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ABSTRACT

This application is submitted through the School of Education, the University of Connecticut, Storrs campus. The Project has been titled *Literacy in English Across Disciplines (LEAD)*. The project will work closely with the Connecticut State Department of Education to ensure standards for the core curricula in Connecticut's public school are adhered to in all content areas. The partner in the project, The Windham Public Schools, is in close proximity to the University of Connecticut and is the only densely populated urban district in the northeastern part of the state. The target schools enroll approximately 2,000 students. Over 1,200 students are Hispanic by State identification and many are newcomers. At present, there are 100 teachers plus support staff employed in Windham Middle and Windham High School.

The proposal addresses the following priorities: Competitive Priority 2. Data based decision making will be collected from teacher records, Connecticut Mastery Test and Connecticut Academic Performance Tests in grades 7, 8 and 10. There will be qualitative and quantitative data analyzed for the use of teacher teams, for administrators and for reports to all stakeholders and to the Federal Government. Initial data has been recorded as baseline information to determine progress of the project. Competitive Priority 3 is an integral part of the project with a focus on bringing Math, Science, the principles of Engineering and Technology into the interdisciplinary curricula and enriching all subjects. Professional development for teachers of these content areas is done in collaboration with the faculty of the IHE, the University of Connecticut under direction of the Department of Bilingual Education/Tesol.

Invitational Priority 1 is key to the acceptance of the project by the Windham Public Schools. The project will lower the dropout rate and improve opportunities for Els to complete secondary school requirements and apply to post secondary school institutions. The Windham Board of Education approved the project on April 13, 2011.

To achieve the goals included in Invitational Priority 1, the project will expand syllabi at the IHE to improve teacher education aimed at English language learners. Course work at the IHE is closely monitored by the State Department of Education and will follow all curricular guidelines established by the SDE for content instruction and assessment of progress in English proficiency. All in-service teacher candidates for inclusion in this project will be committed to accelerate English language proficiency, literacy and knowledge in the content areas. As outlined in this abstract, professional development in the public schools will be accomplished through the University's program, through in-house workshops, teacher mentors, team collaboration and administrative supervision.

This project aims to improve the achievement and graduation rates of English language learners who now have the highest dropout rate in the district selected. Both Invitational Priority 1 and Priority 2 are within the scope of this project. Teacher training leads to better student performance and in turn, solid achievement will keep students in school and in a position to continue their education after secondary school. By including content area teachers and support staff in the description of eligible participants, the probability of English learners being taught by teachers who have knowledge of strategies and methods for second language acquisition is greatly expanded. At this time, Connecticut has no requirement for courses in second language acquisition before certification. This has resulted in both new and tenured teachers with no training to work with large numbers of English language learners.

Data collection to comply with the **Government Performance and Results Act (GPRA)** will be recorded to show numbers of in-service teachers in the project who complete requirements for Connecticut certification to teach limited English proficient students. The

percentage of in-service completers providing instruction to LEP students will also be recorded. A description of the NPD Fellows to be served explains the numbers projected for the five years of the grant. No completers are expected in Year 1. Year 2, N=20, Year 3 N=5, Year 4, N= 20 and Year 5, N=10 for a total of 50 in-service teachers completed individual programs. A system is in place to follow those who leave the program as completers.

In-service teachers and support staff will be enrolled at the University of Connecticut as graduate students. Their program of study will depend on their current certification status. Those who are required to complete a Master's degree within seven years will be in the MA strand; those already holding an MA can work towards certification in Bilingual Education or English for Speakers of Other Languages (ESOL). Further opportunities would include completing specific coursework in the field of English language acquisition or expanding a skill base by completing Sixth Year requirements. Collaboration with content-based departments in the School of Education will be strengthened to ensure specific disciplines will be included in teacher training when appropriate. In addition to content coursework, many teacher needs are addressed under the umbrella of the Department of Curriculum and Instruction. Included as supplementary learning resources for teachers are courses from the faculty of the Department of Educational Psychology, Learning Technology, Special Education, Bilingual Education, TESOL, Guidance and Counseling, and Community Outreach. Efforts will be coordinated through the oversight of the Director of this Bilingual/Tesol focused project.

The second strand will concentrate on working towards earlier **student mastery of academic language and content across the curricula**. All disciplines have their own unique vocabulary that must be learned in context. A focus on mastery of higher-level mathematics can be achieved by improving the assessment of English learners. New arrivals are often placed in lower level tracks because of language. The sequence of mathematics instruction in other countries may differ from that of classes in the U.S.A. and newcomers continue to be placed in ESL classrooms repeating work already learned and delaying their mathematics progress. It is planned that an assessment tool in at least two languages will be developed, piloted, evaluated, revised and adopted. To fully implement this part of the proposal, a variety of educational personnel, including Educational Psychology, will be recruited from the district and the IHE.

In keeping with the goal of increased student mastery of content and language across the curricula, the project proposes to create faculty teams in the two-targeted schools. Through a curricula review, interdisciplinary teams will incorporate "working" math into content area units across the different disciplines to show evidence of "what mathematics really is" and "what mathematics is for. An interdisciplinary approach is an effective means of making learning relevant for students and especially for English language learners.

The collaboration of a Teacher led Team to coordinate math and science instruction will be an interdisciplinary effort designed to assist students to excel in both content areas. The addition of a writing/language component will be part of the enriched curriculum. Science is an example of non-fiction writing required for success in the discipline. Technology is identified as an important subject in this mix for it is a new literacy tool for learning, problem solving and independent inquiry. All content classes will concentrate on literacy.

A third project strand will reach out to **English learner's families** to enlist their support. While many parents are unable to help students with homework and specific assignments, workshops will be developed to describe the program and the need for students to attend school regularly. Parents will learn how to find tutorial assistance for their children. An interdisciplinary

Family Math/Science/Technology program will be offered to parents and other family members to familiarize them with the mathematics and science concepts being taught in the schools. Workshops will be scheduled to show parents the need for higher education to offer career choices after graduation. It is expected that the involvement of parents in "future" planning also will lower the dropout rate in high school. While this project will work with middle school 7th and 8th grade teams and the high school Freshman Academy, the model developed will permit an expansion of the project design to other grades, including grades 10 and 11, over the course of the grant. Both the Public School District and the IHE will develop, pilot, implement and modify the project design over the five-year funding period.

The LEA selected is close to the University campus. There is easy access, promoting close collaboration. The State Department of Education took control of the Windham district on April 6, 2011. Declining academic performance, lack of teachers trained to work with English language learners, a dropout rate twice the state average and the largest academic achievement gap between poor students and their affluent peers. The number of non-English speakers has doubled in recent years and now accounts for 60% of the district. The most telling part of this story is the decline in Connecticut Mastery Test Scores and the Connecticut Academic Performance Test administered in Grade 10. A "special master" has been appointed by the interim State Education Commission to provide an intervention rather than full state control.

There are four elementary schools in Windham. All students meet in Windham Middle School in Grade 5. It is in the Middle School that this project plans to turn around the declining scores and produce a model that will keep improvement growing. When the middle school years are productive, high schools can function at a higher level of learning, offering ELs the opportunity and confidence needed to continue into higher education and professional careers.

The Department of Technology provides a *Learning Resource Center* available throughout the academic year. Teachers in the project will receive training in classroom technology that permits more independent learning. Arrangements are in the planning stage to bring together students from other countries through Skype. This will have a positive affect on both the social sciences and language arts.

At present, several teachers in the Windham Middle School and Windham High School have completed requirements for advanced degrees and/or taken coursework leading to certification in Bilingual Education/Teaching English to Speakers of Other Languages (TESOL). It is planned that these teachers will become part of the new project in the two designated schools as Teacher Leaders. They are all knowledgeable in the field and currently employed by the Windham Public Schools.

The Windham District has the resources to accomplish the goals of this proposal: classroom space, technology infrastructure, motivated teachers, administrators and students with the ability to learn. What is lacking is a paradigm shift that can lead to accelerated learning. This project will provide the funds to enable such a change. The clear focus of the State to ensure change will be a positive element in the project's success.

This project is designed to include as many teachers and classroom students as possible in the pilot with both expansion and dissemination of the model in Windham and other districts within the five year period of the grant. A quarterly Newsletter will be sent to other districts, inviting them to send teachers to participate in the University training for this project. Connecticut has a need for more certified and trained teachers for the growing English as a second language population. The University of Connecticut program is one of the few in the state that is fully recognized by the State of Connecticut Department of Education.

Project Narrative

Project Narrative

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PART III: NARRATIVE

(a) QUALITY OF THE PROJECT DESIGN

Literacy in English Across Disciplines (LEAD) is developed in collaboration with the Windham Public Schools, a pre-K-12 district in northeastern Connecticut. The population of English Learners (ELs) has reached 60% in the past few years and it is a high poverty part of the state. The State Department of Education is carefully monitoring the district as progress is slow and inconsistent. The IHE has previously trained some in-service teachers but turnover in the schools is high and many new staff has no training or coursework in the field of English as a second language or Bilingual Education. Meetings of the proposed Project Director, co-Director, Superintendent of Windham Schools, Curriculum Director and the Head of the School of Education have been held over the past months to determine a course of action most beneficial to ELs.

The Goals and Objectives of this project are written to provide professional development to in-service teachers in order to improve the education of English learners in the public schools. The proposal addresses the needs for better instruction and assessment in all content areas and for professional development for all teachers as all work with ELs in this high incidence district. A focus of the proposal is to improve the mathematics/science/technology instruction of English language learners by relating the use of math applications and science principles across all disciplines. The curricula will align with the State of Connecticut Core Standards for mathematics, science, language arts and other subjects and with the assessment goals of the State Department of Education Connecticut Academic Performance Test (CAPT) administered in every Connecticut high school in Grade 10. By starting the project in middle school, students will be prepared for a more rigorous math, science and technology program and literacy

applications in the many disciplines in high school and which will result in the ability to graduate and continue their education at the college or university level.

While the focus is on in-service teacher training, the revision of the syllabi used by University of Connecticut faculty is of great importance. The analysis of in-coming graduate students will begin the process of matching needs to courses, assuring that all coursework at the University level includes training for the instruction of English language learners at the level needed, building on strengths and identifying weaknesses.

In the LEA, the two target schools will be addressed by grade level. Each grade level will be further separated into teams to ensure close collaboration of teachers in an interdisciplinary setting. At the Windham Middle School each Team will include teachers responsible for Language Arts, Math, Science and Social Studies. A Special Education teacher serves several teams. A new Sheltered English team for 7th and 8th grades started in 2011. This team will produce the Teacher Leaders planned to begin the mentorship/coaching portion of the project. At Windham High School, which will join the project in 2013, the Freshman Academy has a strand designated for ELs. Again, this team will take a leadership position in the training of peers. Several members of the teams designed for ELs are graduates of the Bilingual Education/TESOL program at the University of Connecticut.

Goal 1. Improve the ability of in-service teachers to provide effective instruction across the disciplines to English language learners.

a Objective: Recruit 15 teachers for Professional Enhancement in the 1st and 3rd project year, the 10 strongest participants will continue on an MA or 6th year tract in Bilingual/ TESOL Education (in both years 1 and 3). In additional to the 5 students who benefitted from Professional Enhancement in years 1 and 3, an additional 10 spaces will be available

for Professional Enhancement in years 2, 4 and 5, totaling 40 teachers trained and 20 teachers with graduate level degrees, leading to certification/endorsement in Bilingual Ed/TESOL

Activities:

1. Publicize the new project in Windham and in other districts in the vicinity of the Storrs and Hartford campuses.
2. Provide an orientation in September of 2011 for interested candidates.
3. Offer individual counseling to applicants to the University program.
4. Notify selected candidates of acceptance to the graduate school as matriculating students each year of the project.

b. Objective: Assess the educational needs of in-service teachers in the target schools to determine past training and the educational programs needed.

Activities:

1. Name a standing committee to review, select and enroll in-service teachers for the start of the pilot program and for future applicants.
2. Determine individual educational plans for each graduate student participant in the project.
3. Develop a participant profile for each graduate student cohort.
4. Schedule courses and assign students each quarter.
5. Align courses with teacher/student needs and revise current University syllabi as necessary for the project goals.
6. Meet with IHE faculty to coordinate syllabi, scope and sequence.
7. Align syllabi with state core standards in each discipline.

Note: An MA degree requires 30 graduate credits, the same number needed for certification in Bilingual Education. Only 18 graduate credits are needed for certification in TESOL. This will affect the length of time for individual participants in the program. It is difficult to anticipate the numbers of completers before recruitment and analysis of in-service teacher goals and current graduate status.

c. **Objective: Schedule informational, collaborative meetings with participants to begin the use of formative assessment and strategies for second language learners with an informed teacher base.**

Activities:

1. Appoint team chairs using the model of Learning Communities.
2. Set scheduled meetings each fall with the Project Director and faculty of the IHE taking part in the project in order to analyze scope and sequence and effectiveness of curricula as determined by student outcomes.
3. Schedule meetings with the Team Chairs, Teacher Leaders, Administrators and IHE faculty for the purpose of formative assessment.
4. Recruit IHE faculty to deliver on-site informational presentations to teachers and to observe/provide demonstration classrooms.

d. Objective: Improvement of teacher effectiveness in raising the achievement of ELs in mathematics, science and technology, reading comprehension and writing across the disciplines.

Activities:

1. Increase in numbers of students who achieve mastery of discrete skills during on-going classroom testing in math and data analysis.

2. Analyze classroom profiles in State disseminated grade level tests in the spring of each school year. (Connecticut Mastery Test: Generation III)
3. Disaggregate data to focus on ELs progress.
4. Teachers to build portfolios of individual students showing immediate goals for student learning on a bi-weekly basis.

Formative Assessment:

a. Record the needs of candidates and assess the number without training in the instruction of ELs. (% of numbers participating)

b. Survey teachers to self-assess their understanding of new information and their incorporation of new methods into their classrooms.

c. Connecticut Department of Education has developed core standards by grade level for all content areas. These core standards are used as the basis for the Connecticut Mastery Tests for elementary school students and the Connecticut Academic Performance Test for 10^{th} grade students. The project and graduate students beginning in the spring of 2012 will conduct a curricular analysis, matching the curriculum of Windham with State standards. A further evaluation process will also be in place to create a profile of current changes.

Research Base:

It is accepted that while teaching to the test is not a positive statement, the fact that the Connecticut Mastery Test (CMT) and Connecticut Academic Performance Test (CAPT) are based on the State core curriculum in each content area should be an important factor in determining what is taught. The project objective is to determine if content is taught well and if students are mastering the skills. This proposal is

interdisciplinary by design to bring all content into the arena of academic achievement. The research will be heavily based on the strategies and methodology for teaching second language learners, most especially Stephen Krashen's *Comprehensible Input.* The following researchers have provided a base for specific coursework chosen to train project teachers:

- *Implementing Professional Development for Content Area Teachers With ELLs*, Center For Applied Linguistics (CAL) incorporates the Sheltered Instruction Observation Protocol developed by **Echevarria, Vogt & Short** in 2008. This model includes the Preparation of language and content objectives, vocabulary, ESL techniques, metacognitive and cognitive strategies, oral language interaction, practice and application of the 4 language skills, lesson delivery and review/assessment of student mastery. The strategies used by SIOP include cooperative learning, reading comprehension guides, writing and differentiated instruction. For the purpose of teaching content, key technical vocabulary, concept words and grammatical structures that affect understanding. SIOP is semester course in this program and follow-up occurs in the classrooms where supervisors have been trained in the elements of the model. Another strand of research addresses assessment of student learning. **Lorrie A. Shepard,** University of Colorado, has researched *Linking Formative Assessment to Scaffolding.* The theory is that assessment is a dynamic process that helps learners move from what they know (zone of proximal development) to what they can do next. Scaffoding is the technique used to give support to learners to help them achieve successful problem solving through a sequence of skill building, beginning with what is known. An important point is that students must know the standard and be able to take action. Student self-assessment is noted here and in

other research related to rubrics for students. Dr. Shepard has also written *The Role of Assessment In Teaching Culture.* Also in this category are the works of **William Black** of the University of Chicago, who stresses student's self-perception and the quality of feedback from teachers.

- *Strategies for Teaching English Language Learners (2008) by* **L. Diaz-Rico** is designed to ensure ELLs access to the core curriculum, to enrich the curricula and to make cross-cultural connections through teaching practices and curricular content.
- *Professional Learning Communities (1997)* by **S. Hord** describes the positive outcomes for Staff and students in schools that promote teachers who plan, teach and collaborate share the total development of students. The purpose of the Teams described in this proposal relies on this and other research to end teacher and content isolation to benefit ELs.
- Many researchers, for example, E.A. Grant and S.D. Wong argue that all teacher training courses should include methods of teaching reading and other content to second language learners. This is not yet the case in Connecticut.

Goal 2. Increase the educational opportunities for ELs and their peers in Science, Technology and Math to meet requirements for pre-engineering or related fields at the University level. (STEM)

a. Objective: Assess the academic strengths and weaknesses of the middle and high school classroom students in the two participating schools.

Activities:

1. Develop an assessment tool in mathematics to evaluate newcomers.

2. Create individual student profiles of students in the pilot teams.
3. Set a schedule for formative evaluation of individual student mastery of goals.
4. Analyze curriculum for modifications based on language needs determined by data analysis.
5. Provide remedial support when needed.
6. Develop a process for building interdisciplinary units connected to attain the progressive acquisition of concepts and skills.
7. Critique new units, implement, revise and analyze their effectiveness

Formative Assessment:

Assessment tool will be ready for use the beginning of Year 3.

Assessment of student mastery of skills will be a continuing Professional Development topic and added to the supervisors' checklists.

Student profiles will be matched to curricula analysis to determine patterns that need to be addressed by tutorials, re-teaching or new methods of teaching.

Each year will set an agenda for specific units to be developed.

Research Base:

Many researchers in the field of second language learning have stressed the role of mathematics as an equalizer in educational achievement: Dr. Eliana Rojas is one of these.

- *Integrating Mathematics and Language Learning (1987)* is an initial research project strongly notes that math is language as well as numbers. They clarify the language issues specific to mathematics and discuss the abstract nature of math and the language skills needed for learning.

b. Objective: Add math and science concepts into all content areas as units of study.

Activities:

1. Determine and implement enriched curricula by adding math/science/technology to specific areas of study across the disciplines.
2. Locate materials or utilize current tools that give students the ability to make decisions based on mathematics.
3. Design hands-on instructional units of study in science that encourage group work in problem solving, a prerequisite skill for engineering.
4. Build time for independent research.
5. Assign student projects to encourage guided problem solving.
6. Explore entering the Google Science Fair for teenagers.

c. Objective: Train In-Service Teachers to train their colleagues

Activities:

1. Systematize the process of introducing strategies.
2. Develop a checklist of methods and strategies introduced at bi-monthly team meetings.
3. Using base-line data, keep student records of achievement in content classes
4. Link to CMT scores each fall (spring testing, fall distribution of scores0

Formative Assessment:

1. Use base line data from pilot program in the middle school to follow individual students to the high school 9th grade. (% of students moving to Proficiency and Goal)
2. Collect and evaluate student outcomes in grade 10 to determine: numbers taking higher level math and science (tracks); numbers entering the Technology career track; numbers passing the State Connecticut Academic Performance test.

3. Develop a self-assessment instrument for teachers to rate their use of new approaches to second language acquisition.

Research Base:

- **Russell Gersten,** University of Oregon/Instructional Research Group has focused on the move of students from elementary skills to algebra. A more formal assessment device for middle school students is needed to assure they have the essential components within the elementary school curriculum, for example, fractions and decimals as well as whole number arithmetic. The interventions suggested are a result of the work of the National Mathematics Panel and research based on its findings. Sanders and Witzel (2005) devised an Algebra Readiness Test that will be adapted for ELLs.
- **The Bronx High School of Science** offers models for sequences of math instruction based on initial student testing. The idea of producing higher-level math students is a challenge for this project.
- Not least is the **Center for Research in Mathematics Education in the Neag School of Education & College of Liberal Arts and Sciences at** UConn. The mission of this center is to conduct research on improving the teaching and learning of math at all levels. The resources of CRME will be available to this project.

- A 2010 Report from the **National Education Technology Plan Technical Working Group** represents the best minds from Universities in the U.S. Their logo is Transforming American Education: Learning Powered by

Technology. They postulate that technology based learning and assessment systems will be pivotal in improving student learning. The plan is geared towards today's students whose lives are filled with technology. They are indeed the country's future and the most critical thrust now is to train teachers to work with technology so that its full power is accessible to students.

- National Center for Research on Evaluation, Standards, & Student Testing (CRESST) discusses the need for determining *learning progressions* in the content areas. By working closely in teams, an interdisciplinary approach to looking a student progress across the curricula is possible. CRESST also notes that units of study are often not connected to each other in a coherent vision for the progressive acquisition of concepts and skills. This is the basis for the project's design and for its expectation of raising academic achievement across the content areas.

Goal 3. Develop a structured assistance plan for students through parents, the community, administration and school support staff.

a. Objective : Develop a newsletter reporting student progress that is suitable for home, school and University.

Activities:

1. Recruit both teachers and students for writing assignments
2. Include short reports from school administrators and the IHE faculty about new approaches and progress

3. Feature in-service teacher analyses of what is working
4. Include parent activities written by parents
5. Report progress from standardized testing

b. Objective : Schedule Workshops and informational presentations for parents throughout the academic year.

Activities:

1. Fall: Description of Project – all parents of Teams
2. Winter – Informational meeting on student progress and coming units of study
3. Spring – workshop for parents on technology for learning: hands-on activities
4. Summer – "Futures" workshops on student careers

c. Objective : Using the Game Theory of learning, parents will be introduced to software designed to expand mathematical concepts that can be used at home with students.

Activities;

1. Introduction to technology for parents, using the school computer lab.
2. Pair students and parents to work on activities together
3. Review of software by IHE professor of Mathematics, College of Arts and Sciences.
4. Introduction of specific learning software to parents.
5. Reports from parents on use of the software with their children.
6. Analysis of skills mastered by students.

d. Objective: Recruit college undergraduates through UCONN to act as role models.

Activities:

1. Mentors to meet bi-monthly during the after-school LIFT program at Windham Middle School.

2. Provide events for families from the school communities

3. ELAD teachers act as "hosts" at events

Formative Assessment: Qualitative data will be collected in the form of surveys taken by parents. Quantitative data will include the number of parent participants and number of students involved through parents, tutors and community. Results of the mastery of "game" objectives learned by students will be reported.

Research Base:

It is clear that students can decide school is not relevant and when their parents and the community show them that they are not expected to excel. The results are early dropouts and a loss of an educated citizenry. The need to include parents in the education of their children is of great importance to student success.

- **F. Newman and G. Wehlage (1995)** from the Madison, Wisconsin Center on the Organization and Restructuring Schools completed 5 years of research from various national studies. They find that teachers who are well trained for the population they teach, combined with professional communities and supportive parents and external agencies, can matter more than structure.
- **The Math Forum at Drexel** has an on-line Library of Educational Tools, Materials and Games. Videos and interactive software range from All About Addition to Strategy and Conflict, an interdisciplinary approach to the study of human behavior that touches on computer science, social sciences and behavioral sciences. It is a supplement to texts that makes basic ideas understandable.

The greater number of Latino parents live in two housing projects in Willimantic. Both of the projects have space allocated for Community activities. Outreach will be simplified by using sites close to parents' homes and childcare can be accommodated at both places. It is planned that a schedule for parent activities will be posted in the fall and spring of each project year.

b. QUALITY OF THE PROJECT PERSONNEL

As required by GEPA, this project will actively seek applications from under represented populations. Recruitment will be conducted through Newsletters, postings and school visits to reach as large an applicant pool as possible. The Selection Committee is composed of faculty from the IHE, administrators and staff from the Windham Public Schools. The University of Connecticut has a written Affirmative Action Policy and an office dedicated to the hiring of minorities, women, and the disabled. This will be a bilingual project when appropriate.

IHE

The Principal Investigator and Project Director is a former math teacher in a Hartford High School and a ten year Assistant Professor at the University of Connecticut. **Dr. Eliana Rojas** has made a significant impact on the education of second language learners and the training of teachers to accelerate their achievement. Her special interest is in adapting higher-level math curricula for second language learners. Dr. Rojas has served both nationally and internationally on mathematics education boards attending to the needs of Els. TODOS, Mathematics For All, is one project where she acts as an expert advisor. Dr. Rojas also collaborates in the development of Ethnomathematics, a concept that looks at the impact of culture and language in children's development of mathematics concepts. She has coordinated similar successful projects in Latin America, the Caribbean and Spain. Dr. Rojas has a unique

ability to interact with faculty of the IHE, students at Windham High School, teachers and parents.

Dr. Rojas will teach courses in the Department of Bilingual Education and TESOL, implement workshops in Windham. As Chair of the Advisory Board, her knowledge of teacher needs will guide the collaboration of the School of Education Departments.

Dr. Xae Alicia Reyes, co-PI for this project, is an internationally known expert in the field of community relations. She will head all efforts in this field. As an Associate Professor of Curriculum and Instruction and Puerto Rican and Latino Studies, Dr. Reyes has published extensively in the field of Community Outreach and Cultural Effects of Language on Learning. Dr. Reyes is interested in current trend towards "translational research" that adds the cultural element to the study of cross-communications. Her specific interest is in the relationship of community and parents to the public system of education. She is Professor of Multicultural Learning, University of Connecticut.

Windham Public Schools

Madeline Negron, Principal of Windham Middle School, is a graduate of Windham High School who began in middle school as a student in the bilingual program. She will complete requirements for a PhD in Education in the spring of 2011. Her expertise is in the area of behavior modification, a skill that is making a difference in the culture of Windham's Middle School.

Dr. Jeff Levine is the Windham Middle School Assistant Principal for grades 7 & 8. His training in Special Education is an invaluable asset to this project. One goal is to screen students identified as special education for language interference in testing before placement. Dr. Levine will directly supervise the target teams.

Teacher Leaders include Andrea Handler-Ruiz; Bilingual Science-Mathematics teacher in Windham High School is already successfully developing an interdisciplinary curriculum in collaboration with other faculty.

Yusomil Bonet, ESL teacher and **Max Echevarria**, a Social Studies and ESL teacher in the Dual Language Program. They will act as the first Teacher Leaders. Both are graduates of M.A. program in Bilingual Ed/Tesol, University of Connecticut.

Stephen Merlino, Principal, Windham High School, has been in his position for two years. He is the designer of a Freshman Academy structure that includes special support and staff for newcomers who are second language learners. A goal is to enroll ELs in Advanced Placement courses over the course of the project.

Joan Landrum is the Windham High School ESL Teacher who brought the inclusion of ELs to the attention of those configuring the Freshman Academy. She is an M.A. graduate in BL/Tesol from the University of Connecticut.

Connecticut State Department of Education

Dr. Maria Salazar Glowsky is responsible for the State of Connecticut's Bilingual Programs and of the Teaching of English To Speakers of Other Languages (TESOL) division. She has contact with all districts with high incidence populations of second language learners. She will be involved with the current State proposals to improve the performance of Windham students. In addition to Dr. Glowsky, the State Department of Education will appoint a "Master" and two assistants to work with the Windham District to improve student achievement.

Evaluator: **Jean Romano** is currently evaluator of a NPD project. She was formerly Director of Bilingual Education for the Windham Public Schools and later acted as a grant and report writer for five Connecticut school districts, Fitchberg College and the University of Connecticut.

c. QUALITY OF THE MANAGEMENT PLAN

All stakeholders in this project will have responsibilities for its success. It is considered essential that on-site management is in place as well as over-sight by the University and Project Director. Teacher supervision is used but the observation instrument will be expanded to include the principles of SIOP and the practice of Formative Assessment.

The IHE responsibility is linked to the State of Connecticut Department of Education requirements in planning a program of study leading to certification/endorsement. The over-all responsibility for data collection, management of in-service teacher participants in certification/graduate credit programs, MA degree/6th Year programs is under Dr. Rojas. She will also oversee the coordination of the IHE faculty involved in the project through teaching and syllabi revisions and she will coordinate with the Dean of the School of Education. Dr. Rojas, through her work in the Bilingual Education/English as a Second Language program, reports directly to the Head of the Department of Curriculum and Instruction. The Department Head has been involved in the development of this project and is supportive of other IHE faculty member's commitment to participate.

The University of Connecticut, Storrs, is the anchor of the Connecticut IHE system. It is one of the few Universities approved by the State Department of Education to provide coursework leading to certification in bilingual education and Tesol. The University includes a Department of Puerto Rican and Latino Studies which encourages the School of Education efforts to increase the numbers of Latino and other professionals who are trained to improve the education of the largest minority group in the state. A long-term goal of the College of Education program is to produce a cadre of educators who are well versed in the field of second language acquisition and ready to assume leadership positions.

There are three faculty members and one adjunct considered experts in Bilingual Education/TESOL. Dr. Elizabeth Howard came to the University of Connecticut after a successful career at the Center for Applied Linguistics in Washington, D.C. A new member of the team, Dr. Ana Maria Olezza was formerly Director of Bilingual Education in Hartford and then Director of Curriculum and Special Projects in the Windham Public Schools. This group will be joined by three members of Educational Psychology who will assist in the development of testing instruments, surveys and data analysis. Over the course of the project, faculty from other disciplines, including technology, counseling and specific content studies, for example, math and science, will collaborate with the core team.

The lack of in-service teachers trained to work with English language learners is almost at crisis level in the state's public schools. Most serving are on waivers. At this time, a huge push to reintroduce a program for an alternate route to education for bilingual ed/Tesol teachers is underway at the State Department of Education. This is necessary but at the same time, thousands of ELs currently in the State's public schools meet in classrooms with untrained teachers. The IHE in this proposal is aware of the need and can address it effectively.

The **Windham Public School District**, the partner in these consortia, was hit hard by the economic recession. Teaching staff was reduced, paraprofessionals limited to Special Education, new materials were excluded from budgets and fewer administrators are now employed in the district. While the population of ELs grows, the number of teachers trained to teach them is smaller each year. High turnover is the result of Windham's non-competitive salary range and the need for trained teachers in the larger cities. The dropout rate is high, the graduation rate is lower and the district is in need of a concerted effort to address the problems that are clearly seen.

Access to the teachers is shared in the partnership. The IHE is responsible for offering the best coursework and programs to reach teacher needs for strategies, methods, cultural grounding and philosophical bases for instruction. This proposal will allow the IHE to conduct a Needs Assessment that is a product f the best thinking from the schools and the faculty of the IHE in the purchase of new technology to accelerate learning.

The Windham Public School District through Principals, Assistant Principals and Department Heads will provide the structure for coaching and mentoring in the Teams, on-going supervision of classroom learning, and facilitation of on-site professional development, uniform test administration and distribution of new materials. The Teacher Leaders will assume responsibility for keeping each Team agenda on track, especially in regard to the development of Interdisciplinary curricular units. In-service teachers selected for the University program will be assigned specific tasks related to the goal of building the curricula in their areas of expertise, keeping student and class profiles, analyzing individual student progress, mentoring teachers, and using the strategies and methods learned at the University to improve the academic achievement of ELs

While this may appear a heavy load for in-service teachers, it is noted that most responsibilities are currently part of their job description. Added are the application of skills to better instruct ELs, collaboration with their teams as mentors, and as part of their coursework, assisting in the development of interdisciplinary curricula using the principles of second language acquisition to guide the process.

The Project Director at the IHE and the Director of Curriculum and Instruction at the Windham Public Schools will head the two management strands. Both strands have access to the

teachers in this project. Bi-monthly meetings with the management team will allow problems to be quickly addressed.

In Years 1 and 2, the Principal of the Middle School will meet with the Project Director and Director of Curriculum bi-monthly. In the next 3 project years, the Principal of Windham High School will join these meetings as the project moves on to secondary school.

Lead Teachers, 1 in Year 1, 2 in Year 2, 3 in Year 3, 4 and 5, will have regular meetings with the school principal/assistant principal and with the Project Director on a monthly schedule.

Teachers in the project will be enrolled at the University as graduate students in the College of Education. Those teachers not enrolling in formal coursework will be involved in Professional Development on-site after school hours and in regularly scheduled Professional Development days. All teachers in the target grades and schools will be participating in training activities relevant to second language learners through on-site Professional Development by in-service teachers trained at the University of Connecticut

The structure at the Windham Middle School is team based. At Windham High School, the Freshman Academy includes a strand for English language learners. In grades 10-12, the high school has Career Academies where students with like interests can focus their learning. It has been difficult for ELs to participate. The project will concentrate on the Career Academies for Technology, Informational Technology and Science and Engineering to assure equal opportunities for ELs. Both schools have in-service teachers trained at the University of Connecticut in Bilingual Education/TESOL. They would be the first Teacher Leaders to initiate project activities although it is planned that leadership will be shared over time to assure capacity building of the model.

MANAGEMENT

Goal 1. Improve the ability of in-service teachers to provide effective instruction across the disciplines to English Language Learners.			
Timeline	**Personnel**	**Objectives**	**Milestones**
Fall Semesters 2011-15	Project Director/co-Director Advisory Committee IHE Faculty Tech Lab, Special Ed, Math, Science, Language Arts, Ed Psychology, Counseling Teacher Leaders, In-service teachers.	a. Recruit teachers b. Assess needs, schedule coursework. c. Revise course syllabi to include ELs needs. d. Hold informational meetings for all participants. e. Determine required teacher on-site projects.	15 In-service teachers enrolled for degree/certificate track. Years 1 & 3. 5-10 enrolled yearly for Graduate study in the field. Syllabi reviewed and accepted. Teacher project goals are complete for first cohort in 2013, and 2nd cohort in 2015
Winter Semesters 2011-12	Project Director and co-Director IHE Faculty	a. Discuss progress made in fall semester. Plan Summer Programs. Observe on-site projects.	Contacts in place for summer programs. Projects are accepted

2013-2015	SDE representative Windham Administrators, Teacher Participants	b. Objectives for interdisciplinary units are discussed in Teacher Teams. c. Process, scope and sequence of 2nd language acquisition strategies are systematized.	Curricular units are ready for implementation in fall 2013. Process will repeat for each cohort. Teachers are training teachers in the Middle School Teams and High School Academies.

Goal 2. Increase the education opportunities for ELs and their peers in Science, Math and Technology to meet requirements for pre-engineering or related fields at the University level. (STEM)

Timeline	Personnel	Objectives	Milestones
Fall 2011 – 2015 as grades are added, process repeats.	District Administration, Teacher Leaders, Teachers	Meet with teams for pilot model. each year a grade is added: sequence is grade 7, 8,9,10,11 Professional Development needs are identified for each year.	Teams meet and develop curricula base with addition of specific ELs strategies. On-site PD workshops are scheduled each year

			of the project.
Winter 2011-15	Teams Teachers/Graduate Students	Teams set assessment process for students and curricula revisions. First units are assigned.	All students are identified by strengths and needs and formative assessment shows progress.
Spring 2011 and Fall of each year following	Teacher Leaders In-service teachers	Responsible for agendas, data collection, mentoring, and some Professional Development workshops as scheduled on calendar. Teacher self-assessment surveys given.	Process for implementation is in place and working. Analysis of surveys matched to observed teacher behaviors.
Process begins in Fall 2011 and in summer planning each following year.	Technology Learning Lab/Faculty Math, Science, Social Studies and L.A. teachers in focus grade for each year.	Technology for learning is reinforced by the purchase of selected materials for grade 7 in 2011, grade 8 in 2012, grade 9 2013. Up-grades and expansion to grades and 10 and 11 in 2014, 2015	Training in Technology is scheduled for courses and Professional Development workshops/ access to Learning Lab is in place. On-going assessment of students

			progress and future needs.

Goal 3. Develop a structured assistance plan for students through parents, the community, administration and school support staff.			
Timeline	**Personnel**	**Objectives**	**Milestones**
Fall 2011 Fall 2013	Project Directors/School Administrators Community workers/Social Workers/ PTA leaders	Build a working team for Windham Middle School dedicated to parent outreach. Develop an outreach team at Windham High School. Both teams will have bilingual staff members	Team plans initial workshops for parents Workshops begin in spring 2012 at WMS and 2013 at WHS.
Fall 2012-2015	Project Directors/ IHE faculty, School Administrators/ Social Workers/ Guidance Counselors, PTA leaders Technology faculty	Schedule of Parent/Community workshops, presentations and events are planned for all grades involved. Windham High School enters the loop in 2013 and this project will be added to parent orientation information and the process begun in Middle School	Two workshops will be held each year: one on technology for parents (including game theory) and one on future careers for their children. Additional

		repeated as appropriate to the High School.	presentations will be scheduled, responding to parent surveys.

Timeline and Personnel for Data Collection:

1. GPRA data on progress of participants/completers is collected each semester by the Registrars' Office, University of Connecticut. Records are also in the data bank maintained by the Administrative Assistant. Participants will be ask to reciprocate to the district after graduation. A letter of commitment will be sing with the participant district
2. GPRA data on number of ELs served is collected by teachers annually and given to the Teacher Leader assigned to the target school (s).
3. Project Director and Advisory Committee collect enrollment data at the University each semester with the record of courses enrolled in and completed to give student profiles.
4. Project Directors/Advisory Committee at the University will up-date graduate student profiles each semester and confer with the school district administrators at the close of each academic year.
5. Project Director and Chair of the Department of Curriculum and Instruction at the University will check adherence to State standards for certification in the summer of each academic year.
6. Project Director/ State Department of Education/Administrative Assistant will record all Professional Development presentations, summarize content, and analyze teacher evaluations of the presentations. Surveys will be administered each quarter of the school year to guide future Professional Development Activities.

7. Standardized tests, mandated by the State of Connecticut, are administered in the spring of each year. The appropriate classroom teachers will analyze student progress in the fall when the State releases all data by school, district and state.
8. Teachers will take brief tests to determine their knowledge of the key principles of second language acquisition. School administrators will collect survey tests during Professional Development activities. An IHE Faculty committee will analyze survey tests each summer of the project.

Time Commitments:

1. **Project Director: Dr. Eliana Rojas , 100% FTE.** Dr. Rojas teaches 2 courses in the MA/cross-endorsement program each semester. She will chair committees at the start of the project until other participants are ready to assume responsibilities. On-going responsibilities are as Chair of the Advisory Committee for Student Selection and Support. Her greatest efforts will be in approving on-site projects planned by graduate student/in-service teachers to further project goals. She will coordinate all faculty and department efforts at the University and facilitate those efforts in the two target schools.

2. **Co-Director: Dr. Xae Reyes, (.20 FTE)** holds joint appointments at the University in the Department of Bilingual Education under Curriculum and Instruction, and in the Institute of Puerto Rican and Latino Studies. She will teach in the project, assist in planning and implementing the summer institute and attend Advisory Committee meetings. Her largest efforts will be in Community/Parent relations.

3. IHE faculty involved in graduate instruction will be teaching project students depending on individual goals. All faculties will be asked to include strategies and methods of teaching ELs in

their coursework by revising syllabi and/or inviting faculty in the field of Bilingual/TESOL to present in classes. Several University Faculty have volunteered to take part in the project through student mentoring or parent outreach.

4. Teacher Leaders (TL) will change over the course of the project to give new participants an opportunity for leadership roles. The initial TLs are graduates of the program offered to in-service teachers who will enroll in the program due to this project funding and support.

5. Public school Administrators are supportive of this chance to up-grade learning opportunities for the students in Windham and to train all teachers in better instruction for ELs.

EVALUATION

As the first priority, the evaluation will address Measures 1.5 and 1.6 of the Government Performance and Results Act. In-service teacher completers who fulfill State requirements in EL instruction as a result of the program will be reported. The percentage providing instructional services to ELs will be part of the data collected for Annual Reports, Complete Data Reports and the Final Report. The University of Connecticut awards graduate credits. At that time, the Project Director will inform the Assistant who will add the credits to the project data bank. This will be done quarterly. At any time, the status of a participant can be checked for accuracy and progress. The State is clear on the number of credits and the core courses required for certification/endorsement. Only the State Department of Education can award certification, although the IHE is careful to ensure the goals of the in-service teacher will be met. A method of tracking completers has been determined to allow the Project Director to ascertain the awarding of certification to a completer.

As a result of this project, fewer teachers will be employed with waivers pending certification on completion of coursework.

An Evaluation Team will be composed of the Project Director, co-Project Director, Evaluator, School Principals, Teacher Leaders and the Project Assistant who is responsible for up-dating the data bank. A parent representative will join the Evaluation Team when information is analyzed for the 3rd goal. Although input will be solicited from all parents, one will be selected to serve as a link to the Evaluation Team and the parent/community participants.

The Evaluation Team will meet to determine data-collection systems that will monitor progress towards objectives, including baseline data. Program indicators will include: 1. The number of people receiving services, both in-service teachers, students, IHE faculty and District administrators. 2. The status of those receiving services. 3. The quality of the project services. 4. The money spent on each service, and 5. The numbers of activities, meetings and training sessions conducted. The Team will keep in mind the questions the project is designed to answer.

Evaluation Questions to guide data collection:

1. Does teacher training targeted to improving the education of ELs accelerate the academic achievement of second language learners?

2. Can teacher coaching, mentoring and collaboration change the environment for learning?

3. Does parent training and awareness of career potential influence student motivation?

Evaluation of Objectives

Goal 1. Objective a. Recruit 15 teachers the 1st and 3rd project years for certification/endorsement in programs of Bilingual Ed/TESOL and as additional 5-10 teachers each year for coursework in the field.

1. As the program is designed for in-service teachers, the credits required will be scheduled into two full academic years. A data bank will be up-dated each quarter to assure all selected participants are on schedule for this timeline. Quantitative data will yield the number starting and the completion rate as a percentage at the close of the second year. Data will include the certification and or endorsements requirements completed, degrees attained or coursework completed for those in an individualized program in the field of Bilingual Ed/TESOL.

Objective b. Assess the educational needs of in-service teachers in the target schools to determine past training and the educational programs needed.

1. Profiles of the first cohort will be collected to determine need. As the participants are in-service teachers, they are all certified for their positions by State standards except in the case of Bilingual Ed/TESOL where waivers are common. The data analysis is designed to show the district the numbers of teaching staff (or percent of the whole) who are working with ELs without training in second language acquisition, cultural affects of second language learning or assessment of ELs.

2. Courses selected on the basis of cohort 1 profiles will be recorded to demonstrate adherence to the State guidelines for certification/endorsement.

Objective c. Schedule informational, collaborative meetings with all participants to give the information necessary to begin the use of new strategies and of formative assessment in the classrooms.

1. Meetings to inform all teachers participating in the on-site pilot will be held to explain expectations for the use of formative assessment in the classrooms. Teachers matriculating at the University will be in a position to mentor other teachers. These meetings will start in grade 7 and expand each year of the project to include all grades from 7-11. Surveys will be taken at the end of each quarter (public school schedule) to ensure teachers are using the process, receiving support, and satisfied with the training received. Supervisors will be given checklists to use on regular observations. Reports from both teachers and supervisors will be analyzed and percentages showing changes in instruction quantified.

2. Continue revisions of course syllabi at the IHE to ensure needs of in-service teachers are met, as determined by profiles. Conduct analysis of syllabi each quarter of project until all are revised with standards for second language teaching. Report progress as percent of the 24 courses offered.

3. Check syllabi with State core content standards as each are approved by IHE.

d. Objective: Improvement of teacher effectiveness in raising the achievement of ELs in mathematics, science and technology, reading comprehension and writing across the disciplines.

1. Teachers will track the numbers of students passing regular skill tests to be reported as percents of the class.

2. Disaggregate data from grade levels/classrooms to determine if the gap is lessened after a year of the project implementation. Reported in terms of the Connecticut Mastery Test for Grades 7 and 8. In 2014, the high school CAPT (Connecticut Academic Performance Test) will be used disaggregating ELs from their peers.

3. Teachers will take a brief multiple-choice test to determine their knowledge of the principles of Sheltered Instruction Observation Protocol, Formative Assessment, Strategies and Methods for second language learners and technology for learning. The teachers in grade 7 will take the test each year of the project; each grade will join the test-takers as they join the model.

Results of Evaluation

1. Improving the model by analyzing results of syllabi revisions at the IHE, curricula units, teaching, team collaboration, new strategies and methods for reaching second language learners and Professional Development workshops at the LEA.

2. Determination of the role of technology and the addition of current tools in increasing teacher effectiveness and student motivation.

3. The impact of higher academic achievement on lowering the dropout rate and the numbers of students continuing their education beyond secondary school.

4. Determine with the input of teachers if the project devised Mathematics Placement Test for newcomers changed their placement decisions and the level of instruction for those students.

5. Parent support for student academic goals and career decisions held higher expectations.

6. Determine the status of the "gap" in achievement between ELs and their peers. This will be done with disaggregated data and compared to statewide results.

7. The Evaluation will lead to recommendations for improvement in the model and the Professional Development program.

8. All stakeholders will receive information each year through a publication sent to the Windham Public Schools Administrators and the Board of Education, and the State of Connecticut Department of Education. Dissemination of the project's goals and process will be sent to other district's whose teachers are participating in the University program.

9. A survey will be requested of all public school students affected by the project to determine if participation raised their confidence to compete in the academic forum.

Annual Targets and Evaluation Measures

Timeline And category	**Data**	**Measures and Source**

2011-16 Annual count GPRA	Number of Completers: Quantitative: M.A., 6th Year, Certification, Graduate credits	% completing program University Registrar
	Number of ELs served: Quantitative	Student numbers reported by teacher participants
2011-16 ELs count GPRA	Cohort 1 enrolled. Courses determined and implemented for spring and summer quarter	Description of courses and match with graduate student needs. Number enrolled.
2011 – 16 Standardized test scores from CMT/CAPT show academic progress by ELs	Connecticut Mastery Test Scores (local) baseline data will be given for each of the grades targeted. Each year, another grade level will be added. Data is not reported by the State until fall of each year; tests are administered each spring.	Previous scores are reported as base. Spring 2012 scores reported in 2013 APR with analysis and disaggregation of ELs. Quantitative data
2012-2016 Syllabi revision by IHE	Descriptions of modifications, revision and additions to the University course are reported to show effort to improve instruction of in-service teachers in classrooms with ELs.	Meetings for syllabi review will be reported with the results of individual faculty review of courses taught Qualitative
2011-2016	Annual reports on meetings to discuss	Reports from Teacher

Teacher Collaboration, Mentoring, Practices	student profiles, in-service teacher observations by peers and supervisors, Evidence of practices benefiting second language learners.	Leaders and supervisors will demonstrate use of new practices by in-service teachers in the project.. Reported as %ages to maintain privacy.
2011-2016 Parent effectiveness in motivating student success	Workshops, presentations and hands-on experiences will be developed to permit parent involvement with their children in school and in career planning.	Numbers of parents participating, parent evaluation of the worth of workshops/presentations codified and self-assessments summarized for discussion by parents for reports.

Note: Most of the data will be set as part of the evaluation process in Year 1 although each year of the project will touch on the same objectives. As the project will have 3 years to report project completers for certification/endorsements, degrees, those records will be reported in 2013, 2014 and 2015.

Student baseline quantitative data will include a baseline report before the intervention is in place, for example, grade 7 will be reported for 2011, grades 7 & 8 for 2012 grades 7, 8 & 9 for 2013 and grades 7, 8, 9, 10 for 2014 and 7,8,9,10 and 11 in the final report. There is some lag in the State's reporting but all scores will be available, analyzed by the

State Department of Education and used to determine project improvement needs by the Evaluation Team.

CAPACITY BUILDING

This project will be incorporated in the State Department of Education plan to control the improvement of student achievement in Windham. It is especially noted that the gap between ELs and their peers is growing. It is expected that this model will show one way to lessen this gap, to decrease the high rate of dropouts and to increase the numbers of students continuing their education.

The State Department with have a "Master Supervisor" and two Assistants assigned to Windham for the foreseeable future. Professional Development of teachers to improve the instruction of ELs is high on the list of paradigm shifts in public education. This project offers a way to achieve this. The model has the potential for use in all grades.

Despite the funding of oversight by the SDE, there are few if any funds to increase the technological base and to up-date technology purchased in better economic times. However, the infrastructure for technology is in place, including wiring and access to services. This project would increase tech tools and, more important, provide training for teachers to effectively use them. At this point in the educational timeline, classroom students may be far more knowledgeable than teachers in the use of technology. This motivator must be in the hands of teachers as well for they can use them to expand student learning.