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**APPLICATION FOR GRANTS
UNDER THE**

NATIONAL PROFESSIONAL DEVELOPMENT PROGRAM

CFDA # 84.365Z

PR/Award # T365Z110173

Grants.gov Tracking#: GRANT10865349

Closing Date: MAY 09, 2011

ABSTRACT

Culturally Responsive ESL Special-education Training (CREST) **Masters Degree in Education Fellowship Program**

Name of IHE: Northern Arizona University

Title of the Program: OELA- National Professional Development Program CFDA 84.365Z

Number and Type Participants Projected To Be Served. Over 5 years, 48 Masters of Education (M.Ed.) fellows are projected to be served with an ESL endorsement and M.Ed. in Bilingual Multicultural Education (BME) or Special Education (Sp Ed). These 48 fellows will be divided into cohorts during the 5 years of the grant. Three cohorts of 12 students each are projected to complete either the BME M.Ed. or the Sp. Ed. M.Ed. Additionally, two cohorts of 6 students each are projected to complete the M.Ed. with Certification (Cross-categorical) in 5 years of the grant. Fellows in Sp. Ed. M.Ed. with Certification have more courses in their degree program and therefore take longer to complete their program. The benefit is they will become Highly Qualified Special Education teachers with an ESL endorsement. Both types of Sp. Ed M.Ed. graduates (those already certified in Sp.Ed. and those who will be earning certification in Sp. Ed.) will also earn an NAU Graduate Certificate in CLDE Teaching.

Yr 1- **Cohort 1 Cert:** 3 SpEd Certification Preservice Teachers Begin CREST and 3 SpEd Certification Inservice Teachers Begin CREST;

Midpoint Yr 3-**Cohort 2 Cert:** 3 SpEd Certification Preservice Teachers Begin CREST and 3 SpEd Certification Inservice Teachers Begin CREST .

Yr 1-**Cohort 1 NonCert**-12 Sp Ed or BME Inservice Teachers Begin CREST;

Midpoint Yr 2- **Cohort 2 NonCert**-12 Sp Ed or BME Inservice Teachers Begin CREST;

Yr 4-**Cohort 3 NonCert** -12 Sp Ed or BME Inservice Teachers Begin CREST and end Yr 5.

Yr 1 to 5- **Higher Education Faculty**-5 each year.

PROJECTED TO BE SERVED BY END OF PROJECT–Preservice=6; Inservice =42; Total=48
Higher Education Faculty = Total of 25 Faculty in five years

Consortia LEA Partners: Yuma Union High School District; Yuma Elementary 1, Somerton; Gadsden; Crane; Wellton; Parker; Hyder; Antelope Valley, and La Paz County Schools.

Project Description: Northern Arizona University College of Education and Yuma Branch Campus will work with general education and special education teachers in rural school districts in La Paz county and the Yuma area on the border of Mexico to improve instruction for English Learners (ELs) and English Learners with disabilities. CREST provides all fellows with credit bearing graduate coursework leading to a full State of Arizona endorsement in English as Second Language. This five year grant will assist teachers working with EL students to meet high professional standards through funding for three cohorts of Masters Fellows for the M.Ed. in BME or the M.Ed. in Sp Ed and two cohorts of Masters Fellows for the M.Ed. in SpEd with Arizona Cross Categorical Certification. Each Fellow will complete all coursework for the

Arizona ESL Endorsement and a focus area in Culturally and Linguistically Diverse Exceptional (CLDE) student education.

Fellows will select one of the following Masters Degree Programs:

1. M.Ed. in Bilingual Multicultural Education (BME) with ESL Endorsement.
2. M. Ed. in Special Education (Cross Categorical) with ESL Endorsement.
3. M. Ed. in Special Education with Certification in Cross Categorical Special Education with ESL Endorsement.

All fellows will also have a focus area in their coursework on teaching CLDE students. Fellows in the M. Ed. in Special Education will choose either the M. Ed. without certification if they are already certified in Special Education (Cross-categorical) along with the ESL endorsement or M. Ed. with Certification (Cross-Categorical) if they seek to become Highly Qualified in this area of special education along with the ESL endorsement. The CREST program provides tuition and books for the fellows in the program. The CREST project will deliver instruction in several formats including face to face instruction, Video Conferencing, and Web-based courses so that teachers can remain in their rural communities while earning the Masters Degree and ESL Endorsement. The fellows will collaborate with faculty to develop culturally responsive curriculum and participate in a Trainer of Trainers (TOT) model Professional Development program in which 100 additional peer teachers from the consortium districts each year join with the Masters Fellows to receive training in best practice strategies for working with limited English proficient students and limited English proficient students with disabilities.

Project Activities by Year

Year 1	Year 2	Year 3	Year 4	Year 5
8/1/11-7/31/12	8/1/12-7/31/13	8/1/13-7/31/14	8/1/14-7/31/15	8/1/15-7/31/16
CREST STEM TOTconference 2 Science/ESL speakers. 100 teachers attend. 80%use 3 strategies	CREST STEM TOTconference Math speaker 100 teachers attend. 80% use 3 strategies	CREST STEM TOTconference CLDE speaker 100 teachers attend. 80%use 3 strategies	CREST STEM TOTconference STEM speaker 100 teachers attend. 80%use 3 strategies	CREST STEM TOTconference 3 STEM/CLDE speakers 100 teachers attend. 80%use 3 strategies
Cohort 1 (C1)- 8 courses C1 with Cert-8 courses	C1-4 courses C1 with Cert-8 courses C2-4 courses	C2 – 8 courses C1 with Cert-2 courses C 2 Cert-4 courses	C 3 8 courses C2 with Cert-8 courses	C3 4-courses C2 with Cert-6 courses
Infuse Science into 3 ESL or Sp. Ed. courses	Infuse Math into 3 ESL or Sp. Ed. courses	Infuse CLDE into 3 ESL courses	Collect data on effectiveness of revised syllabi	Analyze data from syllabi review and from focus groups

Priorities: Competitive Preference Priority 2: Enabling More Data Based Decision Making

Multiple measures on progress of participants will be taken during the program of instruction. Cohort will be measured against non-grant participants in the same degree program to determine 1) Retention of CREST students, 2) M.Ed. degree completion rate, 3) GPA, 4) School employment in serving EL students. Also, using a SIOP type assessment instrument, classroom data will be collected on fellows' implementation of ESL/CLDE/STEM instructional strategies.

Competitive Preference Priority 3: Promoting Science, Technology, Engineering, and Mathematics (STEM) Education

1) A priority in this grant will be to recruit current Math and Science teachers at the middle school or high school level as fellows. When these STEM teachers are trained in ESL and CLDE strategies, they will be better able to provide instruction to meet the needs of EL students and EL students with disabilities. 2) Several graduate Special Education and ESL courses will be revised and enhanced to include proven strategies for effective instruction of Math and Science for all students. 3) Nationally recognized experts in ESL and STEM subjects will provide workshops for IHE faculty and keynote presentations at the CREST STEM Training of Trainers (TOT) Conference. 4) Fellows will develop and present TOT professional development sessions on STEM and ESL instructional strategies at the CREST STEM TOT Conference.

Invitational Priority – Improving preparation of all teachers to better serve English Learners. Course redesign guided by nationally recognized experts in EL and STEM education begins in Year 1. Cohort 1 pilots three redesigned courses. Data collected from Cohort 1 will be presented to university faculty. Further course adaptations and adoptions will be considered.

GPRA Targets:

Measure 1.1: The percentage of pre-service program completers who are State and/or locally certified, licensed, or endorsed in EL instruction.

Year 1 – N/A; Year 2 –N/A; Year 3-100%; Year 4 – N/A; Year 5- 100%

Measure 1.2: The percentage of pre-service program completers who are placed in instructional settings serving EL students within one year of program completion.

Year 1- N/A; Year 2 –N/A; Year 3 – 100%; Year 4-N/A; Year 5 – 100%

Measure 1.3: The percentage of pre-service program completers who are providing instructional services to EL students 3 years after program completion.

Year 1-N/A; Year 2- N/A; Year 3- N/A; Year 4- N/A; Year 5- N/A

***COMPLETERS WILL NOT HAVE THREE YEARS SERVICE BY END OF THE GRANT.**

Measure 1.5: The percentage of in-service teacher completers who complete State and/or local certification, licensure, or endorsement requirements in EL instruction as a result of the program.

Year 1 - N/A; Year 2 -100%; Year 3-100%; Year 4 - N/A; Year 5-100%

Measure 1.6: The percentage of in-service teacher completers who are providing instructional services to EL students.

Year 1 –N/A; Year 2 – 100%; Year 3 – 100%; Year 4 – N/A; Year 5 -100%

Project Director Contact: Dr. Russell Prust, (928) 317-7621, Russell.Prust@NAU.edu

A. PROJECT DESIGN

1) Clearly Specified and Measurable Goals, Objectives & Outcomes. Yuma is in southwestern Arizona on the border of Mexico. Of K-12 students in the school districts in Yuma county, the percent of students who are Hispanic ranges from 64% in the Antelope District with 3% English Learners (EL) to 99% Hispanic in the Gadsden District situated on the border with Mexico with 63% ELs. A significant portion of the students in the Culturally Responsive ESL Special Education Training (CREST) Consortia of local school districts in Yuma and La Paz counties are classified as ELs, but relatively few Yuma and La Paz teachers are fully certified in ESL education. Although Yuma is 325 miles from the main campus in Flagstaff, Northern Arizona University (NAU) has been designated by the legislature as its local university.

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CREST STEM	CREST STEM	CREST STEM	CREST STEM	CREST STEM
TOTconference	TOTconference	TOTconference	TOTconference	TOTconference
2 Science/ESL speakers. 100	Math speaker 100 teachers	CLDE speaker 100 teachers	STEM speaker 100 teachers	3 STEM/CLDE speakers

teachers attend	attend	attend	attend	100 teachers attend.
Cohort 1 (C1)- 8 courses C1 with Cert-8 courses	Cohort 1-4 courses Cohort 1 with Cert-8 courses Cohort2-4 courses	Cohort2 – 8 courses Cohort 1 with Cert-2 courses Cohort 2 Cert-4 courses	Cohort 3 8 courses Cohort 2 with Cert-8 courses	Cohort 3 4-courses Cohort 2 with Cert- 6 courses
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CREST GOAL –PREPARE TEACHERS TO IMPROVE INSTRUCTION FOR EL STUDENTS & EL STUDENTS WITH DISABILITIES VIA M.ED. DEGREE, ESL ENDORSEMENT,CLDE FOCUS, STEM CONTENT/STRATEGIES, & TRAINER OF TRAINERS (TOT) LEADERSHIP DEVELOPMENT (TOT CONFERENCE)

Objective 1: Recruit & Select 20 Masters Candidates.

Objective 2: Implement M.Ed.Degree ESL Endorsement Program

Objective 3: Redesign Courses to Infuse STEM & CLDE into ESL and SpEd Courses

Objective 4: Teach Fellows to use TOT Prof. Development model in schools

Objective 5: Students deliver TOT Professional Development at CREST STEM Conference.

Objective 6: Prepare for & implement various means of CREST Program dissemination.

Objective 7: Disseminate the CREST materials.

Objective 8: Graduate 48 M.Ed.BME andM.Ed.Special Ed teachers with ESL Certification

NOTE-See also Chart in Management Plan C for Measurable Activities and Outcomes.

Course Descriptions of Selected CREST Graduate Courses in BME, CLDE & Ed. Research

ESE 520 Bilingual & Multicultural Aspects of Special Education (3) Focuses on the interface of special education and bilingual/multicultural education, and the historical and philosophical roots of both disciplines. Overview of legislation, cultural values of different groups, assessment and evaluation, instructional strategies, and community and agency resources.

ESE 601: Non-biased Assessment for CLDE Students (3). Prereferral procedures, assessment techniques and instruments, educational diagnosis, and placement procedures for CLDE students with emphasis on assessment of Mexican American students.

ESE 602: Curriculum, Methods, and Materials for CLDE Students (3). Impact of culture and language on educational performance and the educational interventions designed to maximize each child's individual potential. Emphasis on modifying and developing methods and curriculum materials related to both academic interventions and appropriate classroom management techniques for Mexican American students with disabilities.

ESE 603 –Inclusive Programs for CLDE Students (3). Contemporary issues, trends, and concepts related to the instruction of CLDE students, especially in inclusive settings. Emphasis on parent and community involvement and collaboration with bilingual, ESL, and other general educators in the development of instructional programs for CLDE students.

BME 420 Literacy and Biliteracy Development (3). Theories and practices related to development of literacy in two languages. Methodologies of reading & writing instruction.

BME 530 Foundations in Bilingual and ESL Instruction. (3) The theoretical, historical, and legal background of bilingual and ESL instruction, including an overview of current models.

BME 538 Linguistics in Educational Contexts (3). Application of linguistics to multicultural educational settings with attention to language-minority and LEP learners in K-12.

BME 631 English Instruction in Bilingual Contexts (3). Teaching English and academic content in bilingual contexts; theoretical implications and practical applications of research.

BME 634 Testing and Evaluation of Minorities (3). In-depth study of assessment policies, practices & equity issues; use of alternative assessment methods ie. portfolios & authentic assessment, and the development & implementation of assessment in students' native languages

BME 637 Cultural Component of Bilingual / ESL Instruction (3). Developing programs & practices relevant to local culture/subcultures to promote parental & community involvement.

BME 608 Practicum in Teaching EL Students

EDR 610 Introduction to Research. (3). General introduction to research in education with focus on using research techniques in educational settings.

CREST M.Ed.BME	CREST M.Ed.SpEd	CREST MEd.SpEd w/cert
BME530	BME530	BME530
BME 631	BME 631	BME 631
BME634	BME634	BME634
BME637	BME637	BME637
BME608	BME608	BME608
BME420	BME420	BME420
BME538	BME538	BME538
EDR610	EDR610	ESE 649
ESE601	ESE601	ESE601

ESE602	ESE602	ESE602
ESE603	ESE603	ESE603
ESE520	ESE520	ESE520
BME698	ESE634	ESE650
	ESE649	ESE625
	ESE698	ESE655
		ESE426
		ESE698
		ESE591

Trainer of Trainers (TOT). Fellows will learn to be Trainer of Trainers (TOT) in CREST courses and will develop a TOT training program consisting of modules each related to assessment and instruction of EL and CLDE students in inclusive settings. Fellows will present their training modules at the CREST STEM TOT Conference for peer teachers involved in teaching EL students in the consortium districts. Graduates of the CREST Master’s Program as well as educators who have completed the TOT Training will then become trainers of other groups of educators in their school district. In this way new participants are continually being trained and are also becoming trainers of the next group. By establishing cadres of trainers in local districts, CREST can also impact future ESL and special education training programs via development of potential local course instructors, guest lecturers, and Student Teacher mentors.

Consortia LEA Partners along with NAU are the following School Districts: Yuma Union High School District; Yuma Elementary 1, Somerton; Gadsden; Crane; Wellton; Parker; Hyder; Antelope Valley; and La Paz County Schools. Letters of support and collaboration are attached in this proposal. **The LEA partners will contribute** in many ways to the CREST project. 1) All

of the districts were contacted and asked for their input and feedback in planning the proposal. They shared their ideas with us about the needs in their districts, and this helped to shape the specific focus areas of STEM content instruction and CLDE strategies that were included in CREST along with ESL courses. 2) LEA Superintendents are members of the CREST Advisory Committee and lend their unique perspectives to the CREST program about best practices in preparing teachers to educate EL students. They will meet twice a year to reflect on the progress of the CREST program fellows and provide feedback on changes or improvements that the program could make. 3) Partner districts will provide practicum settings in the form of the classrooms and students of the fellows for fellows to implement new methods and materials with EL students. 4) Districts will also provide appropriate classroom assignments for pre-service teachers in the M.Ed. SpEd with Certification strand of CREST. 5) LEA partners will also provide feedback on pre-service teacher performance and allow program participants to take part in professional development activities. 6) In addition, LEA partners will allow CREST staff and faculty to observe program participants in their classrooms teaching EL students. 7) Principals in the district schools will be involved in the recruitment and selection process of each cohort of Fellows. 8) Superintendents, principals, and teachers will meet with the External Evaluator to provide data, insights, and feedback on the results of the CREST project. **NAU will contribute** through the collaboration with the local schools and the resources that the CREST program will bring to the community, school districts, teachers, and ultimately EL students. NAU has sufficient resources to deliver a high quality M.Ed. program with the previously detailed activities and the unique characteristics of STEM and CLDE curriculum that have been described in this section. In addition, library holdings, technology, technology support,

facilities, and faculty are all significant contributions that NAU brings as a partner. NAU College of Education programs are accredited by NCATE and North Central Association.

Advisory Committee. Culturally and linguistically diverse individuals are members of the Advisory Committee as well as parents from the community. The Advisory Council is composed of: 1) superintendents of the Consortium School Districts, 2) parents of EL students and students with disabilities, 3) individuals with disabilities, 4) an Arizona Dept of Education Parent Information Network Specialist, 5) a Migrant Education Coordinator from a consortium district, 6) an NAU faculty member and parent of a child with a disability.

These goals and objectives lead to an increased capacity of the consortium districts to provide a quality education to EL students and to provide continual support to new bilingual teachers. The capacity of NAU to provide graduate programs through the NAU Yuma campus and distance education will be strengthened during the five years of the project. The CREST project also serves as a model of long-term collaboration between the university and public schools to serve LEP students and EL students with disabilities in rural settings.

Recruitment and Selection of Fellows. Equal access Recruitment: To ensure an adequate pool of applicants from underrepresented populations, CREST will be advertised at NAU-Yuma (serving many Mexican American students), the consortium districts in Yuma. We will provide flyers & applications to the NAU Coordinator of Disability Support Services, and Students with Disabilities Support Center to assist in recruiting students with disabilities.

Minimum qualifications for program applicants:

- ✓ Employment as a certified teacher in one of the consortium districts is required.
- ✓ Undergraduate GPA of 3.0 is required.

- ✓ Two (2) semesters of a foreign language or CLEP equivalent is required at the time of application or by the end of 2nd semester in program.
- ✓ At least two (2) years full-time certified teaching experience is required for the Master's of Education in the BME and Special Education without certification programs.
- ✓ A commitment is required to a minimum of five (5) years teaching ELL students in a K-12 school setting after completion of the grant degree.

Preferred qualifications for applicants:

- ✓ A certified teacher of math or science at middle or high school in a consortium district.

Delivery of Instruction: Face to Face Format, Polycom VideoConference & Web-based.

In addition to courses delivered in a face to face traditional classroom format in Yuma, the use of Web-based courses and Video Conference interaction will allow systematic dialogue of cross-cultural issues to a critical rural area of the state. Fellows will be taught Web skills allowing them to access community and professional resources, develop their own web pages to share information, co-teach in their local rural classrooms via the Internet, and participate in chat rooms and discussion boards (synchronous & asynchronous) with peers and faculty.

Improving and Enhancing IHE Faculty Skills. CREST will also enhance the skills and knowledge of NAU faculty to better prepare all teachers in content and pedagogy related to the needs of LEP students and CLDE students. Faculty will participate in the STEM and CLDE workshops conducted by national consultants. Faculty will learn to redesign courses to infuse STEM or CLDE content. Faculty will be invited to the annual CREST STEM TOT Conference.

2) Design Reflects Up-to-Date Knowledge from Research & Effective Practice.

The CREST design is based on the following tenets from current research (Baca & Cervantes, 2004; Chamot & O'Malley, 1994; Echevarria & Graves, 1998; Freeman & Freeman,

2000; Gallegos & McCarty, 2003; Gollnick & Chinn, 2009; Gordon, 2007; Salend, 2011; Vogt & Echevarria, 2006; Wong Fillmore, 2005): (1) instructional programming is effective only to the degree that general and special education teachers are knowledgeable about cultural and linguistic variables and extent to which these variables contribute to psychological development, social behaviors, and academic accomplishments of EL students and CLDE students with disabilities; (2) educational issues for EL rural students are not reflected to a high degree in current teacher training programs and K-12 curriculum materials. CREST is designed on current practices in research and pedagogy. Findings from the literature are incorporated into CREST.

Program Format. Courses will address the CREST purpose, objectives, and competencies. Competencies and related activities are based on four theoretical tenets derived from current literature (Baca, 2004). CREST Theoretical Tenets of Language and Culture include: 1) Use of the student's native language and culture as mediums of instruction enhances achievement and self-image; 2) Inclusion of parents and community as resources for learning positively influences that student's achievement and reduces alienation of both student and parents from the school; 3) Use of the student's native language, culture, and experiential background as a basis for the development of curriculum, instructional strategies, and materials positively influences educational growth and affective development; and 4) Cultural and linguistic differences of students from diverse cultures make standard evaluation and consequent placement invalid and necessitates development & use of valid, reliable, non-biased measures to appropriately evaluate, diagnose, place, and prescribe LEP and CLDE student progress in cognitive and affective areas.

Cultural Responsiveness/CLDE. A key factor determining the degree to which the needs of CLDE children are met is the preparation or lack of preparation of teachers to be responsive to the needs of these students and to be more sensitive to their cultural heritage (Baca & Cervantes,

2004; Doran, 2011). Besides student learning, the area of curriculum and instruction materials is directly affected by culture (Barker & Grassi, 2011). Contents of instructional materials as well as the instructional strategies must be presented in culturally appropriate ways (Bruns & Fowler, 2004; Patterson, 2002). In the past, instructional materials have not drawn from the cultural and linguistic experiences relevant to multicultural exceptional children (Gollnick & Chinn, 2009).

Instructional Practice. According to Romo (2006) successful strategies for teaching EL and CLDE students stress collaborative learning and development of higher-level cognitive skills as opposed to factual or rote memory. Based on the research (Baca & Cervantes, 2004; Gallegos & McCarty, 2000; Gollnick & Chinn, 2009; Salend, 2011), CREST will incorporate the most effective instructional practices for students from diverse backgrounds including: Building strong connections to background knowledge; building on existing competence or “funds of knowledge, and providing activities perceived as meaningful and authentic by the students. Teachers must require active rather than passive participation and value and incorporate the language of the students in high-level academic activity. Teachers must permit “nonstandard” interactional patterns where appropriate to support learning. Strategies and effective practices in ESL development and achievement for EL students integrated into CREST coursework are:: A) “The Literacy Club” Freeman, D.E., & Freeman, Y.S. (2000), *Teaching reading in multicultural classrooms*. B) “Anticipation/Reaction Guide” Vogt, M & Echevarria, J. (2006). *Teaching ideas for implementing SIOP*. C) “Discourse of Sheltered Instruction” Echevarria, J. & Graves, A. (1998). *Sheltered content instruction: Teaching English language learners with diverse abilities*. D) “Comparison Chart” Chamot, A.. & O’Malley, J. (1994). *The CALLA handbook: Implementing cognitive, academic language learning approach*. E) “All Around the School Writing.” Gordon, T. (2007). *Teaching young children a second language*.

The SIOP—Sheltered Instruction Observation Protocol--(Echevarria, Vogt & Short , 2008) offered teachers a jump-start for such instruction. SIOP is a research-based model, which began as a tool for evaluation and assessment, but evolved through a period of sustained effort into a full scale instructional model with its own suggested lesson-plans, strategies, and evaluation procedures. Use of SIOP allows teachers to work within a critical community in which students support one another’s learning, and growth, and development processes.

SIOP offers strategies for direct instruction, student involvement, and vocabulary extension, as well as a philosophy for creating safe environments conducive to learning. The scaffolding methodology builds on comprehension including a move from detail to deep understanding in the speaking and listening skills. SIOP includes reading and writing based on phonetic and alphabetical principles through decoding towards comprehension and into critical and interpretive understanding. In our evolving digital universe, literacy skills are obviously crucial and in need of constant evaluation.

To be effective, teachers in today’s classroom must also be aware of the complex contribution to language learning provided by the cultural components. Much research has been done in the field of cultural and linguistic interplay. Drawing on the work of Pinker, for example, Brown and Eisterhold (2004) in their stimulating text *Topics in language and culture for teachers* explain how the notions of “Competence” versus “Performance” complicate and are highly dependent on cultural knowledge and sensitivity.

STEM. As the student population in US schools becomes increasingly culturally and linguistically diverse, the body of knowledge and skills required to be an effective teacher is changing. The growing presence of limited English proficient (also referred to as English Learner [EL]) youth in US schools means that more teachers of core academic subjects, like

science, are confronted with instructional issues related to second language acquisition. As a result, teachers need to create classroom environments that promote EL students' development of general and content-specific academic language (Wong-Fillmore & Snow, 2002).

EL students learn the language more effectively when English instruction is combined with content knowledge than when they are in language-only classes (Chamot and O'Malley 1994; Echevarria et al. 2004), because content-area classrooms present the English language in a more meaningful and authentic context (Chamot and O'Malley 1994; Gibbons 2002).

CREST offers teachers professional development curriculum design and implementation and student assessment methods. CREST will design workshops that provide teachers with multiple methods of speaking and articulating STEM content via drawings, models, charts, and graphs that facilitate EL students' acquisition of English language skills and academic knowledge.

CREST Competencies. In addition to SIOP Competencies, CREST students will demonstrate mastery of the following competencies which the literature indicates are required of teachers serving multicultural and EL students in addition to the teaching of subject matter: (a) developing an understanding of how their own cultural perspective affects the teaching/learning relationship & educational process, (b) developing an atmosphere in which cultural differences can be explored at various levels, (cognitive, affective), (c) using the cultural experiences of students & parents to generate authentic cultural perspectives in the curriculum, (d) using teaching strategies that are congruent with the students' different learning styles, (e) demonstrating ability to scrutinize assessment practices for test bias, (f) developing understanding that every culture has its integrity, validity, & coherence; (g) developing students' knowledge of themselves, building self-esteem & capacity to appreciate & deal with differences in other students; and (h) developing effective strategies for working with culturally

diverse families enhancing participation in implementation of individualized educational programs (Baca,2004). Competencies are evaluated by CREST faculty in courses. Direct instruction procedures and modeling of CREST practices are provided if a student is not achieving specific competencies.

Priorities: Competitive Preference Priority 2: Enabling More Data Based Decision Making

Multiple measures on progress of participants will be taken during the program of instruction. Cohort will be measured against non-grant participants in the same degree program to determine 1) Retention of CREST students, 2) M.Ed. degree completion rate, 3) GPA, 4) Employment in classrooms serving EL students. A statistical comparison of these data from CREST grant program fellows and Non Program graduate students will be performed using appropriate statistical analysis tests. Additionally, using a SIOP type assessment instrument, classroom data will be collected on fellows' implementation of ESL/CLDE/STEM instructional strategies which will improve instruction of EL students. Observation data will be analyzed with the StatPac program to provide formative evaluation information to guide us in changes which may be needed throughout the program. Students are also required to maintain reaction journals and make at least three entries per week in them. Students are encouraged to make entries pertaining to attitudes and dispositions about serving EL students and EL students with disabilities and their families. Students submit journal entries by e-mail to Associate Director. Entries are analyzed for emergent themes using Hyperqual or a similar software package. Interviews and focus groups of students and stakeholders will be conducted to provide ongoing data on effectiveness of program and potential changes that need to be made. We will look for Content Themes within the data using NVivo. Qualitative and quantitative data collected from program participants will be analyzed with StatPac data manager statistical software using appropriate statistical analysis

tests. In addition, course redesign guided by nationally recognized experts in ESL/STEM/CLDE education begins in Year 1. Cohort 1 pilots three redesigned courses. We will use StatPac to design surveys and conduct interviews with students and faculty to determine effectiveness of redesigned courses in improving instruction of EL/ CLDE students. Qualitative and quantitative data will be analyzed with StatPac and NVivo. Cohort 1 data will be presented to university faculty so further course adaptations and adoptions are considered. More complete details about data based decision making are found in Evaluation Section of proposal.

The CREST grant is also interested in documenting how teachers' conceptualizations of academic language were implemented in their science and math instruction and to what effect. A STEM/EL professional development program should specifically target the enhancement of teachers' knowledge and skills in integrating language and literacy goals into math and science instruction. Concurrent research within such a program should document the challenges that exist in changing teacher concepts, beliefs, and methods and putting these into practice (Hart & Lee, 2003; Lee, 2004; Lee, Hart, Cuevas, & Enders, 2004; Stoddart et al., 2002). CREST will document teachers' concepts, beliefs, and methods of **integrating language instruction with math and science instruction**, before and after completing the CREST program, and utilize those data to improve instructional methods and EL student success in secondary and elementary schools. (This also relates to STEM Competitive Preference Priority 3 below.)

Comp Priority 3: Promoting Science, Technology, Engineering, Mathematics (STEM) Ed

1) A priority in this grant will be to recruit current Math and Science teachers at the middle school or high school level as fellows. When these STEM teachers are trained in ESL and CLDE strategies, they will be better able to provide instruction to meet the needs of EL students and EL students with disabilities. 2) Several graduate Special Education and ESL courses will be

revised and enhanced to include proven strategies for effective instruction of Math and Science for all students. 3) Nationally recognized experts in ESL and STEM subjects provide workshops for IHE faculty and keynote presentations at the CREST STEM Training of Trainers (TOT) Conference. 4) Fellows develop and present TOT professional development on STEM and ESL instructional strategies at the CREST STEM TOT Conference.

STEM/ESL/CLDE Strategies Consultants/Trainers and CREST Conference Speakers.

Nationally recognized consultants (**Lily Wong Fillmore in ESL Instruction, Gerry Madrazo in Science/ESL, Nora Ramirez in Math/ESL, and Patricia Medeiros Landurand in CLDE**) will deliver training to NAU faculty to enhance their skills in teaching future teachers how to improve instruction of EL and CLDE students in the areas of science, math, and CLDE.

Consultants will plan workshop, provide materials, travel to Yuma and deliver training to faculty. To maximize the benefits of the cost of consultants for this training, workshop will be open to all NAU Education faculty along with CREST faculty. It is anticipated many faculty/administrators will participate in this training. As such, many College of Education faculty will receive training to improve their courses with principles and strategies related to Science and ELs. Workshop will lead to overall improvement of NAU Teacher Ed Program related to instruction to enhance educational outcomes of EL students and EL students with disabilities. STEM and CLDE consultants will be Keynote Speakers at CREST STEM TOT Conference open to all Yuma area teachers. TARGET – 3 ESL or Sp Ed syllabi enhanced with Science/EL content, 3 ESL or Sp Ed syllabi enhanced with Math/EL content, and 3 ESL syllabi enhanced with CLDE content.

Invitational Priority – Improving preparation of all teachers to better serve English

Learners. Through CREST, NAU Graduate Education curriculum and courses will be improved

significantly to include more instruction related to best practices and research with EL students and CLDE students especially in STEM content areas, ESL, and SpEd courses. Graduate courses will be infused with STEM, ESL, and CLDE strategies to enhance the NAU M.Ed. program.

B.QUALITY OF KEY PERSONNEL

Employment of Persons from Underrepresented Groups. Personnel selected for CREST will be hired in accordance with NAU's non-discriminatory employment policy which prohibits discrimination based on race, color, national origin, gender, age or disability disabilities For the Program Support Coordinator position active recruitment will be done to develop a diverse pool of qualified applicants. Recruitment will target culturally diverse persons as well as individuals with disabilities and other underrepresented persons to receive a wide variety of qualified applicants with the Advisory Committee actively involved in recruitment. Key Personnel and faculty working on this project comprise a wide variety of backgrounds and experience. Several faculty and the Part-time Support Staff member are culturally diverse and have extensive experience working with Mexican-American and/or Native-American children. Among the Key Personnel, faculty, and staff, there are individuals with disabilities working on the CREST grant.

1) Qualifications of Project Director (.05 FTE). Dr. Russell Prust will oversee the CREST project. He will supervise all personnel and budget activities. He will coordinate CREST activities with the Advisory Committee and LEA Consortium District schools meeting monthly with the superintendents of Yuma County School Districts to gather feedback on specific training needs in the area. Dr. Prust is the Education Coordinator at the NAU Yuma Branch Campus, holds a Ph.D. in Educational Psychology with a minor in Anthropology; is fluent in English, Portuguese, and Spanish; taught ESL in Brazil for 5 years; served as Training Manager at the Title VII MRC in Miami; was Field Services Director at the University of Wisconsin

Center for Equity in Education for 7 years; the External Evaluator for Title VII/Title III programs for 12 years and the Director of Grants and Development at Milwaukee Area Technical College for 17 years. He has teaching experience at both the K-12 and post-secondary levels.

2) Qualifications of Key Personnel. Associate Director/Project Manager, Dr. Stephen Showalter (1.0 FTE) will manage the day-to-day operations of the grant through coordinating efforts of the University and the consortium districts, and meet with fellows once each month. Dr. Showalter will be responsible for recruitment and retention of CREST fellows. He will meet with fellows once a month, advise fellows, deliver training on technology and strategies for success in Web-based instruction, develop and implement the CREST STEM TOT Conference, develop and maintain the CREST grant website, oversee the Evaluation Plan Activities in coordination with the External Evaluator, and coordinate the faculty workshops for development of STEM and CLDE content infusion into ESL and Special Education courses through collaboration with the national consultants in ESL, ESL Math, ESL Science, and CLDE strategies. Related to the course revisions, he will collect and analyze data on effectiveness of these course revisions. Dr. Showalter holds an Ed.D. in Curriculum and Instruction with an emphasis on Science Instruction, Technology, and Assessment of Web-based Instruction. He taught biology and earth science to EL high school students on the Navajo reservation and developed culturally responsive curriculum integrating science, English, and art. He is an Assistant Clinical Instructor in Curriculum and Instruction at NAU. **ESL Coordinator, Dr. Natalie Hess (.05 FTE)** will coordinate all ESL coursework and advise students in the CREST grant BME M.Ed. Degree program option. She will work closely with the national consultants on infusion of STEM and CLDE content into ESL graduate courses. Dr. Hess will lead the

fellows in learning to use SIOP teaching strategies and classroom assessment. She is a Professor of BME, holds a Ph.D. in Bilingual Education from the University of Arizona, is multilingual, serves as a mentor to teachers of EL students in the Yuma area, publishes widely on instruction of EL students, and teaches a variety of BME courses. **Dr. Patricia Peterson (.05)**, will coordinate the M.Ed. in Special Education and Special Education with Certification in the CREST program. She will advise the students in the Special Education degree programs, meet with fellows to plan their TOT workshops, collaborate with the CLDE consultant on infusion of CLDE into ESL courses, and oversee the practica and internships in Special Education. Dr. Peterson is bilingual and is a Professor of Special Education with a focus in CLDE. She holds a Ph.D. in Special Education with a minor in Bilingual Education from the University of Florida. She is PI of the Leaders in Exceptional-education Addressing Diversity doctoral grant funded by OSEP which prepares special education faculty in the CLDE area.

Project Faculty. The Project Faculty will teach graduate courses in Bilingual Multicultural Education, Special Education, CLDE, and Research. **Dr. Catherine Medina**, Coordinator of Special Education is a Professor of Special Education, bilingual in Spanish and English and of Mexican-American background. **Dr. Louise Lockard** is trilingual in Spanish, Navajo, and English and teaches BME foundations and methodology courses. **Dr. Norbert Francis**, Ph.D. from Universidad Nacional Autonoma de Mexico, teaches BME 634: Testing Minority Students. **Dr. W. Sakiestewa Gilbert**, Co PI of : "Native Science Connection.", teaches BME 420: Literacy & Biliteracy and BME 698- Graduate Seminar and is a member of the Hopi tribe. **Staff:** Part-time Temp Support, Elizabeth Padilla Ketterer, is bilingual in Spanish and English, will manage travel documents, assist with conference logistics, and carry out clerical duties. The Program Support Coordinator position is To Be Hired. This .50 position involves duties of

office coordination, clerical duties, course registration for fellows, TOT Conference organization, faculty workshop coordination, accounts payable, and budget upkeep.

Requirements for person hired for this position: 2 years working with Federal Grant programs, 2 working with Culturally and Linguistically Diverse students, strong budget management skills, strong interpersonal communication skills, proficiency with NAU Advantage 3 Budget system and Peoplesoft registration/accounts payable system, and excellent written and oral expression skills.

External Evaluator, Dr. Tim Hart, Director of ESL for Wake County Schools, NC, 1980-2010, Ed.D. in Curriculum and Instruction (Second Language/Teacher Ed) will lead project evaluation activities, conduct onsite evaluation visits in Yuma, develop evaluation instruments, collect data, facilitate focus groups, and provide written feedback, reports, and recommendations to Director, Assoc Director, Key Personnel, and Adv Committee on progress and outcomes of project.

STEM/ESL/CLDE Consultants. Dr. Lily Wong Fillmore, internationally known researcher on second language instruction, will work with faculty and fellows in Year 1 on effective practices in ESL in STEM content areas. **Dr. Gerry Madrazo** whose research and publications are in the area of Science instruction and ESL will work with the CREST grant faculty and fellows on course redesign on infusion of Science content and strategies into ESL and Special Education courses in Year 1. **Dr. Nora Ramirez**, Professor of ESL/Math instruction, will work with the CREST grant faculty and fellows on course redesign on infusion of Math content and strategies into ESL and Special Education courses in Year 2. **Dr. Patricia Medeiros Landurand**, known for instructional strategies for CLDE students and parent involvement, will work with CREST faculty/fellows on course redesign on infusion of CLDE

content and strategies into ESL courses in Year 3. Year 4 and 5 Consultants TBD pending data collected Yrs 1, 2, 3.

C. QUALITY OF THE MANAGEMENT PLAN

1) Plan to Achieve Objectives with Responsibilities, Timelines, and Milestones.

CREST leadership personnel and staff will continually monitor progress of participants, including fellows and faculty to ensure key program objectives will be met. Program Support Coordinator (to be hired) and Part Time Temporary Support Staff E. Padilla Ketterer will report monthly to Director or Associate Director (AD) to provide updates on expenditures. Using the NAU GPS system, staff and faculty will track grades of participants to ensure that students who may need intervention/assistance are offered help at the earliest sign of difficulty. AD will observe faculty and Masters Fellows to evaluate use of STEM strategies in the classroom setting. AD will also coordinate STEM/ESL/CLDE workshops and contact faculty at various NAU sites to participate.

ESL and Special Education/CLDE coordinators will advise and supervise the students and ensure that the program of study is followed and that graduation applications are filed to ensure timely degree receipt. Director, AD, ESL coordinator and SpEd CLDE coordinator will disseminate information on the grant to other professionals via conference presentations and journal articles.

GOAL –PREPARE TEACHERS TO IMPROVE INSTRUCTION FOR EL STUDENTS & EL STUDENTS WITH DISABILITIES VIA M.ED. DEGREE, ESL ENDORSEMENT,CLDE FOCUS, STEM CONTENT/STRATEGIES, & TRAINER OF TRAINERS (TOT) LEADERSHIP DEVELOPMENT (TOT CONFERENCE)

(Proj. Director=D; Assoc Director=AD, ESL Coord=EC, Sp Ed Coord=SC, St=students

Adv. Committee=AC; STEM/ESL/CLDE Consultants=C; Faculty =F; Evaluator= E; Staff=S)

	<u>Activity</u>	<u>Staff</u>	<u>Milestones/SuccessCriteria</u>	<u>Begin/End</u>
<i>Objective 1: Recruit & Select 20 Masters Candidates. Process repeats for cohorts 2&3</i>				
1.1	Distribute info to schools.	D/S	Teacher/School Response	5/11
1.2	Hold recruitment mtgs.	D/SC	High attendance	5/11-6/11
1.3	Target Science/Math Tchrs	D/S	List of eligible applicants	6/11
1.4	Contact interested students	D/S	Student Reply	6/11
1.5	Review applications	D/AD	Completed applications	6/11-7/11
1.6	Select program participants	D/AD	Qualified applicants	7/11
<i>Objective 2: Implement M.Ed.Degree ESL Endorsement Program</i>				
2.1	Begin Courses	D/F/C	Completed syllabi	8/11-5/16

2.2	STEM to BME/Sp. Ed	D/C/F	9 Rev. Syllabi approved	3/12-5/16
2.3	TOT for Yuma in service	C,AD,St	80% use new strategies	3/12-5/16
<i>Objective 3: Redesign Courses to Infuse STEM & CLDE into ESL and SpEd Courses</i>				
3.1	Pre/Post survey of math/science language integration goals	AD/F/S	90% math/science grads include language integration in lessons	8/11-8-/16
3.2	STEM wrk.shps faculty revise	SC/C/	implement revised syllabi	1/12-8/16
3.3	Data collection/Syllabi	AD/F/E	Observe STEM/CLDE strategies in 90% fellows	1/12-8/16
3.4	Eval. of syllabi/focus groups	AD/F/E	STEM/CLDE strat. base	1/12-8/16
3.5	Fellows journal to provide feedback	AD/St./ E	Journal analyzed to assess syllabi improvements	5/12 -8/16
<i>Objective 4: Teach Fellows to use TOT Prof. Development model in schools</i>				
4.1	Demonstrate the TOT model	F	Positive student response	8/11-5/16
<i>Objective 5: Students deliver TOT Professional Development at CREST STEM Conference.</i>				
5.1	Prepare presentations TOT	C/St/F	Positive Peer response	2/12-4/16
5.2	Conduct TOT presentation	St/C/F	Positive TOT Conf. evals.	4/12-4/16
<i>Objective 6: Prepare for & implement various means of CREST Program dissemination.</i>				
6.1	Identify prof. Conferences	D/AD	Lists completed	10/11-1/12
6.2	Jrnl. Articles written/submit.	AD/EC	3 accepted for pub.	1/12-8/16
6.3	Conf.proposals submit/present	D,AD, EC,SC	20 Presentations delivered	4/12-8/16

<i>Objective 7: Graduate 48 M. Ed. BME and M. Ed. Special Education teachers with ESL Cert</i>				
7.1	Fac./staff monitor grades/refer students intervention if needed	F/S/AD	All students maintain 3.0 GPA or better	8/12-5/16
7.2	Practica placement/student teach	EC/SC	All students pass capstone courses	8/11-5/16
7.3	Endorsement courses completed	D/AC	48 Bilingual or/ESL endorsed teachers	8/11-5/16
7.4	BME M.Ed. or SpEd M. Ed. Degree completed	D/AC	48 BME M.Ed or SpEd M. Ed degree teachers	8/11-5/16

2) Time Commitments of Director & Key Personnel. The Project Director Dr. Russell Prust, will oversee all administrative and fiscal aspects of CREST, supervise all grant personnel and maintain communication with LEA partners. He will devote **.05 FTE FY** to his CREST duties. The Associate Director – Dr. Stephen Showalter, will devote **1.0 FTE** (10 month) to the grant. He will coordinate STEM infusion workshops, lead data collection, evaluate data and oversee daily operation of the grant. The Special Education/CLDE Coordinator Dr. Patricia Peterson, will devote **.05 FTE (AY)** and 20 days in summer to supervise/advise students and revise CLDE courses to include STEM content. The ESL Coordinator Dr. Natalie Hess will devote **.05 FTE (AY)** to infuse ESL content into the Education Research and Special Education courses. The Program Support Coordinator (to be hired) will devote **.50 FTE (FY)** to carry out office coordination, budget upkeep, communication with all grant personnel and students, STEM conference organization, tuition payments, assist in annual report preparation, data collection and other duties as needed. The Part Time Temporary Support Staff Elizabeth Padilla Ketterer,

will devote **.25 FTE during the fiscal year** to the CREST project and will be responsible for coordination of conferences, travel, schedules, book orders and processing financial documents.

D. QUALITY OF THE EVALUATION PLAN

1)Methods Thorough, Feasible, &Appropriate to Goals, Objectives and Outcomes.

The CREST Project Evaluation has been developed to assure program efficacy. Key features are: a) programs yield knowledge about best practices and in turn disseminate and implement these practices to help educators, families, and other end-users to improve results for EL students, b) research-to-practice goals are supported through an integrated accountability plan which coordinates discretionary investments and forms strategic partnerships with stakeholders, and c) specific actions are taken to develop and collect data on program indicators and solicit stakeholder comments and supports for the process.

This project will be evaluated utilizing the CIPP Model (Context, Input, Process, Product) developed by Stufflebeam in 1966. This model was initially conceptualized as a result of attempts to evaluate projects that had been funded under the Elementary and Secondary Act of 1965 and since then has been widely implemented in the evaluation of federally funded education projects. (Madaus, Scriven, & Stufflebeam, 1983; Stufflebeam, 2001). The CIPP approach is based on the premise that the most important purpose of evaluation is not to *prove* but to *improve*. “The use of the CIPP model is intended to promote growth and to help responsible leadership and staff of an institution systematically to obtain and use feedback so as to excel in meeting important needs....” (p. 118. Madaus, Scriven, & Stufflebeam, 1983).

Utilizing the CIPP model, the evaluation will be clearly aligned with the project objectives. This model will provide a structure for continuous feedback and program revision over the period of the project. The CIPP model will be outlined below to provide the reader with an overview of the model.

1. C = Context: Evaluation planning decisions - What should we do?
2. I = Input: Evaluation structuring decisions – How should we do it?
3. P = Process: Evaluations implementing decisions – Are we doing it as planned?
4. P = Product: Evaluation recycling decisions – Did it work?

Each objective and activity of this project will be evaluated in order to: 1) initiate, assess, and modify project activities related to the program objectives and improve the project (Context, Input, Process), 2) provide OELA with information regarding progress toward goals and the efficacy of the training approach we utilized (Product), and 3) communicate with other professionals currently engaged in or considering similar work (Product).

The following areas will be evaluated: 1) Recruitment and Selection of Qualified Project Participants, 2) Development and Implementation of Program, 3) Assessment and Evaluation activities, 4) Information Dissemination activities. The Program Management Chart, Table 2 in Management Plan section, lists the individuals responsible for the Context (What should we do?) and Input (How should we do it?). The Program Evaluation Chart in the Evaluation section, Table 3, lists the individuals initially responsible for collecting the evaluation data. Although the program objectives for both the management and evaluation plans are the same, activities, personnel responsible and dates are often different.

The Process (are we doing it as planned?) will be ascertained by numerous combinations of individuals. The Director, Associate Director, ESL Coordinator, Special Education/CLDE

Coordinator and available faculty and staff will meet weekly to collect data for Criteria for Success and to monitor progress on objectives. Staff and faculty will provide updates on student progress. The Director and Associate Director will meet quarterly to assess progress on objectives. The Director, Associate Director, Evaluator and Advisory Committee will: 1) review the data collected, recorded feedback, evaluations, and surveys, 2) monitor all criteria for success, and 3) propose any revisions or modifications if necessary bi-annually. Finally, an important component for the evaluation is the external evaluation provided bi-annually by the LEA partners and the Advisory Committee. They will review all program information and also make suggestions on revisions/modifications if necessary. These evaluations will be used to provide annual reports which will provide OELA with information regarding progress toward goals and the efficacy of the training approach we utilized (Product) and may be used for program presentations, findings, and publications (Product). Documentation of student progress will be on-going (e.g., grades, students progress, comprehensive examinations, effectiveness of prospectus hearings). Since multiple methods and multiple evaluations will be used, credibility of the evaluation findings is increased.

2) Use of objective measures which produce quantitative and qualitative data.

Project objectives are designed to meet the overarching goals of producing highly skilled teachers to better serve EL students and EL students with disabilities, especially in the areas of math and science. Project measurement tools will vary according to type of activity/objective measured.

Objective 1: Recruit and select 20 Masters candidates. Working with the LEA partners to identify in-service and pre-service candidates, CREST personnel and LEA partners will evaluate and select 20 program participants for cohort 1. In order to support STEM goals participants who

are high school or middle school math or science teachers will be given a competitive preference.

Target: 20 highly qualified participants – at least 4 math or science teachers per cohort.

Objective 2: Implement M. Ed. Degree ESL Endorsement Program. During the course of the grant, nine syllabi will be augmented with STEM teaching strategies or ESL strategies. The syllabi revision with increased focus on STEM/ESL strategies will allow more teachers to attain the skills needed to effectively teach EL students. By sharing the strategies learned in CREST courses via TOT conferences and activities, CREST students will both increase their own grasp of the strategies and aid fellow teachers to better serve all students. TARGET: During the annual CREST STEM TOT conference the 80% participants identify three or more ESL or STEM strategies they will use in their classrooms. Data will be collected by post conference survey and evaluated with StatPac. Contact information will be requested to pursue further data collection on strategy efficacy.

Objective 3 Redesign Courses to Infuse STEM and CLDE into ESL and Sp Ed. Courses. Using both self-reporting and observational tools, the Associate Director and CREST faculty will survey and observe CREST teachers and graduates at least annually.

TARGET- 90% of CREST participants will be observed using or will report using STEM/CLDE strategies in the classroom with EL students. TARGET 90% of math and science teachers include language integration and ESL strategies with students. Both targets evaluated with observations and surveys analyzed through NVivo.

Objective 4-Train fellows in use of TOT for school presentations- Students receive positive Peer feedback, strengthen presentations skills.

Objective 5-Fellows Present at CREST TOT STEM conference –measure of success that conference attendees (audience) can identify 3 strategies they will use in their classrooms.

Objective 6 Implement Various Means of CREST Program Dissemination. –TARGET-Annually CREST Key personnel will present at a minimum of four professional conferences to present various aspects of the CREST program. – 4 presentations every year- total of at least 20 presentations at national conferences. TARGET-Three juried journal articles presenting aspects of the CREST grant accepted for publication over the span of the grant.

Objective 7: Graduate 48 M. Ed. BME and M. Ed. Special Education Teachers With ESL Cert.

TARGET Year 1 no graduates; Year 2-12 graduates; Year 3- 6 graduates; Year 4 – 12 graduates; Year 5 -18 graduates.

GPRA Targets:

Measure 1.1: The percentage of pre-service program completers who are State and/or locally certified, licensed, or endorsed in EL instruction. Year 1 – N/A; Year 2 –N/A; Year 3-100%; Year 4 – N/A; Year 5- 100%

Measure 1.2: The percentage of pre-service program completers who are placed in instructional settings serving EL students within one year of program completion. Year 1- N/A; Year 2 –N/A; Year 3 – 100%; Year 4-N/A; Year 5 – 100%

Measure 1.3: The percentage of pre-service program completers who are providing instructional services to EL students 3 years after program completion. Year 1-N/A; Year 2- N/A; Year 3- N/A; Year 4- N/A; Year 5- N/A

*COMPLETERS WILL NOT HAVE THREE YEARS SERVICE BY END OF THE GRANT.

Measure 1.5: The percentage of in-service teacher completers who complete State and/or local certification, licensure, or endorsement requirements in EL instruction as a result of the program.

Year 1 - N/A; Year 2 -100%; Year 3-100%; Year 4 - N/A; Year 5-100%

Measure 1.6: The percentage of in-service teacher completers who are providing instructional services to EL students. Year 1–N/A; Year 2–100%; Year 3–100%; Year 4–N/A; Year 5-100%

Evaluation Data will be obtained from the following sources: 1) data on each criterion for success, (ie for professional conference activity - how many students attended the conference (considered successful if all participants attended), 2) formal feedback from participants on evaluation forms, surveys, as well as informal feedback from discussions and personal contacts, 3) input from CLDE faculty and ESL faculty, and 4) informal as well as formal feedback from all stakeholders associated with the program through personal contacts and an annual survey.

Although presented individually objective activities, data collection, and evaluation are not independent. Evaluation is a dynamic process which stimulates program development and continuous improvement. As shown above, program evaluation activities include both quantitative and qualitative data. When appropriate for each objective, quantitative data will be collected that documents both the number and percentage successful outcomes. In addition, qualitative data is documented through all mentor updates and student journals. Aspects of both types of measurement will be incorporated in course evaluations, student surveys, and stakeholder surveys. A yearly program review will be conducted by the AD and External Evaluator consisting of a review of course evaluations, student performance data, endorsements and graduate degrees obtained. This review will report on the number of graduates placed in the instructional setting; identify successful components of the project, exemplary classroom practice, CLDE teaching materials; and disseminate information about these successful

components to all project participants. **The Chart outlining the Project Goal, Objectives, and Activities (in Management plan)** includes feedback mechanisms, person responsible, timelines, and milestones. CREST will be evaluated in order to: 1) modify project activities related to program objectives & improve the project, 2) provide OELA with information to determine the efficacy of the training approach we utilized, and 3) communicate with other professionals currently engaged in or considering similar work. All evaluation activities will be coordinated by the AD and led by the External Evaluator who will provide the Secretary of Education with an evaluation of the CREST Project every year.

EVALUATION QUESTIONS

1. What knowledge, skills, and dispositions are participants gaining in the project?
2. What suggestions for improving the project come from participants and other stakeholders which can then be used to modify the program?
3. How many students complete the program and receive M.Ed. & ESL endorsement?
4. How many program graduates are employed and in what position?
5. How effective is the project in preparing teachers for post-program employment?
6. How effective is TOT Prof. Devel. Model for improving skills of educators of EL students?

3) Methods Provide Performance Feedback & Assmt. of Progress Toward Outcomes

Examples of possible evaluation modifications

Question # 1 – Knowledge, Skills, and Disposition gained from program.

Activity 1 – A test evaluating knowledge of ESL (CALLA, SIOP, etc), STEM, and CLDE strategies for improving instruction of EL will be identified. CREST students will be administered this test in a pre/post format. Based on demographics, a control group of traditional Masters Degree program students will be administered the test at the end of their program of

study. These scores will be compared to post-test scores of the CREST participants.

Program Modification – Mean scores will be compared between the pre and post-tests and the post-tests of the control group. These data will be used to determine whether or not additional information regarding ESL, STEM, and CLDE instructional methods needs to be infused into the curriculum of the program.

Activity 2 – Student Evaluation forms will be developed by the AD/Evaluator to determine effectiveness of Course Revisions developed by STEM/ESL and CLDE specialists. Faculty evaluations will also be done when instructors teach the revised courses which include STEM/ESL/CLDE. **Program Modification-** For any weaknesses or difficulties noted on the evaluations, technical assistance will be provided by CREST staff to remedy problem areas, and modifications will be made in the training and materials provided to the Faculty.

Question #2-Improvement Suggestions from Students & Stakeholders Activity – To obtain suggestions from stakeholders for program improvement, two activities will be completed. Each stakeholder group (Students, instructors, parents, community and administrators) will be asked to complete a questionnaire which will be devised by the AD and External Evaluator. The questionnaire will contain numerous items, all of which will tap constructs such as “how could the delivery of this program be improved?”, “what content/knowledge should be added to the program?” etc. Focus group interviews will be conducted at the end of each year of the program. These interviews will attempt to ascertain from stakeholders any suggestions for improvement in the program, its delivery, and or its structure.

Program Modification – The AD and External Evaluator will review the questionnaires from all stakeholders and use the suggestions for improvement as well as focus group interviews to modify pertinent areas within the curriculum, activities, and procedures of the program.

Question #3 –Number of Students Completing Program, M.Ed, & Endorsement

Activity – These data will be collected at the end of Cohorts 1, 2, &3. Additional data on Masters Degrees & endorsements awarded will be obtained each semester from the Registrar.

Program Modification –Data used to determine if changes are needed in retention activities.

Question # 4 – Number of Graduates Employed and Types of Positions

Activity – The PDs will maintain the names and addresses of all project participants and determine the types of positions they attain after graduation.

Program Modification-Data used to determine if added efforts in placement activities needed.

Question # 5 – Effectiveness of Program in Post-Program Employment

Activity – CREST Graduates will be sent a follow-up questionnaire (developed by AD & Evaluator) at end of their first year of teaching after completing CREST program. Graduates will be asked to provide us feedback about the training they received and suggestions for improvement. Graduates' supervisors will be sent a questionnaire regarding the capabilities of CREST graduates. **Program Modification** – These data will be used to determine if significant changes need to be made to the program curriculum and internship activities.

Question#6-Effectiveness of TOT Prof.Dev. Train. to improving skills of educators of ELs

Activity – An evaluation form will be developed to assess the participants' perceptions of the effectiveness of the TOT Institute Model. This will include both closed-end Likert-type and open-ended questions. The open-ended questions will focus on specific changes in practice that have resulted from the TOT Institute professional development training model. A focus group will provide an assessment of the strengths and weaknesses of the TOT Institute training model. Focus group data will be evaluated using NVIVO or HyperQual to identify content themes.

Program Modification – Data will be used to determine if significant changes need to be made.

Table 3 Evaluation Chart –

Objective, Activities, Evaluation Staff, Eval/Criteria for Success, and Timeline

Director (D) Associate Director (AD) Advisory Committee (AC) ESL Coordinator (EC)

SpEd/CLDE Coordinator (SC) Staff (S) Students (St) Consultants (C) Evaluator (E) Faculty (F)

Evaluation Activity	Staff	Criteria/Milestones	DATES
Test evaluating ESL knowldg.	AD,S, St	St. post response shows	8/11-7/16
Admin. to CREST/nonCREST	E	imprv. Vs. control grp	
Course revise assessments	AD, St,F	Student/Fclty. response	8/11-7/16
Survey of Stakeholders	AD, E,AC	A/C feedback updated, eval/change if needed	8/12-7/16
Reaction Journals	AD, St.	Fellows pos. disposition to EL/CLDE students	8/11-7/16
Data on grads employed vs. non-CREST graduates	AD,S,St.	All graduates employed	8/13-7/16
Placement with EL students	E,AD, S, St	All graduates serving EL/CLDE students	8/13-7/16
Survey graduates and supervisors: changes to grads EL/CLDE instruction	E, AD, St	85%Supervisors rate grads exclnt. Grads use CLDE methods, growth in depth of skills	12/13-7/16
TOT Evaluation , assessment	E, AD,St. F	Focus groups, surveys 80% TOT part. new info	Annually –post TOT institute