitative data to obtain information about program implementation – the extent to which the program is being implemented with fidelity to the plan; any successes or barriers; and recommendations for changes to facilitate continuous improvement and ensure the grant is on track to achieve performance measures, as detailed in the Project POPPY logic model (see Appendix G), as well as GPRA and HEA measures. Table 2 presents an aligned plan that includes the project goals and activities, as well as specific methods that will be used to collect valid and reliable performance data for each. The following section includes a detailed description of the evaluation sources and how they will inform the performance measures.

Table 2. Project POPPY Evaluation Plan

Project Goals and Activities	Evaluation Methods and Sources
<p>Goal 1: <i>Recruit teachers from underrepresented populations and high-need subject areas (STEM fields, special education, computer science, bilingual education) so that eligible partner school districts can hire highly-qualified teachers to serve hard-to-staff rural and remote schools in our tri-county area.</i></p>	
<ul style="list-style-type: none"> ● Recruitment in teacher shortage areas (STEM, special education, bilingual education): Examine issues of lower enrollment of prospective teachers that meet district-partner need; create recruitment plan with input and direction from district partners, recruitment specialist, program faculty, and campus centers; develop computer science credential program; foster sustainability of recruitment efforts through staff training, relationship building with districts, creation of marketing & curriculum materials and infrastructure. ● Recruitment of underrepresented populations: Establish strong grow-your-own links from high school through community college to CSUMB; make teacher education courses accessible to partner districts and classified personnel through the hybrid online model; work with MCOE on expanding ACEIT to recruit more classified employees; and cast a broader net earlier in high schools to encourage students into the pipeline. 	<ul style="list-style-type: none"> ● Program data on total number applied, number accepted, number enrolled, subject area of licensure, number of candidates who graduate, including demographic data to identify prospective teachers from underrepresented groups and those with STEM, computer science, special ed, bilingual ed background ● Program and district HR data on hiring of completers, subjects taught, placement in high-need areas & schools ● Performance on edTPA (passage rate), and observation results using CSUMB’s observational TPE rubric ● Surveys of prospective teachers on motivations for participating in the program and teaching as a career and attitudes about teaching in high-need subject areas ● Interviews w/ grant leadership, staff, partners, faculty ● Reviews of program documents and recruitment materials
<p>Goal 2: <i>Design a cohort-based rigorous residency program in the principles of practice-based teacher preparation through transformative curricular changes inclusive of the NIA reform components, and provide integrated and continuous support for prospective teachers by tightly aligning university coursework and the yearlong clinical experience; through engagement of the three key members within the co-teaching triad in sustained, collaborative, and intensive professional development.</i></p>	

<ul style="list-style-type: none"> ● Implement a partnership model that includes a) cohort placements in which multiple prospective teachers across three credential programs are placed at one school site; b) coteaching throughout the year-long clinical experience with a focus on collaboration and data-driven instruction and reflection; c) professional development for mentor teachers, clinical coaching, and university faculty in providing mentoring, continuous, and integrated support; d) development, training, and calibration for all members of the triad on a newly created observational TPE rubric; and e) academic coaches at each school site to foster communication and tightly align fieldwork with credential coursework. ● Include district representation on decisions of program and curricular reforms as well as credential program admission decisions to better understand the qualities of highly-qualified teachers' partner district look for when hiring. 	<ul style="list-style-type: none"> ● Performance on in-program assessments including edTPA data, observation results on TPE rubric ● Candidate surveys on the quality of co-teaching and clinical experiences ● Mentor teacher surveys on the quality and utility of professional development ● Interviews with candidates, mentor teachers, coaches, faculty, and program leadership on specific components of the residency program (including curriculum, coursework alignment, and clinical experiences) ● Review of initial and revised program syllabi ● Review of program documents and coteaching rubric materials
<p>Goal 3: <i>Implement in collaboration with partner districts and the Monterey County Office of Education a two-year formalized induction program inclusive of the reform elements for residency programs to provide an educator support system that includes individualized high-quality mentoring, structured observations, instructional rounds, and continuous, sustained, and practice-based professional development inclusive of the reform elements in the absolute priority to promote teacher development, retention, and K-12 student achievement.</i></p>	
<ul style="list-style-type: none"> ● Implement a two-year induction model aligned with comprehensive approach components with mentoring, workshops, and supportive communication with school leaders. ● Engage novice teachers in targeted professional growth via structured interdisciplinary PLCs that include teachers in the same field, school site leaders, instructional staff, and mentor faculty, emphasizing high-leverage instructional practices aligned to CCSS-ELA, CCSS-M, ELD, and NGSS. ● Utilize coteaching opportunities with faculty and instructional rounds to support new teachers in technology integration, application of empirically-based practices, learning process and assessment of learning, and using data to drive instruction. 	<ul style="list-style-type: none"> ● Retention data from program and district HR departments ● Student state assessment results ● Candidate surveys on the quality of mentoring, co-teaching, and clinical experiences ● Teacher & school district (those employing teachers) surveys on quality and perceived impact of retention efforts ● Interviews with candidates, partner districts, faculty, and program leadership on specific components of the induction program ● Reviews of program documents & induction materials
<p>Goal 4: <i>Develop through sustained collaboration with our partner districts, high-quality professional development for prospective, new, and in-service teachers around the essential reform elements, including but not limited to K-12 literacy skills across subject areas; the implementation of literacy/reading instruction and assessment to provide individualized instruction with an emphasis on ELD integration; and bilingual instruction to enhance teacher practice and improve K-12 student achievement.</i></p>	
<ul style="list-style-type: none"> ● Engage teachers and prospective teachers from high-need partner districts in professional growth around literacy skills across the subject areas, with an emphasis on STEM education. ● Provide support via literacy coaches who engage in sustained, data-driven, and classroom-focused PD emphasizing the essential components of literacy instruction and assessing students to provide differentiated instruction. ● Utilize CSUMB faculty with expertise in literacy, ELD, and STEM to collaborate with TOSAs, coaches, administrators, and partner district teachers to develop and implement co-created and delivered PD to support high-quality practices, evidence-based instructional strategies, and data-driven decision making. 	<ul style="list-style-type: none"> ● Student state assessment results ● PD attendance data (number attending, subject areas of teachers attending, districts represented, etc.) ● Surveys of PD participants and school district partners on the quality and relevance of PD opportunities ● Interviews with candidates, partner districts, PD participants, faculty, and program leadership ● Reviews of program documents and PD materials
<p>Goal 5: <i>Use the practices of improvement science to engage in continuous improvement and program reform using teacher performance and K-12 student success data to achieve goals 1-4 while also engaging partner district leadership in the improvement science cycle creating systematic sustained efforts in continuous improvement across both the IHE and the LEAs, leading to reformed teacher instructional practices and increased student achievement.</i></p>	
<ul style="list-style-type: none"> ● Collaboratively engage in data-driven improvement cycles to revise and enhance project goals, outcomes, and activities, ensuring delineation of clear roles and responsibilities. ● Focus on sustainability efforts, including leveraging resources and developing structures to support the mutual needs of all partners beyond project funding. ● Onboard district administration in continuous improvement work through collaborative and sustained PD. 	<ul style="list-style-type: none"> ● Student state assessment results ● Surveys of school district partners on instructional decisions and PLCs ● Interviews with candidates, partner districts (teachers and administrators), faculty, and program leadership ● Reviews of program documents ● Results of research studies on impact of PD

Project implementation. To ensure the project is on track to achieve desired performance measures, TPMA will work closely with Project POPPY Leadership Team and Continuous Improvement Data Team to collect formative data on project implementation, including information on grant progress (including key accelerators and barriers, lessons learned, and any changes); the collaboration among partners, particularly partner districts; prospective teacher recruitment processes and progress; induction support, and PD design and implementation. TPMA will review formative data (at least annually, but more frequently if needed), to: suggest ways in which progress may be contributing to outcomes; provide recommendations on areas that may need to be improved; and support continuous improvement. As part of its formative evaluation, TPMA also will regularly review the logic model with Project POPPY Leadership Team and Continuous Improvement Data Team, making adjustments as necessary; review project documents and artifacts; conduct semi-structured interviews and focus groups with grant leadership, stakeholders, and participants; and conduct and analyze survey data to obtain additional information to round out the picture of project implementation.

Continuous improvement. TPMA's evaluation is designed to inform and support continuous improvement throughout the grant. TPMA will establish regular feedback opportunities with project leadership, including in-person and telephone or teleconference meetings, at least quarterly or more frequently if deemed necessary. The formal meetings will be structured around regular review of formative findings and recommendations for changes, as well as incorporating any quantitative data that may be relevant to planning. In addition to formal meetings, TPMA also will allow for ongoing informal collaboration and thought partnering. All reporting of data and findings from the evaluation will be designed to help project staff use the information to reflect on current performance and assess opportunities for improvement.

(ii) The extent to which the methods of evaluation are thorough, feasible, and appropriate to the goals, objectives, and outcomes of the proposed project.

TPMA's approach is aligned to Project POPPY's five overarching goals, utilizing both formative and summative evaluation methods to measure fidelity of implementation, as well as short-, mid-, and long-term outcomes. TPMA will work closely with Project POPPY leadership and Continuous Improvement Data Teams to define the most comprehensive selection of data possible, which will include data collected from project leadership and data teams, staff, stakeholders, and participants on project outcomes (e.g., candidate recruitment numbers, candidate placement, candidate assessment scores, and K-12 student assessment results). TPMA will provide, at a minimum, annual reports on formative evaluation and quantitative teacher and student outcomes measures, including both project and GPRA performance measures. TPMA will report progress to USDE and Project POPPY staff through annual performance reports and annual evaluation reports. The following section provides detailed information on evaluation questions and data collection and analysis plans for each Project POPPY goal.

Project POPPY Goal 1: *Recruit teachers from underrepresented populations and high-need subject areas (STEM fields, special education, computer science, bilingual education) so that eligible partnerships can hire highly-qualified teachers to serve hard-to-staff rural and remote schools in our tri-county area.*

Evaluation questions related to implementation/outcomes: How and to what extent is Project POPPY: (1) encouraging diverse candidates to apply to and enroll in its teacher preparation programs? (2) creating a pathway to certifying highly-qualified teachers prepared to teach in high-need shortage areas (STEM, SPED, computer science, bilingual education)? (3) placing prospective teachers in these high-need subject areas in hard-to-staff rural schools?

Recruitment and enrollment. To assess the effectiveness of recruitment initiatives, including marketing efforts, new pathways, and newly created credentialing and specialized programs, TPMA will review enrollment data on recruitment targets; program enrollment rates for candidates with backgrounds in high-need subject areas and from underrepresented groups; candidates' declared subject matter preparation areas; candidates with backgrounds in high-need subject areas and from underrepresented groups; and candidates' motivations for participating in the program and teaching as a career, as well as teaching in high-need subject areas and rural/remote schools. TPMA will collect program administrative data and recruitment documents and conduct at least annual surveys of candidates to assess these areas. TPMA also will conduct interviews with CSUMB project leadership and continuous improvement data team, faculty, and district partners on recruitment plan development and implementation. Finally, TPMA will review results of needs assessments and other program documents to analyze the extent to which recruitment efforts are aligned with and fulfilling needs.

Graduation and certification. The evaluation will collect data to assess GPRA and HEA measures related to graduation and certification, including *Performance Measure 1: Certification/Licensure. The percentage of program graduates who have attained initial State certification/licensure by passing all necessary licensure/certification assessments within one year of program completion* and *Performance Measure 2: STEM Graduation. The percentage of math/science program graduates that attain initial certification/licensure by passing all necessary licensure/certification assessments within one year of program completion* by obtaining administrative data on state licensure exams (including CSET and edTPA) and data on degrees and specific teaching certifications (including authorized subject matter and grade spans) obtained by candidates and dates awarded, to assess whether they were obtained within the

measure-specified timeframe. HEA also requires a measure on *achievement for all prospective and new teachers, as measured by the eligible partnership, and improvement in the pass rates and scaled scores for initial State certification or licensure of teachers.*

To assess achievement for prospective and new teachers as well as the improvement in the pass rates, TPMA will analyze results from the edTPA data on number of attempts by candidates directly from the program, coupled with observation results from CSUMB's TPE observation tool. TPMA will augment quantitative data with qualitative data obtained through interviews with CSUMB faculty and staff, clinical coaches and district mentor teachers. In the final year of the evaluation (to allow for aggregation across years and larger sample sizes), TPMA will utilize a QED to analyze the extent to which Project POPPY has contributed to greater representation of underrepresented populations and high-need subject areas than programs at other CSUs, and the extent to which the project has contributed to improvements on pass rates and scores for certification and licensure to a greater extent than those of other CSUs.

To facilitate acquisition of comparison teacher data for a QED, TPMA will develop a data sharing MOU with the EdQ Center, which has a warehouse system that consolidates several existing but previously unconnected data collection efforts across 23 CSU campuses. The EdQ data warehouse currently includes survey data on program completers' perceptions of preparation, confidence in career placement, success at the end of the candidate year; survey data on Year One teachers' placement, experience, and perceptions of preparedness of teaching at the end of the first year; and survey data on employers of Year One teachers' perceptions of skills and abilities relative to current needs. EdQ data also will include CSU program applicant data (e.g., undergraduate institution and GPA, demographic information), CSU program completer and credential data, post-completion placement data, and retention in teaching data.

Placement. The HEA requires a measure on *achievement for all prospective and new teachers, as measured by the eligible partnership*. For new teachers, TPMA will analyze data from partner districts on number of completers hired by the LEA, a process which will be formalized with data sharing MOUs between TPMA, CSUMB, and each participating district. The HEA also requires measures regarding subject areas taught and placement in high-need areas and schools. To address this measure, TPMA will assess the number percentage of highly-qualified teachers: *hired by high-need LEAs participating in the eligible partnership; who are members of underrepresented groups (e.g., African-American, Hispanic/Latino, or Native Hawaiian or other Pacific Islander; 7% target increase each year); who are prepared to teach in high-need academic subject areas and who are prepared to teach in high-need areas including STEM, computer science, SPED, and bilingual education (7% target increase each year).*

All related data will be collected annually from the preparation program and surveys of its completers and verified with data from partner districts. In the final year of the evaluation (to allow for larger sample sizes), TPMA will utilize a QED to analyze the extent to which Project POPPY has contributed to greater placement in high-need LEAs for candidates who are members of underrepresented groups and qualified to teach in high-need subject areas than other CSUs. TPMA will determine the *GPRA Efficiency Measure: Federal cost per program completer (in the final year of the project period)* by assessing grant expense budget reports to calculate the grant funds spent divided by the number of program completers.

Project POPPY Goal 2: *Design a cohort-based rigorous residency program in the principles of practice-based teacher preparation through transformative curricular changes inclusive of NIA reform components, and provide integrated & continuous support for prospective teachers by aligning university coursework and the yearlong clinical experience; and through engagement of*

the three key members within the co-teaching triad in sustained, collaborative, and intensive professional development.

Evaluation questions related to implementation and impact include: How and to what extent is Project POPPY: (1) preparing prospective teachers to be effective teachers (particularly in high-need districts) through the residency program, which includes strategic cohort placement; coteaching; and PD? (2) improving candidate preparedness, knowledge, and skills in research-based instructional strategies and other reforms?

Teacher preparation. Measures assessed related to Goal 2 are GPRA *Performance Measure 3: One-year persistence*; and HEA *achievement for all prospective and new teachers, as measured by the eligible partnership; improvement in the pass rates and scaled scores for initial State certification or licensure of teachers*; and percentage of teachers who are hired by the high-need LEA who teach in high-need schools, disaggregated by elementary and secondary school levels; and percentage of teachers trained to use technology effectively to collect, manage, and analyze data to improve teaching and learning for the purpose of improving student academic achievement. Project measures regarding teacher preparation will also assess: prospective teachers' specific subject matter preparation area; quality of preparation activities (i.e., the extent to which the partnership model, coteaching, PD, and other preparation components contribute to prospective teacher perceived self-efficacy for teaching, especially in high-need areas, and in using data and research-based practices); teaching practices learned as measured by pedagogical methods employed and observed (e.g., as measured by the TPE observation rubric); and the development of deep partnerships with districts.

Data for the measures will be collected through CSUMB, including data on edTPA passage rates; EdQ data on preparedness in working with IEPs and with ELs; data on program

persistence; a review of program documents, including district partnership agreements and initial and revised curriculum and program syllabi for all programs, and a review of feedback from faculty and candidates; surveys of candidates and mentor teachers, including exit surveys designed to measure students' feelings of preparedness to enter the profession and helpfulness of course content; efficacy data from PD participants; and interviews with mentor teachers, clinical coaches, district administrators, CSUMB faculty, and program leadership. As previously described, TPMA will conduct QED utilizing comparison groups to analyze the extent to which Project POPPY has contributed to improved performance on measures of teacher preparedness, such as edTPA scores and EdQ data on preparedness in working with IEPs and ELs.

Project POPPY Goal 3: *Implement in collaboration with partner districts and the Monterey County Office of Education a two-year formalized induction program inclusive of the reform elements for residency programs to provide an educator support system that includes individualized high-quality mentoring, structured observations, instructional rounds, and continuous, sustained, and practice-based professional development inclusive of the reform elements in the absolute priority to promote teacher development, retention, and K-12 student achievement.* Evaluation questions related to implementation and impact include: How and to what extent is Project POPPY: (1) supporting and helping retain teachers in high-need districts and in high-need subjects? and (2) improving teacher effectiveness and achievement outcomes of students taught by program completers?

Formalized induction. Measures assessed include GPRA and HEA measures previously addressed (related to teacher preparedness), as well as project measures on candidate and partner district perceptions of the quality of induction programs and support system activities (the extent to which the program contributes to candidates' and teachers' perceived teaching efficacy and

ongoing development), and the extent to which it contributes to improved teaching practices (as measured by the TPE observation rubric). Data for the measures will be collected through CSUMB program data, including data on edTPA passage rates and TPE observation rubrics; EdQ completer surveys; surveys with candidates and teachers/administrators at partner districts; interviews with mentor teachers, clinical coaches, district partner administrators, and CSUMB faculty and program leadership; and review of program documents, including induction program materials. Student outcome data also will be collected and analyzed, including Smarter Balanced Assessment Consortium (SBAC) scores, which provide formative, summative, and interim assessments aligned with Common Core State Standards, and the STAR reading assessment, which provides benchmarked results. Both of these assessments are valuable in reviewing reading growth. In addition, the evaluation will utilize any other measures of student outcomes deemed valuable that are identified in collaboration with CSUMB and partner districts.

Reform Element (f)(11): Collect, analyze, and use data on the retention of all teachers located in the geographic areas served by the partnership to evaluate the effectiveness of the partnership's teacher and educator support system

Preparedness and Retention. TPMA will assess measures of preparedness and retention, including two GPRA measures: *Performance Measure 4: One-Year Employment Retention* and *Performance Measure 5: Three-Year Employment Retention* and one HEA measure, *completer retention in the first three years of a teacher's career*. TPMA will collect data from partner districts on program completers' teaching placements to determine the number and percentage of teachers retained in teaching from each cohort, within one year of placement and within three years of placement. TPMA will disaggregate retention data by underrepresented populations and subjects. TPMA will utilize district data and surveys to obtain information on

candidates who left teaching or obtained non-teaching positions, disaggregated by underrepresented populations and subjects, to identify whether candidate demographics or subjects taught are related to leaving the profession.

To provide context around the retention data, TPMA will utilize surveys with candidates and placed teachers on the quality of induction and retention efforts and the extent to which they contribute to retention, as well as interviews with candidates, partner districts, and CSUMB faculty and staff. In the final year of the project, should suitable comparison data be available, TPMA will utilize a QED to analyze the extent to which Project POPPY has contributed to greater retention rates for program participants than those of similar, non-participating teachers, as well as using EdQ completer survey data on the extent to which Project POPPY participants feel more prepared and confident for placement after completion.

Student outcomes. To measure GPRA *Performance Measure 6: Student Learning*, TPMA will utilize both descriptive analysis and a QED, to calculate learning growth of students taught by program completers. Descriptive data analysis will be conducted by year two of the evaluation (once candidates have been hired by districts and have completed a full year of teaching). Because the assumptions of linear and logistic regressions are often influenced by sample size, for the QED, TPMA will wait until the final year of the evaluation. Pending appropriate comparison data, TPMA will utilize a QED with comparison groups (matching students taught by program participants with similar students taught by non-program participants) to measure student growth on end-of-year state assessments and other benchmark assessments of student performance. To facilitate both descriptive and inferential measures of student outcomes, TPMA and CSUMB will develop data sharing MOUs with partner districts.

Project POPPY Goal 4: *Develop through sustained collaboration with partner districts, high-quality PD for prospective, new, and in-service teachers on essential reform elements, including but not limited to K-12 literacy skills across subject areas, implementation of literacy/reading instruction and assessment to provide individualized instruction with an emphasis on ELD and bilingual instruction to enhance teacher practice and improve K-12 achievement.*

Evaluation questions related to implementation and impact include: How and to what extent is Project POPPY: (1) improving the knowledge of new teachers and in-service teachers about the essential reform elements? (2) engaging participants to utilize strategies in their teaching? and (3) improving achievement outcomes of students taught by program completers?

Professional development. To assess the efforts of the program in improving teacher learning around using K-12 literacy across the subject areas, TPMA will collect data on participation in PD offerings, understanding and use of data for improvements, and application of the critical components of instruction across subject areas. The data will be collected through TPE rubric ratings; PD attendance data; surveys of and interviews with participants on the quality of the PD and use of learnings; and interviews with partner districts and CSUMB faculty.

Student learning. The PD in Goal 4 is particularly focused on improving students' academic achievement on the California Assessment of Student Performance and Progress (CAASPP) in E/LA, as well as ensuring the diverse needs of ELs are met to improve K-12 literacy achievement (measured by the English Language Proficiency Assessment for California, ELPAC) and reduce the number of students who are Long Term English Learners (LTELs). As such, TPMA will utilize descriptive measures to analyze student learning (at least annually) for students taught by teachers participating in PD. In addition, in an attempt to more accurately measure impact, TPMA will conduct a QED in the final year of the evaluation to analyze the

extent to which student learning, particularly literacy achievement, differs for those taught by teachers participating in PD from learning of those taught by non-participating teachers.

Achievement will be measured using state assessments such as CAASPP and ELPAC.

Project POPPY Goal 5: *Use the practices of improvement science to engage in continuous improvement and program reform using teacher performance and K-12 student success data to achieve goals 1-4 while engaging partner district leadership in the improvement science cycle creating systematic sustained efforts in continuous improvement across both the IHE and the LEAs, leading to reformed teacher instructional practices and increased student achievement.*

Evaluation questions related to implementation and impact include how and to what extent is Project POPPY: (1) using data to engage in continuous improvement; (2) engaging partner districts in utilizing technology and data to improve teaching practices and student outcomes. TPMA will utilize data collected for Goals 1-4 and regular meetings with CSUMB leadership and Continuous Improvement Data Teams to discuss progress toward achieving outcomes; make recommendations for course correction; and act as thought partners for continuous improvement. In addition, TPMA will use surveys and interviews with partner districts, mentor teachers, candidates, and CSUMB faculty and staff to analyze the extent to which continuous improvement activities are being embedded in partner districts. Further, TPMA will utilize research studies described in Section 5.2 of the workplan (impact of STEM PD on teachers' self-efficacy and STEM instruction and impact of literacy PD on teachers' self-efficacy and observed literacy instruction on student achievement) to augment evaluation findings and contribute to continuous improvement activities.