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ABSTRACT

Applicant: Salisbury University: TITLE: TRAINING AND RETAINING GRADES K-12 EASTERN-SHORE TEACHERS **(TARGET *Phase II*)**. **Participants**: Each year, via a competitive application process, **60 teachers** from a variety of content areas, but especially STEM teachers, will be recruited into one of *three* specially-designed, graduate-level programs offered specifically for these educators at accessible times/formats. PROJECT OUTCOME: Via a concatenative sequencing of 3 institutes of 5 graduate courses each—held in spring, summer and fall, respectively—we will offer data-infused, graduate course training utilizing systematic qualitative and quantitative tracking of pre/post-program trainee performance synergized to student achievement outcomes. Course content will offer opportunities for practice, reflection and peer feedback in all 15 customized and methodically sequenced courses (to include two specially-designed STEM-focused, adjunct/team-taught courses consisting of tri-personnel teams of science, math & TESOL experts). **Outcomes**: Over the span of the project, 300 STEM/content teachers will attain ESOL expertise (50 will receive advanced certificates) with 250 others provided with sufficient training to prompt the passing of state-mandated examinations to gain ESOL endorsement. **Partners**: 8 independent, high-need, rural school districts (Caroline, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, and Worcester)—approximately 100 schools enrolling over 1,200 EL students, and spanning a geographical radius of 95 miles.

Project Need: While we have provided successful training through prior NPD-funded programs, our target area continues to suffer from higher than state average teacher attrition rates. Our teachers are predominantly inexperienced with one district reporting 15.4% holding conditional certificates (*MSDE Staffing Report 2010- 2012*). The impact on student performance is abysmal. Some of our partners exhibit the *highest* dropout rates in the state, while also reporting the lowest college-bound rates. EL performance data in 2010 was the lowest underperformance (of any sub-group) in STEM subjects (see, proposal for data). Additionally, Maryland's COMAR 13A: *Comprehensive Teacher Induction*—part of the recent Race to the Top Initiative—requires comprehensive PD training of its teachers *(Ibid.* p. 19). These combined factors make **TARGET-Phase II** of urgent importance to our 8 partnering districts (see, letters of support, and teacher-culled needs-assessment highlighting need in quantitative and qualitative terms).

Project Description: TARGET—Phase II is a high-incentive, long-term, niche-program targeted at the *actual* needs of rural education professionals. Needs-assessment data from a 2011 electronic poll conducted to determine local needs to which **482 Eastern Shore teachers** responded indicates the following: 100% of STEM teachers and 82% of all polled content-area teachers have requested graduate-level, EL-based professional development in three areas which the proposed program aims to address. The research-based TARGET-Phase II project accommodates triple needs: 1) STEM/Content teachers who could potentially seek a post-baccalaureate certificate in TESOL for whom we are developing a spring session: Academic Career Choices Ensuring Student Success **(ACCESS)**—a concatenation of 5 graduate courses designed to ensure expedient access to this state-approved certificate program; 2) STEM/content-area teachers desiring *targeted* academic skills training for whom we are specifically designing a summer program: Enhancing Newcomer Competencies On Required Education **(ENCORE)**—a compendium of 5 graduate courses on enhancing EL academic performance in productive (speaking and writing) and receptive (reading and listening) skills in multiple STEM/content areas with timely, technology-infused modules providing tech-enhanced strategies for improved EL performance in multiple-domains. Finally, for 3) STEM/content teachers aiming to achieve an endorsement in ESOL via a state approved set of two graduate-level courses (focused on

second language acquisition and academic literacy enhancement) and the passing of the Praxis II, we are offering a fall program: Seminars Assisting Incoming Language-Learners **(SAIL)**—a set of parallel-delivered, graduate-level courses offered at flexible times and in accessible formats with a menu of 5 specially designed, state-aligned course titles from which teachers can either choose one or two courses—a menu of course choices and delivery formats not currently available to area teachers who also sorely desire this third option for professional development. **Meeting Invitational priorities:** Competitive Preference Priority #2 & #3; Invitational: #1& #2 **Data-Driven Decisions**: Outcome-oriented results form the cornerstone of our model, and occur in three stages: A. Pre-program: The use of continuous, targeted evaluative tools designed to match trainee enrollment to actual district needs (keyed to a standardized tool gauging STEM/content-area expertise and EL population data) with STEM teachers given priority admittance. B. During-program: A comprehensive use of multiple mandatory instruments: 1. *Monitored Mentoring* via a pre-program administering of a standardized *Supervisor Feedback* tool assessing trainee teaching practice in systematic rather than random terms (quantitative and qualitative data-oriented) 2. A *Learning Plan* premised on actual EL school needs (interviews with EL & ESOL staff/content teachers). 3. *Reflective accounts* of EL tutoring/teaching encounters during training, the output of which is infused throughout course-work and forms input for post-program, professional dissemination obligations. 4. For SAIL participants, the designing of two, tri-personnel-team-taught, STEM-focused courses requiring data gathering on student outcome achievement (pre/post-administrations of Maryland State Assessments STEM problem sets to trainees' students) (see, proposal). C. Post-program: Training with immediate measurable impact tracked via a meticulous, systematic and coherent six-pronged, post-exit data management plan (see, proposal) utilizing a tri-stage evaluative chronology of data-gathering at immediate, intermediate and long-term points in trainee learning trajectories to track shifts in trainee knowledge, skills, and attitudes which effective PD demands, and which will be effectuated via *comparative data analyses* of: 1) pre/post-program supervisor feedback (MONITORED MENTORING) tied to a standardized, research-based measurement tool) 2) Data comparisons of improved student achievement data (numeric gains exhibited on pre/post-exit administrations of single-item, MSA-oriented, problem sets in the STEM-focused courses). Our data plan is preliminarily being put into place to ensure that STEM/content teachers provide quality instruction which translates into every EL student meeting and exceeding AYP targets as well as graduating on to college. Measurable objectives will be evaluated continuously and chronologically (pre/during/post-program) to yield formative and summative data to simultaneously track and improve upon all required (*in-service* teacher related) GPRA outcomes (e.g., GPRA 1.5 & 1.6). **Project Innovations**: Prior successes with NPD programs provide us with the skilled expertise to deliver a program which is now **broad in scope** and **high in impact** (60 trainees a year). Additionally, our model is local-needs-derived, targets STEM middle/high-school teachers where EL underperformance is highest, provides PD training which is sustained and multimodal, and incorporates innovative STEM curricular configurations of teamed-teaching synergized with cutting-edge, technology-enhanced strategies to instigate improved EL achievement outcomes. Our innovative, measurable, MONITORED MENTORING feature ensures training which is outcome-oriented in design and output and not random or ad hoc. Via a systematic and continuous evaluation plan garnering quantitative and qualitative data of trainee-impact on student achievement, we provide a local-needs-responsive, high-incentive, career-ladder oriented PD-model doubly useful for EL students and teachers in rural Maryland. **Director Contact Information**: DR. ANJALI PANDEY, (410-677-5387); axpandey@salisbury.edu

(a) PROJECT DESIGN: Why TARGET-Phase II? *(Background Needs: See Abstract)*

15-year English learner (henceforth, EL) growth trends in the targeted schools average 200% with some districts experiencing 777% EL growth rates (*MSDE Trend data*). Our ESOL teacher-to-student ratios average above 1: 40 (*District Statistics*). ESOL tops the list of critical teacher-shortage areas in Maryland for the 6th year (2010-2012 *Maryland Teacher Staffing Report*). More of the burden for EL education is on the shoulders of untrained STEM/content-area teachers. Recent freezes on new teacher hires necessitate a focus on *in-service*, STEM and content teachers, since pre-service hires in a downturned economy remain tenuous.

1. Data-based Decisions: How stakeholders were involved: To provide Professional Development (henceforth, PD) training that is useful, necessary and improves the quality of ELs in our rural schools who "spend the majority of their school day" (Cervone 2010: 103) with STEM/content teachers, we engaged in an intensive collaborative effort with all 8 of our partner districts both to assess current needs and effectively utilize "existing synergies" (Herrera & Murry 2010:70). We aimed to offer PD which is symmetrical rather than asymmetrical: "with educational personnel instead of for them" [1](Wilder 2010, 10). In April 2011, a *three-step* needs assessment process was implemented in which we a) interviewed SEA officials regarding current state-wide initiatives to encourage STEM/content teachers to obtain ESOL endorsement; b) interviewed all 8 ESOL partnering supervisors on PD needs pertaining to Maryland's *Race to the Top* initiatives to instigate college readiness in STEM/content-area instruction; and c) converted the data into a four-question, randomly administered, electronically-delivered survey designed to elicit actual quantitative and qualitative PD needs of teachers in over 100 schools spanning a radius of approximately 95 miles in 8 independent school districts on Maryland's rural Eastern Shore. County supervisors assisted in disbursing the survey (see, support letters).

[1] All full references of citations are available upon request.

2. Actual Needs for STEM/Content Training: In spite of a two-week turn-around time, **482 teachers** in all 8 counties responded. Results point to an overwhelming and urgent need for professional development in two targeted teacher groups: a) STEM teachers and b) all certified content teachers with 100% of the STEM teachers and 82 % of content teachers requesting EL-related training. It might be emphasized that 0% of STEM teachers and only 18% of content teachers requested *no* training (one of the questions asked). Additionally, 93% of the STEM teachers polled and 71% of the responding content teachers requested training in the form of graduate-level courses as opposed to workshop-type training. 78% of the STEM teachers indicated having no prior ESOL training—reflecting nationwide trends of less than 20% of existent teacher preparation programs mandating courses on EL-related issues (Wilder 2010).

3. Addressing Current and Prior Demands for STEM/Content-area Training: While we have offered PD training via a prior NPD program, the demand for EL training has been overwhelming. A previous program offered 64 slots for training via a specially designed dual-cohort graduate program and received 156 applications. The competition was so stiff that acceptance rates had to be as competitive as 25% for entry into two separate cohort programs with multiple applicants from a single, high-need LEA (*Program Reports* :PR/Award #: T195N070327:OELA). In short, we have never had a single year when we have been able to keep up with the demand for training or offer slots to trainees on waiting lists (with a 0% attrition rate of trainees). Our current-needs data prompts us to propose TRAINING AND RETAINING GRADES K-12 EASTERN-SHORE TEACHERS-**TARGET (Phase II)**—a program which addresses the *continued* demand for content-area training (see, letters of support from all 8 district supervisors) while also offering streamlined and customized training to STEM teachers requesting such focused training.

4. At Risk Student Data: Statewide performance data on student achievement demonstrates that 27% of 7th graders and 33% of 8th graders performed at below proficient levels in math (*MSDE: Fact Book 2009*). High school assessment data (Algebra, Biology Government and English) show 10th grade EL students as the **second lowest performing group** at 56%, with 11th grade EL student performance data listed as the lowest performing level of ***any subgroup*** at 55% (special education scores surpassed them at 58%).[2] It is no surprise that our needs-assessment data reflects teachers requesting intensive and in-depth training in multiple domains. The research-based TARGET project accommodates triple needs: a) STEM/Content teachers who could potentially seek a post-baccalaureate certificate in TESOL for whom we are developing a spring session: ACADEMIC CAREER CHOICES ENSURING STUDENT SUCCESS (henceforth, **ACCESS)**—a concatenation of 5 graduate courses (in Linguistics, SLA; Culture; Assessment and Methods) designed to ensure expedient access to a state-approved certificate program; b) STEM/content-area teachers desiring *targeted* academic skills training infused with EL-relevant, technology enhancements (a design feature culled from our needs assessment survey) for whom we are specifically designing a summer program: ENHANCING NEWCOMER COMPETENCIES ON REQUIRED EDUCATION (henceforth, **ENCORE)**—a compendium of 5 graduate courses on enhancing EL academic performance and college readiness in productive skills (speaking and writing) and receptive skills (reading and listening) synergized in all four domains with focused modules on current, EL-relevant, Web-2.0/3.0 applications in multiple STEM/content areas. ENCORE is specifically aimed at enhancing academic English skills—a mastery of which is a predicator of success in K-12 education and beyond (Scarcella 2003). Explicit training on strategies and recent technological applications to generate "grade-appropriate comprehensible"

[2] *MSDE: The Fact Book. 2008-2009. p. 14-15*

EL content (Hansen-Thomas & Casey, 2010:87) in all four domains is urgently needed. Our research-based program enhances ELs' productive academic skills in speaking and writing (Peregoy & Boyle 2005; Wong-Fillmore & Snow 2002), while augmenting academic reading and listening skills (Folse, 2006; Richards & Renanda 2002) in a variety of STEM/content areas. ENCORE concludes with a much-needed (needs data) research-based course on ESOL program development (Short & Boyson 2004; Crawford 2004). c) Finally, and more specifically for STEM/content teachers aiming to achieve focused training on improving the quality of scientific/mathematics content uptake as well as obtain an endorsement in ESOL via a state approved set of two graduate-level courses (focused on second language acquisition and targeted academic literacy enhancement) and the passing of the Praxis II examination, we are offering a fall program: Seminars Assisting Incoming Language-Learners (henceforth, **SAIL**)—a set of parallel-delivered, graduate-level courses offered at flexible times and in accessible formats with a menu of 5 specially designed, state-aligned course titles from which teachers can either choose one or two courses—a menu of course choices not currently available to area teachers who also sorely desire this third option for professional development. Two courses in SAIL will specifically be STEM-discourse focused and team-taught (tri-personnel teams consisting of higher education faculty and EL-trained STEM teachers (details below). Our program improves the quantity and quality of trained STEM/content classroom teachers in three crucial domains: a) **Knowledge** of second language learning procedures; b) **Efficiency** in STEM/content delivery; c) **Expertise:** The ability to arrive at novel solutions to the needs of EL students. Consequently, all month-long courses will have to demonstrate syllabi design covering all three areas for every class meeting. To accommodate our teachers' needs, we are proposing a triple-cohort program to

be held during spring, summer and fall respectively—a sequencing permitting a semester-focused, single attention to each program as outlined below:

ACCESS (Spring)	**ENCORE (Summer)**
Module #1	**Module #1** *(Technology Infused)*
Engl. 536: Principles of Linguistics Engl. 509: Intercultural Communication in Schools	Engl. 591: Literacy and ESOL Listening Engl. 532: Literacy and ESOL Reading
Module #2	**Module #2** *(Technology Infused)*
Engl. 539: Second Language Acquisition	Engl. 534: Literacy and ESOL Writing Engl. 591: Literacy and ESOL Speaking
Module #3	**Module #3** *(Technology Infused)*
Engl. 528: ESOL Tests and Measurements Engl. 547: Current Methods ESOL Instruction	Engl. 533: ESOL Program Development

SAIL (FALL) (CHOICE-BASED DELIVERY MODEL)

TIME OF COURSE	TITLE OF SEMINAR
August (Saturdays): *All Content Teachers*	English Structure for Teachers
August (Saturdays): *All Content Teachers*	Methods and Techniques for ELL Learners
September (Saturdays): *STEM Teachers*	Second Language Learning (STEM)
October (Saturdays): *STEM Teachers*	Academic Literacy in STEM for ELL Learners
October (Saturdays): *All Content Teachers*	Acquiring a Second Language

The Design Protocol: a) Planning Phase: Salisbury University (SU) created with LEA supervisor input (all 8 districts) the needs-assessment survey which all assisted in disbursing (see, letters of support). Supervisors requested retaining the title, scope and delivery mode of a previous NPD program while expanding to our current STEM focus (see, letters of support). Additionally, SU will customize existing course content (10 courses), and develop 5 additional specialized courses (15 courses in all) with input from all 8 partnering LEA representatives. As the lead budgetary agency, resources (print, electronic, and personnel) will be provided by SU with partnering districts suggesting personnel in the form of content/technology coaches (13) and co-faculty in the STEM-focused courses (4). We have a track record of amicably and collaboratively working with our partners in prior funded projects (see, support letters). b) Development Phase: All 8 LEAs will assist SU in recruiting STEM/content teachers in any or all three of the proposed programs (see, letters of support for identity). c) Implementation: LEAs

will ensure that trainees fulfill pre/post-program obligations—a salient component of our data-driven programmatic goal. Our training model thus involves input from all stakeholders: EL students, teachers (ESOL/STEM/Content), district supervisors and higher education faculty.

5. Research behind the Design: Underpinning our model is the recognition that STEM content uptake, particularly for newcomers, requires teachers trained in the needs of "diverse student populations with different histories and cultural perspectives, experiences and expectations, and styles and approaches to learning and organizing information" (Loucks-Horsley et al 2010: 6)—training which *cannot* be accomplished via short workshops, but which can only occur as embedded and comprehensive PD content delivered via a series of specially designed and focused courses synthesized to MONITORED MENTORING (see, below). We are consequently proposing a graduate model of training which is sustained and multimodal in focus (Bearse, 2010), while offering *choices* to its recipients, and providing STEM/content teachers with systematic protocols (Mahn & Bruce 2010) in the imparting of abstract STEM registers (Truxaw & Staples 2010). Additionally, our proposal has an *a priori* embedded evaluation plan in which immediate, intermediate and long-term training impact outcomes are "multiple-indicator assessed" (Guskey 2006). **Why graduate-level training?** Operating on the premise that ESOL expertise cannot justifiably be achieved via workshop models (Wei, et al, 2009) which only give a disconnected peppering of "the best practices" to classroom teachers with no formal linguistic training (only 7% of STEM teachers and 11% of content teachers polled in our proposal felt this was even a viable option), we are proposing a high quality, graduate-level program of study specifically designed to offer PD training which is sustained, "interconnected and sequential" (Loucks-Horsley et al 2010), and which offers the: a) Range, b) Breadth and, c) Depth of expertise desperately desired by STEM/classroom teachers. Furthermore, "a substantial amount

of time (typically, 50 hours or more) of professional development is needed before teachers make substantial changes in their practices" (Loucks-Horsley et al 2010 p. 6). Our PD offers teachers a minimum of 75 hours of training (2 graduate courses) while also sustaining maximal training in the form of 187 hours (5 sequenced graduate courses) for teachers desiring the cited benefits of sequential course-work (Rodriguez & Manner 2010). **TARGET-Phase II** is a comprehensive, on-site, graduate-level PD training program whose course-work infuses "capacity-building and EL-advocacy" (Ibid: 80) tied to a systematic protocol of MONITORED MENTORING (see, below). Research is increasingly spotlighting the drawbacks of on-line based PD in which remoteness, displacement and social distance (Rodriguez & Manner 2010: 80) hamper effective PD training, especially in complex linguistic subjects which need face-to-face teaching for effective uptake. Our PD model privileges such sorely needed, on-site, face-to-face PD training, and will NOT relegate training to unidirectional, online course platforms. Our model is based on educational eclecticism and the adaptation of the Copernican Plan of learning (Ellis and Fouts 1996). "Traditional 45-50 minute class periods do not allow time for students to deal with topics in depth or to work on projects together with other students or individually" (Ellis and Fouts 1996). Our course design (day-long institutes) gives trainees time for learning, reflection, practice and team-collaboration (Casteel & Ballantyne, 2010:1) with opportunities for preparation, presentation, practice and performance in training (Meier 2000) (see, below).

6. Research behind Tri-program: To provide choice while also offering comprehensive PD (what teachers have requested), the ACCESS and ENCORE programs will be offered as cohort programs, permitting "community-building" (Hansen-Thomas & Casey 2010), with SAIL permitting multiple entrants, and "collaboration" (Ye-He & Prater2010) with our LEAs. All courses in ACCESS/ENCORE/SAIL are NCATE-aligned to the five tested domains: linguistics,

SLA, Methods, Assessment, Culture in the *Praxis II* exam (*ETS 2011: ESOL Test*). For the first 20 trainees desiring to take the Praxis II exam, an added incentive will be an honorarium towards registering for the exam. 7. **Why two specially focused STEM courses**? With math/science problem-solving becoming linguistic as well as formulaic in orientation and "with a dearth of professionals with requisite skills" (Truxaw & Staples 2010: 45) such a training focus is urgently needed. 3 of our 8 target districts report EL students unable to meet AYP goals in specific grade-level and content areas[3] (3 partners have schools in need of improvement). Wicomico County, with the largest number of EL students (an increase of 68% in the past five years),[4] did not meet its 2010 AYP targets either in reading or math (Grades 6-8)[5]. Math 2010 performance data[6] in Wicomico shows that while the proficiency in middle school was at 68.7% (below AMO target of 71.4), the LEP performance was even lower at 26 percentage points below target: 45% proficiency (special education was at 41%). Grade-level performance data in math is even more depressing. 7th grade special education math scores at 33.6% proficient surpassed LEP students! Similar EL **underperformance** exists in science confirming that "we are failing to capture the interest of our youth for scientific or mathematical ideas" (*Glenn Commission*, 2008). Two LEAs in our target area show the *lowest* college-bound rates in the entire state at 63% (Kent) and 65% (Somerset)—average state-wide college-bound rate is 82% (*The Factbook*, p.17). "Given that future innovation, global finance, and the very standard of living depend on mathematics and science knowledge, our students' unacceptable performance in these subjects constitutes nothing short of a national crisis" (Loucks et al 5-6). Research notes the increasing linguistic complexity in Algebra and science in the transition from elementary to middle and high school (Samway

[3] http://mdk12.org/data/rcounty.aspx?Nav=1.1:5.2
[4] MSDE data:
[5] Source: http://www.mdreportcard.org/
[6] Ibid.

2006)—a scenario with negative consequences in our target area. Dropout rates in Wicomico County are the highest in Maryland at 5.15% (Statewide: 2.8%) (*The Factbook*: 20). Such results have also led to increasing pressure on both EL students and ESOL teachers to 'perform' with increasing hostility (Reeves, 2006) "hesitancy, fear and frustration" (Herrera & Murry, 2010: 69) experienced by EL students/ESOL personnel (post-exit data from prior programs). Our PD model rectifies such prevalent attitudes in rural areas by ensuring that trainees *realize* that EL education **is** the responsibility of ***all*** teachers, not just the ESOL teachers. Such trends point to an urgent need for specially-designed courses which make teachers overtly aware of the discourse patterns, genres and linguistic registers of math and science (Fathman & Crowther, 2009). Our training aims to make STEM discourse *accessible* and *interesting* to ELs by providing teachers with creative and current ways to make STEM content both teachable and "Usefun" (Lewis, 2001). Our courses will train teachers on isolating the linguistic content in STEM subject areas while offering teachers a sustained protocol of practice (Mahn & Bruce, 2010) involving lesson design which provides overt *awareness* strategies using sentence frames, recurring transitions and logical-sequence lexicon underpinning STEM discourse use (Echevarria et al 2008; Fathman & Crowther, 2009). Our aim is to trigger a *targeted* use and mastery of the language of justification of STEM-specific academic registers (Truxaw & Staples 2010). Our training modules will provide a 'doing vs. learning' approach with a focus on multimodal instruction and collaborative learning (Bearse 2010: 44) in which STEM content targeted at ELs is **not** ad hoc or after-thought-based but seamlessly infused in lesson design, and is to the benefit of *all students*, not just EL students. TARGET-Phase II provides graduate-level expertise to area educators which is responsive, relevant, accessible, beneficial, cohesive and practical to local area educators. Goals, strategies and measurable objectives/outcomes appear in the chart below.

GOAL 1 :	**To provide graduate-level expertise in relevant EL content to *all* committed rural, STEM/content-area teachers in the most accessible routes while maintaining the quality of training.** (COMPETITIVE PREFERENCE PRIORITY #2 & # 3 ; INVITATIONAL PRIORITY 1 & 2 Objectives and performance measures (see below)
OUTCOME	**GPRA 1. 6**: Track the number of *"in-service program completers providing instructional services to EL students"*
STRATEGY	Provide an accessible PD training in the form of: 60 training slots to STEM/content area teachers each project year.
OBJECTIVE 1A.	Each project year, TARGET-Phase II will recruit 20 STEM/content teachers into either the ACCESS or ENCORE programs. Trainees demonstrate commitment to EL education as measured by: A) qualitative evaluations of a competitive application process of two parts: detailed written application dossier corroborated by face-to-face interviews with a three panel-board (graduate director; project director and TARGET faculty member), a completed pre-program entry survey gauging school-specific EL needs and content expertise; B) quantitative evaluations to consist of: 1) 100% signed contractual obligations; 2)100% completed *Individualized Learning Plans* (gauging both EL student needs/ ESOL/content teacher needs); 3) 100% completed *Pre-program Supervisor Feedback* forms using a standardized measurement tool (*Monitored Mentoring*); 4) 100% completed self-reflections on EL tutoring/teaching encounters (tied to training outcomes); 5) quantitative measurements of above bench mark scores[7] on both trainee-satisfaction surveys of the application process and formal orientation to the program.
OBJECTIVE 1B.	Each project year, TARGET-Phase II will provide 40 training slots via SAIL to STEM/content teachers demonstrating commitment to EL education as measured by: 1) 100% completed pre-program entry survey gauging school-specific EL needs/STEM content expertise for entry into program (STEM teachers receive priority registration); 2) 100%

[7] All questionnaires in this program will offer a Likert scale of 1-5 (1 being the lowest rated value, and 5 being the highest rated value) on all measurable items. Our target goal in all measurable performance objectives is to consistently strive to maintain a numerical level of at least 90% of our surveyed participants rating the measured items at 3.5 percent or higher.

	complete copies of academic transcripts. All 40 SAIL trainees will provide quantitative data in the form of 1) 100% signed contractual obligations; 100% completed *Individualized Learning Plans* (gauging both EL student needs/ ESOL/content teacher needs); 3) 100% completed *Pre-program Supervisor Feedback* forms using a standardized measurement tool (*Monitored Mentoring*); 4) 100% completed self-reflections on EL tutoring/teaching encounters (tied to training outcomes); 4) 100% completed pre/post-single-item STEM-based problem set data (see, 5A)
OBJECTIVE 1C.	Each project year, 60 STEM/content teachers professionals will have completed an accessible program of study held at accessible times, in accessible formats as measured by: 1) above bench mark scores (see above) on pre- and post-accessibility measurements administered at the outset/conclusion of the ACCESS; ENCORE and SAIL programs; 2) 90% or above attendance in all 5 courses (15 total) held in either/or ACCESS, ENCORE and SAIL program; 3) 90% or above completion rates as demonstrated by final course grades; 4) 90% or above completion of contractual obligations; 5) 90% above response rate on post-exit reporting requirements (Part A and B of a post-exit report).
GOAL 2 :	**To provide a beneficial PD program to STEM/content teachers which is specific to the needs of EL populations on the Eastern Shore of Maryland and which reflects and permits expedient access to state mandated licensure requirements.** (COMPETITIVE PREFERENCE PRIORITY #2 & #3 ; INVITATIONAL PRIORITY 1 & 2
OUTCOME	**GPRA 1.5**: the number of in-service completers *"who complete certification, licensure or endorsement"*
Strategy:	Provide a beneficial professional development model: upgrade credentials
OBJECTIVE 2A	Each project year, 60 STEM/content teachers will complete a graduate program of study. 1) 20 STEM/content teachers will obtain either 15 graduate credits (5 courses) in either the ACCESS or the ENCORE program. 2) 40 STEM/content teachers will obtain minimally 3 or maximally 6 graduate credits in the SAIL program. All 60 will demonstrate acquired benefits measured and tracked by at or above benchmark scores in 1) course-specific critiques, (15 in all) 2) program-specific critique forms (15 in all); 2) 100% completion of post-program satisfaction surveys at or above benchmark scores (Part B: 20 questions); 3) 90% or above completion of post-exit professional dissemination

	projects; 4) 100% complete audience analyses of post-training dissemination projects (standardized tool) at or above benchmark scores. 5. 100% completed pre/post-program supervisor feedback forms.
OBJECTIVE 2A	Each project year, at least 10 trainees (more if demand is higher for entry into ACCESS) will receive a post-baccalaureate certificate in TESOL, with 50 other trainees prepared to take the state-mandated Praxis II content area test for ESOL endorsement at 90% or above passing rates.
GOAL 3:	**To provide professional development training at the graduate level in the form of a cohesive, research-based, outcome-oriented program of study customized to meet the identified needs of STEM/content teachers.** (COMPETITIVE PREFERENCE PRIORITY #2 & #3 ; INVITATIONAL PRIORITY 1 & 2)
OUTCOME	**GPRA 1. 6**: Objectives and performance measures (see below)
Strategy:	Use a cohesive, research-based curriculum: *Triarchic Theory of Intelligence* (Sternberg and Horvath 1995).
OBJECTIVE 3A	Each project year, 10 teachers will complete 5 sequenced, NCATE-aligned courses at the graduate level in the form of a spring program: ACCESS as measured by 1) GPA of B or above in the 15 graduate credits; 2) At or above benchmark scores on program-specific questionnaires measuring cohesiveness (range, breadth and depth of content coverage/utility of spotlighted technologies); 90% or above cohort completion rates as demonstrated by final course grades entailing self-reflections/peer-coaching of videotaped teaching encounters using technology-enhanced strategies; 3) 90% or above attendance in all five courses; 4) 90% or above cohort completion rates as demonstrated by final program grades involving self-observations/reflective coaching/mentoring video teaching demonstrations/technology infusion; 5) At or above benchmark scores on critiques of content-coach demonstrations; 6) 90% or above completion of contractual obligations; 7) 90% or above response rates on post-exit narratives/case studies of linkages between training and improved teacher innovations (narratives/case studies of ELs' assisted/improved practices upon graduation). Each project year: add 15 new items to the TARGET Resource Center.
GOAL 4:	**To provide a practical, relevant and current program of professional development for *all* desiring**

	STEM/classroom teachers which enhances newcomer academic skills in the domains of listening, speaking, reading and writing infused with EL-relevant, technology-based strategies. (COMPETITIVE PREFERENCE PRIORITY #2 & #3 ; INVITATIONAL PRIORITY 1 & 2)
OUTCOME	**GPRA 1. 6**: Track the number of *"program completers providing instructional services to EL students"*
Strategy	Provide practical and timely professional development content. Objectives and performance measures (see below)
OBJECTIVE 4A	Each project year, 10 area professionals will have successfully completed 5 cohesive, concatenatively sequenced, NCATE-aligned graduate courses in the form of a summer program entitled: ENCORE designed to enhance productive/receptive skills in the academic content uptake of EL learners while systematically incorporating relevant EL technology-enhanced strategies (all skills courses) as measured by 1-5 (see, 3A) 6) 90% or above completion of contractual obligations; 7) 90% above response rate of post-exit reports
GOAL 5:	**To provide a data-driven program of professional development based on performance-based outcomes in STEM-specific content, and delivered via career-ladder oriented course-training.** (COMPETITIVE PREFERENCE PRIORITY #2 & #3 ; INVITATIONAL PRIORITY 1 & 2)
OUTCOME	**GPRA 1. 6**: Objectives and performance measures (see below)
Strategy 5:	Develop customized, data-driven, course-training with incentives
OBJECTIVE 5A	Each project year, 16 STEM teachers will complete (either 1 or 2) specially designed STEM-focused content courses in the SAIL program consisting of either 3 or 6 credits with a GPA of B or above. (See objectives #2-7 under 3A.) Additionally, there will be: 100% completion (16 trainees in the two STEM-focused courses), of pre-program disbursements of single-item, problem sets in STEM-relevant fields to trainee-students. Test items will be culled from open releases of the Maryland State Assessments (appropriate for each grade/content level), administered by trainees to their students (pre/post), and rubric-scored by the tri-personnel co-teaching STEM/teams (see, evaluation).
GOAL 6:	**To provide data-driven professional development training to a diverse pool of area teachers with immediate**

	measurable impact evidenced by data outcomes from a systematic, six-pronged, post-exit data management plan. (COMPETITIVE PREFERENCE PRIORITY #2 & #3 ; INVITATIONAL PRIORITY 1 & 2)
OUTCOME	**GPRA 1.5 & GPRA 1. 6**: Objectives and performance measures (see below)
Strategy 6:	Provide responsive, outcome-oriented, data-driven professional development model. (Guskey, 2006)
OBJECTIVE 6A	Each project year, we will measure training efficacy via: 1) 100% completed contractual obligation statements, 2) 100% response rate on post-exit audience satisfaction surveys measured via a standardized feedback instrument at above benchmark scores, 3) 100% responses rate on post-program supervisor feedback forms with at least .2 gains noted in comparative pre/post-program analyses using a standardized tool; 4) 100% completed reflections on EL tutoring/teaching encounters; 5) At least .2 gains in rubric-scored pre/post-single-item problem set data (student-achievement-based) (tri-personnel team scored); 6) 100% response rate on 40-question post-exit report and 100% response to 20-question post-exit trainee satisfaction survey on quality of training and job preparedness.
OBJECTIVE 6B	Measure PD outcomes on EL student achievement by 1) 100% disbursed post-exit student-derived responses on single item problem sets in the two stem-focused courses (see, 5A above) with 90% or more of at least .1 performance gains
OBJECTIVE 6C	Recruit and train a cohort consisting of at least 15% or more from traditionally underrepresented groups (race, color, national origin, age, disability and gender) taught by a higher-education faculty consisting of at least 15% or more from traditionally underrepresented groups. Note: Promotional materials for the program will strongly encourage applications from traditionally underrepresented minority groups in teaching. While Maryland has a minority-majority student population (54.4%), the teaching workforce continues to reflect a majority Caucasian (75%) and majorly female demographic (77%) (*The Maryland Fact Book 2010-2012 pp. 63-65*). We have an impressive track record of accomplishing our diversification goal via a prior NPD program in which we successfully recruited a trainee cohort (5-year project) which was 42% diverse (30% culled from traditionally underrepresented groups; and 13% male) (*Final Report:* PR/ Number #: T195N020104). We are confident of accomplishing similar results in this project.

8. Design Features: We will be using an impact-tracking protocol involving: 1. completed pre/post-program *supervisor feedback forms* (MONITORED MENTORING) (details below) 2. completed pre-program *Individualized Learning Plans* requiring all entrants to interview ESOL students/ teachers in their school in a bid to design a relevant program of training linked to a post-exit dissemination project of relevance. 3. For the two specially designed STEM courses, we will gather program impact data on student achievement (Truxaw and Staples 2010). We will elicit pre/post-comparative gains by disbursing a single-item problem set from STEM-relevant areas (released from openly accessible Maryland State Assessments prompts), appropriate for multiple, grade-levels which will be administered by trainees to their students. Pre/post-data will be rubric-scored for mastery by the tri-personnel STEM-teams (Truxaw and Staples 2010). We are implementing such an "infusion-rich" (Castenada et.al 2010: 81) model to provide PD training with "real-life" (Ibid: 82) applications which provides trainees with opportunities to "put theory into practice" (Ibid: 82) by requiring all trainees to engage in self-reflections of EL tutoring/teaching encounters/video-taped teaching linked to course content in all three cohorts.

(b) PROJECT PERSONNEL: We will hire faculty and staff in the project who represent a fair mix of multilingual and multiethnic members of society from underrepresented groups (See, Objective 6C and GEPA description) to enhance the personnel resources and role models for ELs in Maryland's rural Eastern Shore. We already have a full set of faculty members committed to this project, 50% of whom already represent underrepresented groups. (See Budget for details.)

PROJECT DIRECTOR: DR. ANJALI PANDEY (Ph.D., Applied Linguistics, University of Illinois): Project Director, TARGET-Phase II. She has 21 years teaching experience in five institutions across the nation having designed and taught over 20 different courses in TESOL/Applied Linguistics. Anjali has additionally published extensively and delivered over 20 ESOL-related staff development workshops

(multihour) on enhancing EL academic achievement. She has a 10-year track record of successfully authoring, designing, implementing, managing and evaluating high-impact NPD programs (over 100 trainees). In 2008, she was commissioned by a local low-performing, EL-dominant school district to design a multimodal, STEM-focused PD venture aimed at uncovering the 'linguistics' of math and science instruction, attended by cross-grade, STEM/content teachers from over 15 schools. Anjali has served as Graduate Advisor for: "Linguistic Patterns in Science: Sentence/Vocabulary building in Thematic Units in Middle-School Science." She brings a decade of experience managing different, multi-year, federally-sponsored, data-driven, PD projects for which she has designed over 30 evaluative tools and filed multiple reports. Herself a bilingual, straddling a three-continent cultural background, Anjali is a committed advocate of EL educational access (see, budget for description of credentials).

Administrative Coordinator: MR. ROBERT HOFFMAN (B.A.; M.A., English, minor in business administration, *Salisbury University*). Mr. Hoffman is currently the Administrative Coordinator of a prior funded NPD program due to expire, and will be poised to step into the administrative duties of a new program if funded. Mr. Hoffman possesses vast administrative experience from other multi-year projects. His training and experience have provided programs with meticulous administrative management skills while also adding a much-needed data-management expertise. In the former role, his duties have included advertising, recruiting, and developing rapport with LEA personnel. Being a local, he understands the culture of rural Maryland and has offered invaluable trouble-shooting strategies in prior programs. He provides full administrative support for the TARGET Project Director, faculty and trainees. In his data management role, he processes all evaluative tools and generates all trend reports for program improvement and data tracking. He co-creates comprehensive annual reports (with the Project Director) documenting in measurable terms the almost implausible impact PD programs have had on the Maryland Eastern Shore ELL student population—a role he will maintain. (See Budget for credentials.)

(c) MANAGEMENT PLAN: 1. Data-Based Program Delivery**:** Our mode of PD delivery is based on continuous data-tracking of program components and is premised on a "continuous improvement model" (Casteel & Ballantyne, 2010:111) so objectives are accomplished and assessed throughout the tri-cycle of the program. We already have an impressive track record (prior PD program) of incrementally improving delivery services in multiple areas. We improved performance averages from 4.39 in Year 1 to 4.76 in Year 4 in our application process, for instance (see, *Program Reports:* OELA). In addition to using needs-assessment data to designing program goals, data drives our program design. Outcome-oriented Program Design: Results from a prior PD survey polling 256 teachers in a multi-year program on preferences for content delivery either in the form of semester or weekend delivery formats show that 91% (241 responses) chose the weekend/summer course design as the preferred choice. It is this type of data monitoring which guides our current Copernican program design. Outcome-Oriented MONITORED MENTORING: To provide a master teacher, mentor program, we implemented the use of three mentor teachers/instructional coaches per course in a prior dual-cohort program consisting of 10 courses (30 content coaches per project year). While research recognizes that for PD training to be truly effective, it must succeed in effectuating positive shifts and "changes in teachers' classroom practices beliefs and attitudes" (Castro, 2010:15) which can be enhanced by "institutionalized mentoring programs" (Casteel & Ballantyne, 2010:1), more research is pointing to the difficulty of *actualizing* such outcomes since most such teachers, while being noted to possess instructional skills, have no coaching skills (Stowe, 2010:27). Research also notes the lack of 'buy-in'—even downright resistance exhibited particularly by veteran teachers to being coached or mentored by fellow teachers (Spezzini and Austin, 2010:30). The final verdict: "traditional mentor training is insufficient for transforming teachers, even caring and

dedicated teachers" (Spezzini and Austin, 2010:30). Instead, researchers found a change in praxis—"an empowerment through coursework" (Spezzini and Austin, 2010:30) and through "cross-district conversations" which such course work permits and which have led to improved innovations in EL programs more so than through coaching alone (Williams et. al 2007). In a long-term data tracking of the role of coaches/mentors in a multi-year prior NPD program, we found similar findings. Each project year, at least one content coach received below-benchmark ratings (8% of our content coaches in a four-year data tracking of 95 content-coach encounters). More troubling has been the incremental downgrading of three our highest performing coaches (all experienced ESOL teachers), as measured by a post-performance survey which without fail show diminishing average scores each successive project year for each coach in spite of the same quality of content delivery (Coach 1 (Decker): Year 1:4.90; Year 2:4.63; Year 3:4.50; Coach 2 (Ryerson): Year 1:4.93; Year 2:4.75; Year 3:4.14; Coach 3 (Tawes): Year 1:4.85 Year 2:4.65)[8]

Performance-based results: To achieve project goals, we will utilize a mix of performance-based approaches which provide teachers with sufficient opportunities for practice, reflection and feedback by using: a) already existent professional learning communities from which trainees are culled. Thus, immediate content supervisors will be asked to administer a standardized program-aligned pre- and post-program *Supervisor Feedback Form* (MONITORED MENTORING). The role of such "job-embedded" (Richardson, 2003) connections in PD training have shown to have more transformative power in garnering school-wide support for reform (Richardson, 2003) and collegiality (Udelhofen, 2005) than traditional mentoring programs (see above). We believe that STEM/content-area teachers *cannot* and *should not* be assessed on their content delivery by ESOL supervisors, but by their own content supervisors. We will not be using the SIOP grid since valid use of SIOP requires "pre-training supervisors" on a meticulous instrument of 8

[8] Program Statistics: PR/Award #: T195N070327. OELA.

components and 30 features. Training requires "one component of the SIOP model per quarter over two years" (Echevarria, 2010: 60)—time and training hours which we unfortunately do not have. Rather, our *Monitored Mentoring* tracking tool will be designed to be an easily administered instrument, offering unbiased feedback, and be multi-user-friendly for supervisors from multiple STEM/content areas (pre/post-program). For overworked and busy administrators (Brown and Miller 2010)—a commonly noted prohibitive factor in implementing cumbersome measurement instruments, and which we intend to avoid—our easily administered pre/post-program supervisor feedback form will be particularly useful. a) Qualitative Evidence: Each trainee will be required to submit: 1) a detailed reflective account of a minimum of one tutoring/teaching encounter with an EL learner using learned content from coursework; 2) reflective self-analyses corroborated with peer evaluations of 75 minutes of video-taped teaching to be used in course trainings in all three programs. b) Numeric Evidence: Training impact will be measured via comparative analyses of pre/post-program supervisor feedback output, and will easily be administered via our Likert-based instrument eliciting both quantitative and qualitative data. This user-friendly, multi-content applicable form will consist of 10 closed questions (quantitative data)—5 adapted from SIOP models which specifically assess teacher efficacy in academic/STEM domains (speaking reading, writing and listening), and 5 adapted questions from CREDE's standards for effective pedagogy and student outcomes (Doherty et. al 2004). Supervisors will be offered open-ended prompts eliciting further qualitative comment. We have successfully utilized such an instrument in a prior NPD program with fruitful results. In a multi-year tracking of training impact (dual-cohort program), we saw gains on *all* 10 measured questions in comparative analyses of pre- vs. post-program teacher performance (all years) as evaluated by *neutral* third-party content supervisors. Highest gains were noted in imparting

literacy skills (the ENCORE program) and managing teacher-talk (ACCESS program), with some post-program gains as high as .7 in response to the efficacy with which recently-trained teachers "incorporated a respect for linguistic diversity" post-exit from the program as judged by content supervisors. The highest gains reported to date were of a math teacher's improvements in teaching (neutral, post-exit supervisor report) (Program Statistics: PR/Award #: T195N070327. OELA). Adjunct Teaching/Content Coaches/Mentors: While 92% of our content coaches have performed at above benchmark scores we will utilize previously elicited data to design a more symmetrical mentoring program in TARGET-Phase II which uses an adjunct-teacher model in our specially-designed STEM courses to increase teacher buy-in and maximize the collaborative benefits of "multiple instructors" (Ye He & Prater 2010: 86). In our specially designed STEM-focused courses, instruction will be delivered via tripartite personnel teams of: University Professor (expertise in TESOL) and two EL-trained STEM teachers: one math teacher and one science teacher per course. These teams will score the pre/post-program single-item problem set data using a standardized rubric (see above). Each of these teams will also co-plan, co-deliver, and co-assess trainees in the two STEM-focused courses in a bid to model how effective co-teaching can and should be planned and implemented for students (Villa et al 2008). Such a configuration will additionally move the role of coaches/mentors from a peripheral, asymmetrical assignment to more symmetrically positioned roles as co-partners in the design of praxis. Current research stresses the need and efficacy of well-orchestrated, co-teaching models (Villa et al 2008; Richards and Rogers 2001). We expect positive results from this course design to be measured by course-specific and program-specific evaluative tools. Our design is premised on a prior tracking of 256 trainee preferences regarding preferred faculty credentials in which 75% noted preference for courses taught by doctorate holders. Consequently, all 15 courses will

consist of lead faculty with doctorates in the area being taught. Based on capacity-building from a prior NPD program, we already have two ESOL-trained science teachers (middle and high school) who are also bilingual, and two trained math teachers (middle and high school). We will continue to use one content coach per course for other courses (a total of 13 coaches) with a representative mix from districts. Coaches will primarily serve to translate theory to praxis by showcasing "how" SLA theory translates into effective lesson design/technology use by giving model demonstration lessons using district-specific needs and available resources (e.g., computer lab vs. one-laptop lessons). District-derived technology coaches will showcase the latest Web 2.0/3.0 EL-relevant tools in the four domains in the ENCORE program (a design feature based on needs-assessment). Coaches will be evaluated via quantitative/qualitative peer evaluations.

2. Time Commitments of Key Personnel[9]: **PROJECT DIRECTOR** (50%): Dr. Anjali Pandey is a tenured associate professor and is currently serving as the Project Director of a federally funded project due to expire at the same time the new grant would come into effect. She has demonstrated tremendous success in handling her faculty responsibilities and project duties simultaneously, with the latter demonstrated by the accomplishments of previous PD projects (see, partner letters). She will be devoting a 50% time and effort commitment (see, plan) to be divided in the three programs as: ACCESS (16%); ENCORE (16%) and SAIL (18%).

ADMINISTRATIVE COORDINATOR (100%): Mr. Robert Hoffman is the full-time coordinator with a current PD project, and will step into the position as the TARGET-Phase II coordinator with a full set of administrative tools and over 1,000 education contacts intact, along with unparalleled expertise in the daily administrative workings of federally funded projects.

Adequacy of the Management Plan (chart next page): The plan below outlines a one-year plan of milestones and responsibilities keyed to performance measures in the project's cycle.

[9] Please see budget sheet for responsibilities of other personnel on the project.

TIMELINE: Month/week	MILESTONE/Project Task	Responsibility (See budget narrative for details)	Measurement/Feedback/Improvement Strategies
OCTOBER: Week 1	Recruit Web assistant; Begin work on TARGET web-site; Prepare and send out recruitment flyers for both ACCESS/ENCORE/SAIL cohorts Deliver STEM-Team-Taught course #2; SAIL (SLA for content teachers)	Project Director (PD)/ Administrative Coordinator/(AC) STEM-Content Team	Refine pre-program entry documents; EL #s content expertise; Learning Plan document Evaluate content instructors (STEM team)
Week 2	Plan and finalize TARGET timetable schedule/classroom space; 15 courses: ACCESS (5) ENCORE (5) SAIL (5); recruit ACCESS coaches; Finalize contractual statement of obligations	AC /PD	
Week 3	Set up selection board to evaluate participants' credentials Start materials selection for TARGET library	PD	Prepare and finalize GPRA data for report
Week 4	Recruit faculty for ACCESS spring program Conduct Faculty Orientation Institute: Ensure that **every** instructor: plans entire course/syllabus with links to state/national standards and TARGET program objectives. (STEM/content focus)	PD	Administer faculty orientation evaluations specific questionnaire with Likert scale 1-5
NOVEMBER: Week 1	Set up selection board for both ACCESS/ENCORE Notify Graduate Office of SAIL applicant transcripts	PD AC	
Week 2	Begin review process: ACCESS &ENCORE applicants	PD	
Week 3	Finalize TARGET applications-set up interviews	Selection Board: PD, Graduate Director TARGET faculty member	
Week 4	Interview potential cohort applicants for both ACCESS program as well as ENCORE program		Administer interview/application satisfaction survey based on Likert scale 1-5
DECEMBER: Week 1	Admit 20 qualified students into graduate program (10 in ACCESS; 10 in ENCORE). Begin admittance of SAIL trainees (STEM only)	Graduate Director/Graduate Registrar	Finalize all post-program single-item disbursement data (STEM-focused courses) problem set choices
Week 2	Conduct weekend orientation program for ACCESS/ENCORE cohort; Collect all signed contractual statements of obligation; Order books for first course	AC/PD	Administer **orientation satisfaction** survey based on Likert scale 1-5
Weeks 3 and 4	Holiday session		Pre-Supervisor Feedback/individualized plan forms
JANUARY: Week 1	Begin ACCESS Academic Program **START: ENGL. 536: PRINCIPLES OF LINGUISTICS (Saturday Classes)**; Distribute textbooks for course; Have student I.D. cards made; Establish data demographic list Add each student's goals to participant's web-page; Gather web-site information for each student	Faculty member Web assistant / AC/PD	QUANTITATIVE DATA: Administer pre-accessibility survey; Begin daily attendance database on each student (monitored mentoring; pre-assessments) QUALITATIVE DATA Distribute qualitative questionnaire of desired program goals to students; Consolidate all student program goals into database of student goals.
Week 2	Order textbooks for next course Complete hiring and training of STEM co-teaching teams (math; science and higher education faculty); plan, implement and design courses (STEM-focused in SAIL program) including selecting single-item prompt as well as finalized scoring rubric details.	AC/PD	QUALITATIVE DATA: Complete disaggregated data base on scholarship cohort in the following groupings: Teaching experience; Age; Languages spoken; Content Area Expertise; Diversity tracking information --and other relevant areas
Week 3	Prepare course-specific evaluation tied to TARGET goals Obtain and distribute books for *Intercultural Communication in Schools*	PD AC	Begin database on each individual student tuition and expenditures for books for each course.

Week 4	Finalize course Reflections on EL tutoring/teaching encounters; Planning meeting with STEM co-teams: Final details	TARGET faculty member PD &STEM Teams	Administer final course evaluations: for: ENGL 536: *Principles of Linguistics.* Administer: Standardized university quantitative and qualitative evaluation TARGET program course-specific questionnaire based on Likert scale of 1-5
FEBRUARY: Week 1	START: **ENGL. 509: INTERCULTURAL COMMUNICATION(Saturday classes)**	TARGET faculty member	Begin GPA database Evaluate and submit final course grades
Week 2	Order textbooks for next course	AC	
Week 3	**GENERAL FACULTY MEETING (ACCESS)** Set up monthly advising/mentoring meeting for ACCESS recipients Recruit content/technology coaches for ENCORE program	PD	Create disaggregated database on how many in the cohort seek certification; Maintain complete numbers
Week 4	Finalize course	TARGET faculty member	Administer final course evaluations: for: ENGL. 509: **INTERCULTURAL COMM.** Administer: standardized university quantitative and qualitative evaluation TARGET program course-specific questionnaire based on Likert scale of 1-5
MARCH: Week 1	START: **ENGL. 539: SECOND LANGUAGE ACQUISITION (Saturday classes)**	TARGET faculty member	Begin TARGET faculty database Evaluate and submit final course grades
Week 2	Order textbooks for next course Conduct content coach orientation for ENCORE program	PD/AC	Administer content coach orientation evaluations course-specific questionnaire with Likert scale 1-5
Week 3	Monthly advising ACCESS cohort	PD/AC	Update student-specific expenditure database.
Week 4	Finalize course Planning meeting with STEM Team #2 (finalize single assessment details) Plan and finalize with faculty other 3 SAIL courses	TARGET faculty member PD & Stem Teams PD & TARGET faculty	Administer final course evaluations: for: *ENGL 539: Second Language Acquisition* administer: standardized university quantitative and qualitative evaluation TARGET program course-specific questionnaire based on Likert scale of 1-5
APRIL: Week 1	START: **ENGL. 528: ESOL TESTS AND MEASUREMENTS (Saturday classes)**	TARGET faculty member	Evaluate and submit final course grades previous course
Week 2	Order textbooks for next course	AC	Update GPRA database
Week 3	Add materials to the TARGET library for ENCORE program Open SAIL program to all content teachers	PD/AC	Update student-specific expenditure database.
Week 4	Finalize course Order all textbooks for ENCORE program Consolidate all pre/post-exit reports for APR report	TARGET faculty member (AC)/(PD)	Administer final course evaluations: for: ENGL. 528: ESOL TEST AND MEASUREMENTS (Saturday classes) Administer: standardized university quantitative and qualitative evaluation TARGET program course-specific questionnaire based on Likert scale of 1-5
MAY: Week 1	START: **ENGL. 547: CURRENT APPROACHES IN ESOL INSTRUCTION (Saturday classes)** Recruit faculty for ENCORE summer program	TARGET faculty member PD	Finalize all pre-program single-item disbursement data collection (STEM-focused courses) Evaluate and submit final course grades previous course

Week 2	Order textbooks for next course	AC	Prepare APR report/GPRA report outcomes
Week 3	**Finalize SAIL course enrollments for all five courses to include two STEM-focused specially designed team-taught courses** **Finalize and submit APR report**	PD/AC	Finalize and submit AYP report/GPRA report CREATE PROGRAM EXIT EVALUATION INSTRUMENT: ACCESS Update student-specific expenditures
Week 4	Teach course/Finalize course Distribute textbooks for ENCORE program; Enroll all ENCORE students in summer program. Conduct weekend refresher orientation program for ENCORE cohort Have student I.D. cards made; Establish data demographic list Add each student's goals to web-page; Gather web-site information for each student	TARGET faculty member AC Web assistant	Administer final course evaluations: for: *Eng. 547: Current Approaches in ESOL Instruction.* Administer: standardized university quantitative and qualitative evaluation; TARGET program course-specific questionnaire based on Likert scale of 1-5 Administer orientation satisfaction survey based on Likert scale 1-5
JUNE: Week 1	Finalize ACCESS cohort program Set up ENCORE content coach schedule Conduct Faculty Orientation Institute: Ensure that **every** instructor: plans entire course/syllabus with links to state/national standards and TARGET program objectives/STEM content objectives)	PD/AC PD	QUANTITATIVE DATA: Administer post-accessibility survey; Begin daily attendance database on each student Distribute : PROGRAM EXIT EVALUATION INSTRUMENT PART A
Week 2	Conduct Faculty Orientation Institute: Ensure that **every** instructor: plans entire course/syllabus with links to state/national standards and TARGET program objectives/STEM content objectives in SAIL	PD	Administer faculty orientation evaluations specific questionnaire with Likert scale 1-5
Week 3	Begin ENCORE Academic Program **START: ENGL. 491: TOPICS: LITERACY AND ESOL LISTENING (Summer Classes);** Reflections on EL tutoring/teaching encounters/video-teaching	TARGET faculty member Web assistant / AC/PD	QUANTITATIVE DATA: Administer pre-accessibility survey; Begin daily attendance database on each student; content coach evaluations QUALITATIVE DATA Distribute qualitative questionnaire of desired program goals to students; Consolidate all student program goals into database of student goals.
Week 4	**GENERAL FACULTY MEETING (ENCORE)** Set up monthly advising/mentoring meeting for ENCORE recipients ENCORE content coaches (elementary; middle and high school) present listening strategies from a variety of content areas.	AC/PD ENCORE content/Tech. coaches	Administer final course evaluations: for: *ENGL 591: Topics: Literacy and ESOL listening* administer: standardized university quantitative and qualitative evaluation; content coach evaluations Use TARGET program course-specific questionnaire Administer content coach evaluations
JULY: Week 1	**START: ENGL. 532: LITERACY AND ESOL READING (Summer Classes)** Finalize all book orders for SAIL program: first two courses	AC TARGET faculty member	CREATE PROGRAM EXIT EVALUATION INSTRUMENT: ENCORE
Week 2	Continue course Advising/mentoring meeting for ENCORE recipients ENCORE content/technology coaches (elementary; middle and high school) present tech-based reading strategies from a variety of content areas.	TARGET faculty member PD ENCORE content/tech coaches	Administer final course evaluations: for: *ENGL 532: Literacy and ESOL Reading* Administer: standardized university quantitative and qualitative evaluation Use TARGET program course-specific questionnaire based on Likert scale of 1-5 Administer content coach evaluations

Week 3	START: ENGL. 534: LITERACY AND ESOL WRITING (Summer Classes) Finalize all details In STEM-focused courses (SAIL program)	TARGET faculty member STEM content teams	REVIEW PROGRAM EXIT EVALUATION INSTRUMENT PART A: QUALITATIVE (POST-PROGRAM) PART B: QUANTITATIVE (POST-PROGRAM)
Week 4	Continue course Advising/mentoring meeting for ENCORE recipients ENCORE content/tech coaches (elementary; middle and high school) present tech-based writing strategies from a variety of content areas. Finalize all book orders for STEM-focused courses	TARGET faculty member ENCORE content/tech coaches AC	Administer final course evaluations: for: *ENGL 532: Literacy and ESOL Reading* administer: standardized university quantitative and qualitative evaluation Use TARGET program course-specific questionnaire based on Likert scale of 1-5 Administer content coach evaluations
AUGUST: Week 1	START: ENGL. 591: LITERACY AND ESOL SPEAKING (Summer Classes); ENCORE content/tech coaches (elementary, middle and high school) present tech-based speaking strategies from a variety of content areas. Deliver parallel sequence SAIL courses: ENGLISH STRUCTURE FOR TEACHERS Reflections on EL tutoring/teaching encounters METHODS AND TECHNIQUES	TARGET faculty members	REVIEW PROGRAM EXIT EVALUATION INSTRUMENT Administer final course evaluations: for: *ENGL 591: Topics: Literacy and ESOL Speaking* Administer: standardized university quantitative and qualitative evaluation Use TARGET program course-specific questionnaire based on Likert scale of 1-5 Administer content coach evaluations
Week 2	START: ENGL. 533 ESOL PROGRAM DEVELOPMENT (Summer Classes); (Encore) ENCORE/SAIL content coaches (elementary, middle and high school) present program development strategies from a variety of content areas.	TARGET faculty members ENCORE/SAIL content coaches	Administer final course evaluations: for: *ENGL 533: ESOL Program Development* administer: standardized university quantitative and qualitative evaluation Use TARGET program course-specific questionnaire based on Likert scale of 1-5 Administer content coach evaluations
Week 3 and 4	Final details of ENCORE program Conduct post-exit requirements meeting: All TARGET participants End SAIL courses 1 and 2 (all-teacher focused)	PD/AC TARGET Faculty	QUANTITATIVE DATA: Administer post-accessibility survey; Begin daily attendance database on each student Distribute : PROGRAM EXIT EVALUATION INSTRUMENT PART A
SEPTEMBER:	Create Part B of final post-exit survey (all trainees have to submit GPRA required data by March of the following project year in time for the AYP report.) Begin recruitment strategy for next project year Deliver Academic Literacy course (Stem Focused) Reflections on EL tutoring/teaching encounters	PD and AC STEM content teams	POST- EXIT EVALUATION INSTRUMENT PART B: ACCESS / ENCORE/SAIL Evaluate content instructors (STEM team)

(d) QUALITY OF THE PROJECT EVALUATION: 1. Thoroughness of Evaluation: The evaluation plan is in line with four established tenets in assessment research (Brown 2004; Alderson 2002) namely: **Practicality** (the evaluations selected will be feasible, in line with the resources/personnel allotted in the budget, and with the methods for reporting results determined in advance); **Reliability** (use of consistent sets of criteria in each measurement tool in each project year and across project years to allow for reliable comparisons); **Validity** (multiple instruments will be utilized to assess training effectiveness, in expected formats, with clear and uncomplicated wording, and will be appropriate and meaningful to the content being measured to ensure content, consequential and face validity: e.g. to ensure content validity of quality of training, course-specific evaluations will be tied to course objectives for each specific course, 15 courses in all—two measurement tools per course); and finally, **Authenticity** (measurements will be geared towards actual program objectives i.e., specifically created for the program (e.g., pre- and post-program accessibility analyses; pre/post-program supervisor feedback forms, and post-exit audience satisfaction analyses, to name some of the authentic tools to be created in this program). This theoretically-based plan will result in evaluation which is simultaneously thorough and appropriate to project objectives as can be seen in the chart below. 2. **Linkages to project outcomes**: As the management plan has clearly outlined, evaluation in this project is continuous and chronological in an attempt to yield both formative and summative data in both quantitative and qualitative formats so as to consistently improve upon intended outcomes. This project produces two kinds of data to gauge how effective our training is on trainees and their students: program impact data (measurement tools created to assess the long-term effects of our PD training) as well as student achievement outcome data (systematically monitored short-term pre/post-program data from single-item, STEM-relevant prompt disbursements to trainee-

students). 3. **Comprehensive Evaluation**: The chart below summarizes in detail the linkage between project objectives and the proposed measurements. Additionally, our Data Management Plan garners evaluative data on all five cornerstones of effective PD training (Guskey 2000) eliciting data on: a) participant reactions (multiple, pre/during program tools); b) participant learning (multiple, course-based tools); c) organizational support and change (supervisor feedback forms); d) use of knowledge and skills (during program, video-teaching reflections/ tutoring /teaching encounters/post-program qualitative case-study reports) and e) student learning outcomes (comparative data analyses of student-generated pre/post-performance on single-item disbursement in STEM-focused courses, and AYP tracking in post-exit reports). 4. **Evaluation Efficacy**: The project will be evaluated via quantitative as well as qualitative instruments designed to measure four areas in the project: a) activities: orientations/workshops conducted as well as all 15 courses delivered (ACCESS/ENCORE/SAIL cohorts), b) participant progress: participating TARGET students as well as the performance of all participating faculty and staff, c) program objectives: the success of the goals of the project as measured by pre-, during and post-program quantitative and qualitative evaluations (see chart), and d) training impact (*Monitored Mentoring* via neutrally administered pre/post-program supervisor feedback keyed to a standardized, research-based tool and pre/post-program comparisons of single item scores on STEM subject performance by trainees' students (SAIL). **Training with measurable outcomes**: Success in program implementation is realized in and through the successes of our trainees upon exit from our program. We envision our post-program management plan to be the single most important outcome of our project (Invitational Priority #2). Thus, we have set in motion an extensive and thorough six-pronged, post-exit data-management plan which ensures that all completers a) sign a contractual obligation with assurances to serve their school districts

with their newly gained expertise for one year upon program completion (failure to comply will result in a refund of all training expenses: tuition; books and fees), an obligation which we will track in numeric terms; b) a mentoring protocol which provides *systematic* rather than random evaluations of trainee output. All trainees are to be evaluated via a *supervisor feedback form* (MONITORED MENTORING) pre-training/post-training so that neutral supervisors can quantitatively and qualitatively assess the impact of training post-exit. This will constitute the "immediate" (Guskey 2010:94) quantitative/qualitative evidential proof of PD impact to be tracked. c) The formal presentation of a post-exit presentation entitled "Disseminating Expert Knowledge" in which trainees share expert knowledge in any domain with others in their schools. Our model ensures that trainees *actively* assist either students, peers, superiors, or county/state officials in the delivery of EL education. A year provides the necessary "delay needed in PD-training" (Ibid); d) All trainees enrolled in the STEM-focused courses in SAIL will be required to submit student-oriented data (see above) at the outset and upon exit from the program. e. Standardized evaluation of the post-exit presentation, the results of which will be sent to us with their final report; e)(1) A detailed response to a multi-question (quantitative and qualitative) reflective report as to how trainees have implemented course work in the teaching of EL students (improved their practices post-exit) with required self-analyses/reports of their own work with EL students in the form of reflective/case-study accounts of tutoring/teaching experiences with EL learners; e)(2) A post-exit response to a quantitative 20-question survey administered six months after program completion (to give time for reflection) (Guskey, 2006), and which gauges trainee satisfaction (post-exit) with the quality of training provided and job-preparedness (in regards to EL students). To maintain uniformity, and accountability, the detailed management plan outlined in the form of broad weekly outcomes will ensure that all

project goals are realized on time. Consistent evaluations of procedures, training content, and project personnel pre-, during, and post-program will occur each project year. 5. **Performance Feedback**: This will be done in both quantitative and qualitative ways. All quantitative questionnaires in this program will offer a Likert scale of 1-5 (1 being the lowest rated value, and 5 being the highest rated value) on all measurable items. Our target goal in all measurable performance objectives is to consistently strive to maintain a numerical level of at least 90% of our surveyed participants rating the measured items at 3.5 percent or higher. The numerical performance feedback on approximately 30 different instruments (used each project year) will allow us to make constant improvements in the delivery of our training. As can be seen in the management plan (see earlier chart), quantitative evaluations are offered on an average of a bi-weekly basis each project year, so that we can make necessary and immediate improvements in the project year and in succeeding project years. To provide an example, if a faculty member's ratings on course critiques are below our benchmark values, we will reconsider hiring the faculty member to teach the course in the succeeding year. In order to ensure that the program is flexible to the needs of trainees we will ask them to report on the following question in their post-exit report: "What areas of EL training do you think teachers in the next cohort need in addition to what you got?" Additionally, in order to ensure that the project benefits from the results of each previous year's cohorts' post-training encounters, completers will be asked to complete a post-exit survey prompt on challenges they are facing in their schools regarding EL education. We will track this salient feedback and incorporate all such input to the extent possible in the activities, training content and project goals each succeeding project year.

GOAL/GPRA OUTCOME	QUANTITATIVE: How/When?	[F]=Formative [S]= Summative	QUALITATIVE: How/when	[F]=Formative [S]= Summative
Goal 1: (see, Project design) GPRA 1.6 *In-service completers who are providing instructional services to EL students.*	**Tracking: Pre-Program**: 1. 100% signed contractual obligation statements [S]; 100% completed pre-program individualized learning plans; 100% completed pre-program supervisor feedback forms; SAIL: 100% completed single-item data disbursements (student-achievement data) [S] **Tracking: During Program** Attendance records [S]; GPA records [S] *Trainee satisfaction surveys (Numeric data)* Application Process [F];Program orientation Pre-accessibility [S]; Post-accessibility [S]; **Tracking: Post-Program (numeric)** [S] Final post-exit reports: actual numbers of EL served (post-exit); language groups, program types, program initiatives/innovations; Post-exit numeric tracking of EL students assisted; Numeric tracking of post-exit interviews; Post-Program: Trainee satisfaction surveys: Part A of post-exit report: Completer knowledge ratings; 100% completed post-program supervisor feedback forms. SAIL: 100% completed single-item disbursements. [S]		**Tracking: Pre-Program:** evaluations of a highly competitive trainee application process consisting of a two-part detailed written application dossier and face-to-face interviews with a three panel-board (Graduate Director; Project Director and TARGET faculty member) [F]; and supervisor feedback. [S] *Trainee satisfaction surveys (qualitative)* Application Process [F] Program orientation [F] **Tracking: During Program:** Program orientation; Pre-accessibility surveys; Post-accessibility surveys; Reflections on EL tutoring/teaching encounters/tech-based strategies (course evaluations) [F] **Tracking: Post-Program:[S]** Part B of post-exit report: Examples of improved curricula; Narratives of case studies of EL students assisted upon graduation; interviews with school personnel using *TESOL Standards of Access Document.* 100% post-program supervisor feedback forms (Qualitative comments)	
Goal 2: (see, Project design) GPRA 1.5	**Tracking: Pre-Program**: disaggregated database on scholarship cohort on teaching experience; age; languages spoken; content area expertise; diversity tracking information		**Tracking: Pre-Program**: QUALITATIVE DATA: Complete disaggregated database on scholarship cohort on program goals and learning	

Completers who meet certification/endorsement as a result of the program.	and other relevant areas **Tracking: During Program**: 15 course–specific / program-specific evaluations. STEM content instructor evaluations. **Tracking: Post-Program** (numeric) Post-program: 20 question satisfaction survey: Extent of satisfaction with program and training services provided and job preparedness; Post-exit dissemination project audience analyses: Professional development workshops to fellow colleagues in the school or district on topics of relevance with third-party evaluations via a standardized feedback instrument; Tracking of passing scores on post-program Praxis II/State mandated exams	outcomes/individualized learning plans. [F] **Tracking: During Program**: 5 course–specific evaluations: ACCESS/ENCORE/SAIL; Reflections on EL tutoring/teaching encounters/video-taped teaching **Tracking: Post-Program** Post-exit dissemination project audience analyses; Pre- and post-observation feedback from supervisors; Pre- and post-videotapings of teachings; Self-reports on the incorporation of newly acquired expertise; Self-conducted interviews with school personnel. [S] ACCESS/ENCORE/SAIL Praxis II exam scores 100% pre/post-single item data (SAIL-STEM courses)
Goal 3: (see, Project design) GPRA 1.6	**Tracking: Pre-Program**: **Faculty orientation** questionnaire with Likert scale 1-5. **Tracking: During Program**: (numeric) Daily attendance database on each student; Standardized university quantitative and qualitative evaluation; TARGET program course-specific questionnaire based on Likert scale **Tracking: Post-Program: (numeric)** Contractual obligation fulfillment data (12 months post-exit); Part B of post-exit report: 20 questions: course-specific evaluations: means; program-specific evaluations: means; content coach demonstration averages	**Tracking: Pre-Program**: Administer **faculty orientation** evaluations; Content area databases/teacher demographic database **Tracking: During Program**: (numeric) Daily attendance database on each student; Standardized qualitative evaluation; ACCESS program course-specific questionnaire based on course content/evaluation of training content. **Tracking: Post-Program (Qualitative) [S]** Part B of post-exit Report (qualitative reports of improved practices; case studies; student testimonials).

Goals 4&5: (see, Project design) GPRA 1.5; 1.6	**Tracking: Pre-Program**: Administer **faculty orientation** evaluations specific questionnaire with Likert scale 1-5 **Content coach orientation** evaluations specific questionnaire with Likert scale 1-5 **Tracking: During Program: (numeric)** **daily attendance** records on each student GPA records; Attendance records; Course specific evaluations: (department (15); Program (15) [S] Program specific evaluations; Content coach evaluations (ENCORE program) [F] **Tracking: Post-Program: (numeric)** Contractual obligation fulfillment data; Part A of post-exit report: completer knowledge ratings; Final GPA records Final attendance records; Course specific evaluations: means Program specific evaluations: means; Content coach demonstrations/STEM instructors: means [F]	**Tracking: Pre-Program**: Administer **faculty orientation** evaluations; content area databases/teacher demographic database **Tracking: During Program: (numeric)** Daily attendance database on each student; Standardized qualitative evaluation; TARGET program course-specific questionnaire .(15x2) based on course content/evaluation of training content/content coach training content [F] **Tracking: Post-Program (Qualitative)** Part B of post-exit report: Reports on **specific/ detailed examples** of the manner in which post-exit teaching reflects improved teaching practices in the area of language retention, language acquisition, assessment, standards alignment, STEM-content strategies/tech-based EL strategies; post-exit demonstrations incorporating course content in any area; interviews with school personnel (TESOL standards)
Goal 6: (see, Project design) GPRA 1.5	**Tracking: Pre-Program**: application data: minority/gender distribution/content area/applicant demographics **Tracking: During Program: (numeric)** Trainee/faculty demographic data **Tracking: Post-Program: (numeric)** EL demographic data; language; proficiency	**Tracking: Pre-Program**: application data: minority/gender distribution/applicant demographics **Tracking: During Program: (qualitative)** Trainee/faculty demographic data **Tracking: Post-Program: (qualitative)** EL demographic data (case studies)

CONCLUSION: **TARGET-Phase II** offers rural, cross-grade, already-certified teachers from multiple STEM/content areas the opportunity to obtain graduate-level expertise in ESOL via a training design keyed to measurable achievement outcomes with built-in career-ladder incentives for teachers. TARGET-Phase II fulfils all 10 design features of successful PD programs (Loucks-Horsley et al 2010:5). This proposed project 1) is directly aligned with student needs (trainees are required to garner EL needs prior to entry), 2) is intensive (our courses follow a sequenced module delivery), 3) is ongoing (trainees have to fulfill pre/post-program obligations involving *neutral* third-party evaluations culled from their communities of practice, and file self-reflective evaluations of teaching improvement), 4) is connected to practice (via MONITORED MENTORING PROTOCOLS we have immediate supervisors neutrally assessing PD impact in systematic, measurable terms rather than random ad hoc terms), 5) is focused (we have customized and even created new STEM-focused courses specifically to address teachers' real needs while streamlining courses to reflect cutting-edge technological innovations), 6) is connected to other school initiatives (trainees are given both student-oriented outcome incentives and career-ladder incentives), 7) provides time and opportunity to collaborate (our Copernican-style courses are especially designed to foster inter-and intra-school/district alliances), 8) builds strong working relationships (with the input of partnering supervisors/immediate supervisors who interact with trainees, we eventually place trainees in coveted job positions), 9) is continuously monitored (we have over 30 measurements tools in a cohesive data-management plan gauging immediate, intermediate and long-term training impact (Guskey 2006), and 10) is evaluated (garnered data improves program outcomes while meeting project goals). To reiterate, *TARGET-Phase II* is a PD model dually-designed to promote the retention of experienced classroom teachers while improving the 21st century college-readiness of students in STEM/related disciplines.