U.S. Department of Education

Washington, D.C. 20202-5335

APPLICATION FOR GRANTS UNDER THE

NATIONAL PROFESSIONAL DEVELOPMENT PROGRAM
CFDA # 84.365Z
PR/Award # T365Z110027
Grants.gov Tracking#: GRANT10863053

Closing Date: MAY 09, 2011

Name of the IHE:
University of Hawaii at Manoa = UHM (main campus in UH system)

Title of the Program:
New Beginnings for ELL: Innovation through Technology for English Literacy and Academic Success

Consortia Partners (See Appendix A. for a letter of Commitment from each partner):
1. State of Hawaii Department of Education = HI DOE
2. American Samoa Department of Education = AS DOE
3. Republic of the Marshall Islands Ministry of Education = RMI MOE

Project Description:

CFDA 84.365 Z

Abstract

The purpose of this proposed 5-year project is to develop, provide, and evaluate high-quality professional development (PD) activities that will result in improved academic achievement with enhanced English skills and motivation of English Language Learner (ELL) students. We will address the competitive priorities 2) and 3) by enabling more data-based decision-making and by promoting Science, Technology, and Mathematics education for ELLs.

This proposed project will be built on the lessons learned from the PD courses we have developed and offered since fall 2007 and will take steps forward to include state-of-the-art technology to provide individualized differentiated instruction to enhance writing skills with meta-cognitive strategies across the content areas, and to develop cross-cultural understanding to help in-service teachers become more effective in teaching ELLs.

In the first year, we will complete the production of PD training modules (including manuals, training videos, assessment tools, and resource materials) and establish full website capability for online teaching. The modules will be offered as PD courses through the University of Hawai'i at Manoa, College of Education, in collaboration with our partners, the departments of education of Hawaii, American Samoa, and the Marshall Islands. Our partners will provide the following: (a) information on their own aligned systems of K-12 English language proficiency standards, content standards, and assessments; (b) recruitment of participating teachers and other school personnel; and (c) resources, such as computers and internet access needed by teachers to take the online PD courses. The PD courses will be developed by UH content experts with input from our partners' teams. The trained school personnel will be supported to adopt and implement the strategies learned into their school settings. The PD courses will be evaluated at the end of each semester, modified based on the needs and feedback of the PD participants, and offered repeatedly across years 2-5 in different school districts. Over 500 school personnel (GPRA Measures 1.4 and 1.6 in relation to the proposed project Goals 1 and 2) will be trained, and over 1,000 English Language Learners (ELLs – Goal 3) will benefit during the 5-year period of the

New Beginnings for ELL: Innovation through Technology

for English Literacy and Academic Success

A. Project Design

A.1. Goals, Objectives, and Outcomes: Clearly Specified and Measurable (35 points)

This proposed project will be built on the lessons learned from the PD courses we have offered in our current 5-year ELL-ACE Project, which received positive participant feedback:

"This was one of more in-depth PD courses I have taken. It was a struggle to keep up but I learned a great deal. The technology aspect was amazing. Mahalo [Thank you in Hawaiian]!"

"... I have learned some valuable tools that I will continue to use in my classroom. The beautiful thing is, I can use these strategies not only with my ELL students, but with my SPED and regular education students as well ..."

"These are universal strategies and ideas....I have learned and value the new strategies I was able to use: the multiple [repeated] reading technique, the use of technology, cultural texts, and the video and audio recordings. These will continue to be used in my curriculum and instructional strategies for years to come."

"Wonderful course! I recommended the course to the other teachers with ELLs!"

The quotes above are representative responses of participants who evaluated the PD courses we offered through the ELL-ACE Project (current OELA project). Since fall 2008, we have developed and offered 2 PD courses, ACE Reading for ELL and TeenACE Writing for ELL via the UHM, HI DOE, AS DOE, and RMI MOE. In Years 2 and 3 of the ELL-ACE Project, we had 75 completers who trained an additional 35 paraprofessionals and implemented ACE programs with 210 students. In addition, we provided a 30-hour, on-site workshop in RMI to 8

teachers to learn the fundamental ACE strategies. The RMI teachers chose to target instructional practices to use with their ELLs, rather than spend approximately 100 hours on required course work including a case study to earn 3 PD credits. Four teachers later went on to take the 15-week course. In the current Year 4 of the ELL-ACE Project, we have had 21 completers with 24 additional teachers near completion in the 2 PD courses for credits.

This proposed project will take steps forward to include state-of-the-art technology to provide individualized differentiated instruction, to enhance writing skills with meta-cognitive strategies across the content areas, and to develop cross-cultural understanding to help teachers become more effective in teaching English Language Learner (ELL) students.

The purpose of this proposed 5-year project, *New Beginnings for ELL: Innovation Through Technology for English Literacy and Academic Success*, is to develop, provide, and evaluate high-quality professional development (PD) activities that will result in improved academic achievement in content areas with enhanced English skills and motivation of ELLs.

We will address the competitive priorities (2) and (3) by enabling more data-based decision-making and by promoting Science, Technology, and Mathematics education for ELLs. We have developed 6 goals with 20 objectives to achieve this purpose, as shown in Table A, Project Design and Work Plan (below). For each objective, a set of activities and measurable outcomes has been specified with persons responsible and timelines. Table B, Participant Projections, adds measurable outcomes in terms of the number of beneficiaries of *New Beginnings for ELL* (short project title to be used in the proposal narrative below).

Table A. Project Design and Work Plan

Activities	Persons Responsible	Timeline (Months)	Outcome/ Milestone
Administrative Tasks to Establish Project			
Recruit and hire project personnel	PI (Principal Investigator)	1-3	Positions filled
Establish fiscal structure of grant	PI, FO (Fiscal Officer)	1-2	Structure established
Goal 1: Develop Professional Development (PD) Program			
Objective 1.1 Develop a Project Team for Each Partner (HI DOE, AS DOE, RMI MOE) Build professional learning communities which include ELL experts, are nurtured by educational leaders who model responsibility for ELLs, and are supported by resources at the school, district, and department levels. Two expected outcomes include: (a) a team of 4-7 experts and leaders for each of the three consortia partner sites; and (b) the priorities of PD determined based on the needs of the school districts and educational personnel to be served.			
Establish project team, including SC (Site Coordinator) and Master Teachers (MTs), through collaborative team meetings with ELL experts (4-7)	PI	1-3	Team, sites established
Develop implementation plans at sites	PC (Project Coordinator)	6-12	3 plans developed
Objective 1.2 Develop PD Training Modules and Components The PD process will be driven by accurate data concerning the numbers and performance of			

Activities	Persons Responsible	Timeline (Months)	Outcome/ Milestone
ELLs and by evaluation which takes this data into account (Competitive Priority 2). Programs will incorporate research which focuses on the language and communication skills required in the content areas, and will be designed with mainstream teachers in mind (Competitive Priority 3). The content of the PD modules will include: (a) an understanding of the diverse culture and learning styles of ELLs; (b) strategies for involving community members and families of ELLs, to ensure equity; and (c) instructional strategies which result in ELLs meeting rigorous academic standards in English/Language Arts, Science, and Mathematics.			
Establish online classroom	PC	2-4	Online system built
Assemble PD components	PI, Ins (Instructors), PC	1-6	Finalize pilot curriculum
Develop PD Training Modules	PI, Ins, PC PC, SC	3-12	Training modules pilot tested
Adapt Training Modules to partners' cultures	PI, Ins PC, SC	13-16, as needed	Curriculum reviewed by sites
Adapt curriculum to web	PC, Ins	4-12	Online delivery system up and running for Pilot
Objective 1.3. Refine PD Training Modules for Teachers (mainstream and ELL) We will work with 6 selected teachers, including those who teach in content areas, to pilot test			

Activities	Persons Responsible	Timeline (Months)	Outcome/ Milestone
the modules, collect evaluation data, receive feedback from Teams, and refine the modules.			
Pilot curriculum	PI PC, SC	10-15	Recruit 6 teachers and 12 ELLs
Collect feedback and data	EV (Evaluator)	10-18	Pre-post student assessments
Analyze data	PI, PC, EV	13-18	1-3 grade level gains for students
Refine curriculum and online delivery mechanism	PI, SC PC	10-18	Survey results, finalize full implementation

Resources: The modules will be offered as PD courses through the UHM, in collaboration with our partners. Our partners will provide the following: (a) information on their own aligned systems of K-12 English language proficiency standards, content standards, and assessments; (b) recruitment of participating teachers and other school personnel; and (c) resources, such as computers and internet access needed by teachers to take the online PD courses. The PD courses will be developed by UH content experts with input from our partners' teams. The trained school personnel will be supported to adopt and implement the strategies learned into their school settings. The PD courses will be evaluated at the end of each semester, modified based on the needs and feedback of the PD participants, and offered repeatedly across years 2-5 in different school districts. Over 500 school personnel (GPRA Measures 1.4 and 1.6 in relation to the proposed project Goals 1 and 2) will be trained, and

Activities	Persons Responsible	Timeline (Months)	Outcome/ Milestone
over 1,000 English Language Learners (ELLs – Goal 3) will benefit during the 5-year period of the project. We also anticipate that the indirect impact of our local capacity building activities (Goal 6) through Project Teams and Master Teachers (MTs) will be enormous. Experience from our current grant shows that our PD components are being used by local schools and teachers to at least double the number of PD participants and their ELLs that we directly trained and supported.			
Goal 2: Deliver Professional Development (PD) Program to Teachers			
The following activities, timelines, and outcomes under Objectives 2.1 and 2.4 can be repeated for each PD course and short-term workshop we create and offer.			
Objective 2.1 Recruit Teachers with Partner Collaboration			
Coordinate timelines with PD trainees	PC, SC	7-60	PD Teachers: See Table B for target participants
Objective 2.2 Offer a PD Course Focusing on Teachers in K-5 Through UH and Partners			
Objective 2.3 Offer a PD Course Focusing on Teaching Content Areas in Secondary School Settings Through UH and Partners			
Objective 2.4 Evaluate each of the 2 PD courses by the participating teachers			
Identify procedures to establish PD credits in UH and in the departments of education of HI, AS, and RMI	PI PC	4-6	Establish PD credits in all regions
Submit and obtain approvals and	PC, SC	7-9, 13,	Approve, certify,

Activities	Persons Responsible	Timeline (Months)	Outcome/ Milestone
certifications for PD from partners		19, 25, 31, 43, 55	and re-certify PD every 6 months
Recruit and train 2 Master Teachers (MTs) per site, and add more MTs as needed	PC, SC PC, SC PC, SC	7-12 13-15 16-22	6 MTs trained and help with PD trainees.
Establish trainee network/ listserv	PC, SC EV	7-60	All sites maintain and share databases
Schedule and deliver training	PI, Ins MT	7-18 19-60	2 MTs trained each site
Collect data on training (interviews; teacher surveys on the feasibility, usability, practicality of PD modules/components; and effectiveness of training	PC, EV	7-60	Data collected each semester/site
Analyze data on training	PI, PC, EV	10-60	Data analyzed each semester/site
Revise training and materials based on evaluation	PI, Ins	10-60	Materials revised each semester
Modify online delivery as needed	PC	10-60	Updated version
Goal 3: Teachers Implement Strategies Learned with ELLs			
Objective 3.1 Identify, Assess, and Collect Base-Line Data for ELLs.			

Activities	Persons Responsible	Timeline (Months)	Outcome/ Milestone
Identify and recruit students (1-3 tutees per teacher)	SC	7-60	Student Tutees:
Objective 3.2 Guide and Support Teachers Implementing Strategies with ELLs			
Implement activities and evaluation plan	PC, EV	7-60	Evaluation checklist
Group students with each trainee	PC	7-60	Student/teacher assignments
Collect pre-assessments	PC , EV	7-54	Test results (e.g., LAS Links, HSA Reading)
Collect post-assessments	PC, EV	13-60	Test results
Analyze data and report	PI EV	6-60	Compile data and report annually
Objective 3.3 Teachers Develop After-School Support Programs			
Support teachers to develop and offer an after-school program for additional support for ELLs beyond their classrooms	PC	7-60	Evaluation – activities/outcome same as Obj 3.2.
Coordinate timelines with PD trainees, and provide technical training	SC	7-60	Technology for feedforward (ff)
Assign students to trainees	SC	7-51	Create 50 ff
Objective 3.4 Teachers Recruit and Train Paraprofessionals			

Activities	Persons Responsible	Timeline (Months)	Outcome/ Milestone
Recruit tutors (1 tutor to 3-5 students)	MT, Teachers	7-57	Tutors recruited as needed
Provide tutor training (4 hours each) and ongoing mentoring (as well as monitoring/integrity checklist for fidelity)	PC, Ins MT	Each semester	95% integrity for each tutor
Evaluate tutor recruitment and training	PC EV	Each semester	Tutors trained
Collect feedback from tutor focus groups	EV	Each semester	Focus groups at 3 sites
Mentor and manage tutors	PC MT, SC	Each semester	Tutors evaluation data
Objective 3.5. Collect Implementation Data and Evaluate Student Outcomes.			
Provide tutoring and feedforward	PC, Ins	7-57	40 sessions per semester, per site
Evaluate progress, modify interventions	PI, Ins	16-54	Review annually each site
Goal 4: Evaluate Effectiveness of the Project			
The following activities, timelines, and outcomes under Objectives 4.1, 4.2, and 4.3 can be repeated for each PD course and short-term workshop we create and offer.			
Objective 4.1 Support Teams to Implement System of Program Evaluation			
Develop self-evaluation system for sites and	PI, Team, EV	1-6	Self-evaluation

Activities	Persons Responsible	Timeline (Months)	Outcome/ Milestone
evaluate teachers and students		Revise as needed	system established
Develop evaluation criteria based on school, community, and department of education	PC, Team, EV	1-6 Revise as needed	Evaluation criteria developed
Reaffirm objectives and activities	PI, PC, Team	Annual meetings	Objectives and activities reaffirmed
Implement self-monitoring system	SC, PC	6-60	Self-monitoring worked well
Conduct annual program assessments	PI, EV PC, SC	Annual	Annual data analyzed
Refine program based on self-assessment	PI, Ins		Program refined
Objective 4.2 Conduct Outcome Evaluation of Project			
Evaluate outcomes, impact	PI, EV	Annual	Annual reports
Evaluate program quality	PI, EV	Annual	Annual reports
Evaluate quality of distance education	PI, EV	Annual	Annual reports
Objective 4.3 Modify Program Operations to Reach Objectives			
Modify program operations based on evaluation	Team	As needed	Team meeting minutes
Goal 5: Disseminate			

Activities	Persons Responsible	Timeline (Months)	Outcome/ Milestone
Objective 5.1 Disseminate PD Training Program			
Maintain and update website and virtual classrooms; maximize interactive e-class	PC	4-60	Updates done monthly
Present at schools and conferences	PI et.al.	4-60	PacRim, AERA
Submit a journal article	PI et.al.	4-60	ESL, Technology, Multicultural Education
Objective 5.2 Develop Networks of PD Trainees			
Network all trainees	PC, MT	7-60	On-line sharing of cases by site
Promote mentoring and articulation across sites	PI, Ins, MT	7-60	Quarterly web-conferencing
Hold annual project meetings with PI, PC, SC, MT, DOE, IE	PI, PC	Annual	Annual PacRim conference, HI
Goal 6: Promote Sustainability for Continued Implementation Beyond Grant Funding			
Objective 6.1 – Integrate PD Components into UHM, Local Schools, and Beyond			
Expand within local communities	PC	25-60	Identify sites, ELL programs
Provide annual grant-writing workshops	PI	Annual	Grant proposals done by partners
Provide technical assistance for	MT	13-60	4-20

Activities	Persons Responsible	Timeline (Months)	Outcome/ Milestone
sustainability from within			trainings/year
Objective 6.2 Explore Funding Options for Further Training and Research			
Identify funding sources within HI DOE, AS DOE, RMI MOE	PI	13-60	3 block grants
Identify funding sources outside partners	PI	13-60	7 federal grants
Objective 6.3 Provide Technical Assistance by Center on Disability Studies			
Adopt Curriculum by each partner	PI	10-60	Adopted programs
Increase community tutors	PC	10-60	10% increase/year
Resource management	PC	10-60	End of grant each partner pay 100% of program
Increase Technology and distance learning	PC	10-60	10% increase/year
Provide more training by Mentoring	PC, MT	10-60	20% increase/year

A.1. ***Design to Successfully Address the Needs of the Target Population.***

The quality of the project design is reflected in all sections of this proposal. This section focuses on the design aspects related to addressing the needs of the target population. As Table A shows, high priority is given to involving a broad range of stakeholders in the strategic planning, designing, and evaluation of PD activities, including a focus on collecting both formative and summative data. Team members will include HI DOE, AS DOE, and RMI MOE representatives

who are responsible for statewide implementation of ELL curriculum and assessment, site coordinators, Master Teachers, and parent representatives. Each site will have a team, and one representative from each team will form an advisory board for this project to advise and support all activities, beginning immediately and continuing through the 5 years of funding. A major focus of *New Beginnings for ELL* is to build local capacity. PD training activities will, therefore, employ a train-the-trainer or Master Trainer (MT) model. We will train MTs (members of each site team) and provide access to the curricular materials and ongoing technical assistance, so they can effectively train others in their localities. Through Web technology and other dissemination avenues, educational agencies and individuals across the regions will have ready access to essential knowledge to enhance local capacity to serve ELL students throughout the years.

Local capacity will also be significantly strengthened as we help team members develop their voices and direct roles in project activities. The local teams can help establish their own approved curriculum for sustainable implementation in the future. Areas of active participation for team members will include: (1) strategic planning of proposed activities; (2) attending and giving presentations at trainings and meetings; (3) providing feedback to develop materials, professional networks, and websites; (4) evaluating the process and outcomes of project activities; (5) representing this project at meetings and conferences relevant to teaching ESL; and (6) creating a "blueprint" that has strong potential for replication at the state and local levels.

The team at each site will also ensure *New Beginnings for ELL* is successful in addressing the needs of 2 groups of participants: professionals and ELL students. ELL enrollment in the State of Hawaii has increased 38.8 % from school year 1997-1998 to school year 2007-2008 (Batalova & McHugh, 2010[a]). There were 17,868 ELL students in 2007-2008 in Hawaii, and most of them spoke a native language other than English. The top 3 languages were Ilokano

(21%), Chuukese (9%), and Marshallese (9%) (Batalova & McHugh, 2010[b]). Almost all students in American Samoa and RMI are ELLs. Currently, teachers are facing enormous challenges in teaching ELLs English as well as content areas for ELL students to catch up with their peers.

Professionals' pressing needs will be addressed by developing and offering 2 University of Hawaii 600 level (graduate) courses for in-service teachers with BA degrees (GPRA measure 1.6) and one UH 200 level (undergraduate) for in-service paraprofessionals who do not have BA degrees and may be working on an Associate Degree (GPRA measure 1.4), with approval of project partners (Goals 1 & 2), so the credits the professionals receive can be added to their reclassification for higher rank and salary, in addition to learning the skills they need to better serve ELLs. The professional trainees will apply what they learn to benefit their students, which is the ultimate goal of these PD courses (Goal 3). Professionals will improve their effectiveness by teaching and evaluating their own ELLs. Selected teachers with leadership skills and a desire to apply *New Beginnings for ELL* beyond their own classrooms will be trained further to become Master Teachers (MT). MTs will train teachers and aides in local schools, using the curriculum and resources developed by *New Beginnings for ELL*, making appropriate adaptations to meet the local needs. MTs will be compensated by the project with a stipend and travel funds to attend an annual one-day institute in Honolulu, Oahu.

For our second target population, ELL students' needs will be addressed by supervised application of *New Beginnings for ELL* as part of their teachers' PD participation (Goal 3). The ACE model, the conceptual framework of all PD courses developed and to be developed, will help ELL students through small group instruction with culturally and linguistically proficient peer/adult tutors (2-5 to 1 ratio, Objective 3.4).

To ensure we reach professionals with diverse learning styles, a combination of several

technologies will be used for this PD training course, including: (a) web-based access to curriculum, resources, and tips available anytime and anywhere; (b) interactive and synchronized web-conferencing using Elluminate software supported by UHM College of Education in the beginning of the course, and as often as needed by individual participant's request; and (c) face-to-face, one-day institute annually.

A.2. Design with Up-to-Date Knowledge from Research and Effective Practice

This section reflects a thorough and high quality summary of the literature in the areas of technology, English literacy, mathematics, science, and research-based instructional strategies for teaching ELLs. We have cited a fraction of all the literature we reviewed because of page limits; our plans are built on an extensive bibliography (see Appendix B. Bibliography).

New Beginnings for ELL is founded on *ACE Reading*®, our programmatic work in effective literacy support that has been developed and researched thoroughly since 1996.

The ACE literacy family of programs. Our findings with the early *ACE Reading*® and other literacy programs, contribute to 3 areas of research and effective practice: (1) quantities of literacy engagement with the right level of challenge (the'90:10 rule' – 90% success and 10% challenge) can reliably produce large gains; (2) self-efficacy and enjoyment related to text can be achieved with explicit self-image success strategies; (3) engagement occurring readily with multimedia must be *guided,* as in the zone of proximal development (ZPD, Vygotsky, 1978), for significant learning to occur.

ACE Reading began in 1996 in Philadelphia's urban schools, expanding to Honolulu in 1998 and to many other locations, including Kentucky, Oregon, Tennessee, Florida, Pohnpei, American Samoa, Micronesia, the Republic of the Marshall Islands, and New Zealand, with high rates of success in ELLs (Dowrick, Kim-Rupnow, & Power, 2006). We first focused on children

with reading difficulties in the early grades. Then we expanded to different versions of ACE for different age groups, following a community responsiveness model (Yuen et al., 2006). A typical ACE program runs 8-10 weeks (Rao, Dowrick, Yuen, & Boisvert, 2009). These tutor-assisted programs follow a 25-step protocol to promote fluency, vocabulary, phonics/phonemics, and comprehension (verified by National Reading Panel [NRP], 2000). They also provide enjoyment and mentorship, accommodating individual and cultural differences (Pressley, 2002). Successful versions of ACE include PreK-ACE, Computer ACE, TeenACE for writing, and ACE puzzles for math. Over 5,000 students (approximately 25% of them were ELLs) have participated in various versions of ACE Reading; 95% have improved 1 to 5 grade levels (Dowrick, 2009; Dowrick & Yuen, 2006) at the end of 40 sessions, implementing one of the ACE versions.

ACE strategies. ACE literacy support sessions include all the elements of best practices of teaching and learning literacy as widely recognized (NRP, 2000; Gersten et al, 2001). The sessions are designed to provide just the right level of scaffolding around the literacy tasks. Technology-based options are Video ACE and Computer ACE. In Computer ACE, the whole session uses interactive multimedia: off-the-shelf software for fluency and phonics (e.g., Learning Company, 1996) and our own software for individualized word recognition and vocabulary (Dowrick, 2002). Some schools have adopted ACE as a permanent offering in their afterschool programs (Hitchcock et al, 2004). Young students typically triple their reading fluency (from <10 words per minute to >30 wpm; Kim-Rupnow & Dowrick, 2001). In higher grades, there are higher gains (e.g., Dowrick & Yuen, 2007).

Relevant theories of learning. All creatures learn from observing their own successes, a process called "self modeling" (Dowrick, 1999). Humans have the added capacity to learn from

successes they have *not yet had.* That form of self modeling has been dubbed "**feedforward**" in contrast to the notion of "feedback" (Dowrick, 2006).

Research over several decades in the areas of Vygotsky's zone of proximal development (ZPD), Bandura's self-efficacy, and Dowrick's self modeling and feedforward provide a theoretical framework to address the challenges experienced by ELLs. According to Vygotsky, conditions of learning are best met within the ZPD, when information to be learned is just beyond current knowledge, but closely related to it. By Vygotsky's definition, the ZPD refers to experiences between the child's unaided performance and the performance possible with the help of an adult or peer (Hausfather, 1996; Vygotsky, 1978).

Supportive principles can be found in social-cognitive theory (Bandura, 1986, 1997), especially in *self-efficacy*. Perceived self-efficacy refers to a person's belief that he or she can perform an identified task or achieve a specific outcome. Empirical findings indicate that teaching new skills results in variable levels of self-efficacy across individuals, causing different levels of performance (Bandura, 1977). For example, readers with high self-efficacy will persevere in the face of difficult comprehension, interact with more forms of text, and become better readers than other people with comparable potential. Thus, they will explore their ZPD despite challenges. Our project targets the self-efficacy of low-achieving ELL students.

Individuals can acquire self-efficacy through external encouragement and, in particular, through *observing their own successes*--which is the very definition of *self modeling* (Dowrick, 1983, 1999; Bandura, 1986, 1997). Self modeling is most powerful when the successful self-image can be repeatedly replayed on video or computer. This medium supports *feedforward,* the subcategory of self modeling in which the observed success is slightly *above* current capability (Dowrick, 1991, 1997). For example, "Kalani" sees a video of herself reading a book of

"frustrational level" text--and the video shows Kalani reading with good fluency and decoding some difficult words. *Thus feedforward promotes self-efficacy and creates learning in the ZPD.*

Encourage teachers to learn new technologies to enhance their students' learning. Because our courses are focused on improving the literacy skills and academic achievement of ELLs in K-12, our PD activities are also intended to develop teachers' technology skills, since technology gives teachers other tools to reach their students and accommodate diverse needs, skill levels, and interests. For example, we can assign an exercise for creating an *Audio Feedforward* recording and provide a tutorial for the technology requirements. Each participant has to download and install both Audacity and LAME, free software to easily make a 30-60 second, error-free Audio Feedforward recording of a student's voice. The student sees herself being successful at tasks that are normally too challenging. This effect is achieved through careful planning and editing of component skills that are prompted or supported by a teacher. After viewing this recording, the student sees her possible future success, begins to set higher goals, and develops a desire for improvement. Audio feedforward techniques have produced significant gains in phonological awareness, an essential reading skill (Macleod, Macmillan & Norwich, 2007). We also can assign an exercise for creating a *Video Feedforward* recording, with a tutorial for the technology requirements. Participants with access to a Mac computer with iMovie software create a short Video Feedforward clip. Our iMovie Tutorial for Macs, FFV Creation, instructs them on the basic steps in using a modern Mac, its built-in camera, and iMovie editing software (version 8 or higher) to create a video, which they can then apply to creating a feedforward video. Recently developed technologies such as hand-held cameras and smart phones can create instant playback video clips. The proposed PD courses will explore activities around using less expensive and more effective technologies available to empower

teachers and their ELLs. We have successfully used technology to increase word knowledge, oral reading fluency, and reading comprehension (Hitchcock et al, 2004).

Use of feedforward-type strategies in literacy programs. In addition to using feedforward as a powerful application of technology for learning English, it is also used in a general way of doing business. We use the principle of "creating images of future success" in the learning protocols, in our training methods, and in the way that ACE-trained personnel interact every day with their students. Our project will teach professionals how to improve self-images of success for ELL students by maintaining the 90:10 level of challenge, providing frequent praise for effort, supporting academic risk-taking, and building strong mentor relationships.

Encourage teachers to use cognitive strategy instruction for long-term learning outcomes for ELLs. The positive impact of cognitive strategies on student learning outcomes has been well documented (De La Paz & Graham, 2002; Graham, 2006). Over the past 30 years, researchers have shown that cognitive strategy instruction has multiple benefits, such as achieving higher levels of academic proficiency for diverse populations of students (Harris, Graham, & Mason, 2006). Strategy instruction also has been applied to a wide range of academic content areas, including reading (Mason, 2004), writing (Wong, Butler, Ficzere, & Kuperis, 1997), mathematics (Fuchs et al., 2003), and social studies (De La Paz, 2005). However, strategy instruction has not been widely used in school settings, and only one study has used a combination of VSM and self-regulated strategy instruction (SRSD) with writing (Delano, 2007). Some teachers may hesitate to provide explicit information to heterogeneous learners, and that this form of instruction often requires more time than incidental forms of teaching. Cognitive strategy instruction typically includes the following five features: (1) teachers routinely provide think-aloud demonstrations; (2) instruction is initially teacher-directed, with gradual fading of

instructional scaffolds (i.e., prompts or supports, such as dialogue); (3) students work collaboratively and then independently to master the target strategies; (4) students use mnemonics to help them remember the sequence of steps for executing each strategy--for each letter in the mnemonic cues, students are to engage in a cognitive or metacognitive act (such as self-regulation) as part of the overall sequence of elements, resulting in the overall execution of a strategy; and (5) students regulate independently the use of strategies, self-regulated strategy development [SRSD] (adopted from De La Paz, 2007). The proposed PD activities will include explicit instruction through creating think-aloud feedforward audio or video clips for ELLs and will take full advantage of the benefits both technology and cognitive science can provide to help them achieve long-lasting and higher levels of academic success.

Practice: Multimedia in Literacy and Learning. As a mechanism to teach literacy, technology is still under-utilized and under-researched for ELL students (Anderson & Speck, 2001). Some evidence suggests computers should be effective with teen learners, enabling flexibility of use, control over learning pace, individualization, privacy, and empowerment (Askov & Bixler, 1998). ELLs have benefited because computers are patient, consistent, and nonjudgmental (Kamil, Intrator, & Kim, 2000). Several studies (Rao et al, 2009) suggest the use of technological tools specifically for adolescent literacy programs. Learning is significantly enhanced when 2 or 3 students are grouped to share language and experiences in learning (Willing & Girard, 1990), as is highly appropriate in Polynesian cultures. *New Beginnings for ELL* will advance evidence related to these conditions by collecting and evaluating data from PD participants and their ELLs.

Practice: Multimedia in Science and Associated Literacy. To develop a PD course for science, we will build on prior research in *ACE Literacy* programs. We will develop a step-by-

step protocol for science, just as in TeenACE for Writing, which has been developed and tested with over 350 youth in a variety of settings by the instructors proposed in this proposal. Evaluations focused on improvement of procedures. Overall, the evidence confirms that TeenACE has the theoretical promise of a multimedia-based program of supplemental support to promote writing, vocabulary, and comprehension in teenagers (ages 10 and above), including ELL, who are well below grade level in language arts/literacy. Participants will benefit from the task of writing a scientific report based on a set of pictures using multimedia software (see sample Lesson Plan, SRSD protocol and self-monitoring graphs in Appendix C). The text that they generate, write, read, record, listen to, and eventually display and discuss with their peers, teachers, and community members should be very engaging for the teens and should assist them in making rapid gains in thinking in the scientific process, vocabulary, reading fluency, comprehension, and school connection. Applying these successes to support learning in the science curriculum is a step towards "science (standards) for all students" (NSF, 2006). Writing in science will be assessed using 5-point scales from the Hawai'i State Standards for Science.

Practice: Multimedia in Mathematics and Associated Literacy. To develop another PD course for math as described for science above, we will build on prior research in *ACE Literacy* programs. We will develop a step-by-step protocol for math. Over the years, there has been a misconception that math is nonverbal, so ELLs can be easily included in mainstream math classes. However, a respectable body of knowledge has been developed about what kinds of language cause difficulty for ELLs. Mathematics involves critical thinking, reasoning, and problem solving. Most studies of language difficulties in math are descriptive, listing and explaining the kinds of vocabulary that ELLs have trouble with, the sentence structures that cause problems, the correspondence or non-correspondence of words and symbols affecting math

learning, characteristics of word problems that make their comprehension difficult, and so forth. These features of the special language of mathematics are often referred to as a *math register.*

Then, what can research tell us about what individual teachers should be doing to improve the math achievement of ELLs? Based on a review of the literature, we will develop PD activities for teachers of math to ELLs around the following criteria: (1) Teachers must know the academic language associated with math well enough to be able to use it automatically in their classroom interactions with students. They must also understand the importance of explicitly teaching the language of math, and know how to effectively teach academic language to ELLs. (2) They must know how to structure small-group interaction so students can and will take advantage of the safe environment of small groups to use academic math language as they talk about math processes and concepts. They must know how to scaffold students' interactions in small groups and how to gradually reduce the scaffolding so students will become comfortable interacting in whole-class situations. (3) They must become familiar with their students' backgrounds in order to make the math curriculum culturally relevant by drawing on the knowledge and resources of students' homes and communities. (4) They must practice teaching strategies that can help improve the effectiveness of math teaching for ELLs. Words which have different meanings in different contexts can be stumbling blocks for ELLs. Math vocabulary often uses words with everyday meanings which have very specific meanings in mathematics—words like *product, root, function,* or *right*, as in *right angle*. Teachers can help students by pointing out that some words have specific meanings in mathematics, and when possible, trying to show how their mathematical meaning connects with their everyday real-world situations.

One way to give students a boost in their math vocabulary is to be aware of cognates—words which sound the same across languages because they have a common origin. Even simple

word problems in mathematics can be difficult for ELLs because they require students to use language to understand the relationships between mathematical operators and numbers. There may be several ways to express a mathematical operation in a word problem. Although the specifics of vocabulary and sentence structure are important, they are not the end goal of mathematics education. Rather, they are a communicative toolkit which gives students the ability to think in mathematical ways and to communicate to others their mathematical thinking.

Multicultural Proficiency. Culture impacts children's learning process and social adjustment, and providing developmentally and culturally appropriate practice (DCAP) is at the core of the teaching profession (Robles de Melendez & Beck, 2007). Multicultural education has become a critical component for school personnel preparation and professional development, and it should include an understanding of a variety of cultures (NCCTQ, 2007). We will develop a multicultural workshop and integrate it within our course to provide information on theories, practices, and resources relating to multicultural issues and competency in teaching CLD students (Hitchcock, Prater, & Chang, 2009). Teachers will participate in 3 activities where they discuss and demonstrate professionalism, ethical practices, and competency in teaching CLD students.

Students who are ELL and Response to Intervention (RTI). Disproportional numbers of culturally and linguistically diverse students (ELLs) continue to be identified and placed in special education programs (Sullivan, 2011). This project will be embedded within **a Response to Intervention (RTI)** model, which is a systematic intervention approach that integrates assessment and intervention within a multi-level system to maximize student achievement as well as to reduce behavior problems (Vaughn & Fuchs, 2003). With RTI, schools can identify students at risk for poor learning outcomes, monitor student progress, provide evidence-based

interventions and adjust the intensity and nature of those interventions. The RTI model focuses on providing support services in a timely manner, unlike the traditional approach where students can only receive support services *after* receiving a formal disability diagnosis. This also reduces the need for children to receive special education services in order to obtain support (Kame'enui, Good, & Harn, 2005). In Hawaii, schools use a process based on the child's response to scientific, research-based intervention, within a 3-tier model. RTI's systematic intervention approach allows for the continuous evaluation and re-evaluation of a student's progress.

Tier 1: School-wide Instruction and Student Assessment. Tier 1 begins with high quality evidence-based instruction where the applied core curriculum materials are ensured to be evidence based and backed by research. Regular school-wide assessments are conducted to monitor students' academic progress.

Tier 2: Supplementary Instruction and Progress Monitoring. Tier 2 provides targeted academic and behavioral services for struggling students who have been identified through the progress monitoring process in Tier 1. Interventions at the Tier 2 level are more intense and are focused on the specific needs of a student. Progress is monitored more frequently to determine student responsiveness to the interventions provided.

Tier 3: Intensive Instruction and Continued Progress Monitoring. Students who continue to be unsuccessful despite Tier 2 interventions receive more intensive and individualized services. Progress is monitored frequently, and those who do not make adequate progress are evaluated further to determine the presence of any specific disabilities.

The RTI model uses formative assessment data (such as curriculum-based assessment measures) to determine whether students are progressing as they should or additional supports

are needed. In this project, we will implement this model on ELL students, including those who have been identified as at risk and require more intensive supports in Tier 2 or 3 of the model.

Improvement of Teaching and Learning to Achieve Rigorous Standards

In Hawaii, the ESL Program Assessment Procedures and Exit Criteria (http://sssb.k12.hi.us/esll/Sep%2027%20memo.pdf) and Flow Charts are to be used to determine the English proficiency level of students in K-12 before exiting the ESL program. There likely is no such criteria in AS and RMI since virtually all students are ELL. *New Beginnings for ELL* English learning support program and evaluation will be aligned with the state's criteria to support rigorous academic standards for students.

New Beginnings for ELL will allow teachers to earn professional development credits, improve skill and confidence in the classroom, become part of a network of teachers around the Pacific facing similar challenges, and create effective and positive learning experiences for ELLs. We will align with a new DOE initiative to establish standards for high quality teachers of students who are ELL (12 credits) as well as general education teachers (6 credits). Our online classrooms have the potential to connect teachers on isolated islands and in rural areas who have limited PD options.

The PD programs will be available to all interested teachers and educational aides in Hawaii, AS, and RMI, and we have already established collaborative relationships in regions with site team members (see Letters of Commitment). Years 1 to 5 are presented in Table B along with estimates of participations by teachers, aides, and students. During the project, we will serve over 200 teachers, 300 educational assistants, and 1,000 students (Projections by Site, Table B. below).

Table B. Projections by Year, Site, and Activity for Project Participants (*T=Teacher, EA=Educational Aides, Stu=Student*)

YEAR	1: Regional credentials, ELL curriculum, pilot, 2 Master Teachers each site			2: Distance education certification at each site, evaluation system, training at 3 sites			3: Maintain all sites, refine curriculum & implementation, evaluate progress & outcomes			4: Maintain all sites, finalize curriculum & implementation, evaluate progress & outcomes			5: Maintain all sites; expand to world markets; final evaluation, products, & outcomes			SUBTOTALS			Site Total
	T	*EA*	*Stu*	*T*	*EA*	*Stu*	*T*	*EA*	*Stu*	*T*	*EA*	*Stu*	*T*	*EA*	*Stu*	*T*	*EA*	*Stu*	
HI-DOE	2	2	4	15	20	70	30	30	120	30	40	140	30	40	140	107	132	474	**713**
AS	2	2	4	5	10	30	7	15	44	10	15	50	12	20	64	36	62	192	**290**
RMI	2	2	4	4	8	24	6	10	32	8	12	40	10	14	48	30	46	148	**224**
World													40	60	200	40	60	200	**300**
Subtotal	**6**	**6**	**12**	**24**	**38**	**124**	**43**	**55**	**196**	**48**	**67**	**230**	**92**	**134**	**452**	**213**	**300**	**1,014**	
Total	**Yr 1 = 24**			**Yr 2 = 186**			**Yr 3 = 294**			**Yr 4 = 345**			**Yr 5 = 478**			**5-Year Total = 1,527**			

B. Project Personnel

The Center on Disability Studies (CDS) at the University of Hawaii (UH), the most ethnically diverse major campus in the U.S., practices the recruitment and selection of personnel affirmatively and without discrimination (see GEPA and EEO/AA Statement). In this project, special initiatives will ensure full and effective participation of individuals who are traditionally underrepresented. Identified project staff include a high proportion of ethnic minorities. The P.I. is a native Korean who came to the U.S. for her graduate degrees and has worked at schools and universities in Hawaii for over two decades. The Project Coordinator is of Chinese ancestry from Hawaii. One of the Project instructors is of Chinese/Hawaiian ancestry, and the other is a native of Canada and of a bilingual French Canadian background. The Evaluator is a native of China. Each has a family member with a disability. For Master Teachers and other personnel, we will continue to be proactive in the recruitment of underrepresented individuals.

B.1. ***Qualifications of the Project Director or Principal Investigator (P.I.).***

Weol Soon Kim-Rupnow, Ph.D. (.80 FTE), P.I., will serve as Project Director. Dr. Kim-Rupnow, the current Director of the ELL-ACE Project, was born, raised, and educated in the Republic of Korea. After nine years of successful teaching in Korea, she moved to the U.S. to pursue further education, requiring her to successfully gain English proficiency. She then completed a second Master's degree and a Ph.D. degree, while teaching ESL students and computer skills part-time at schools for 6 years. Her doctoral dissertation was entitled, "The Role of Metacognitive Skills in Young ESL Students' Writing Revisions." Since 1993, she has been employed by CDS where she has successfully directed and completed many projects funded by the U.S. DOE. As a primary developer of Computer ACE for Phases 1 and 2, Dr. Kim-Rupnow's passion for teacher training in using technology for ELLs continues to grow. Her guidance and

leadership for this proposed project will be immense, since it deals with her primary area of interest in which she has researched and published extensively. Dr. Kim-Rupnow has extensive experience with multi-media and delivering distance education, and we have confidence in her determination to carry out successfully the proposed project, as she has done in previous projects.

B.2. Qualifications, including Relevant Training and Experience, of Key Personnel.

(1) Instructor: Caryl H. Hitchcock, Ph.D. (.20 FTE). Dr. Hitchcock is Assistant Professor of Disability Studies at CDS and serves as Associate Graduate Faculty in the field of Special Education at the UH. Dr. Hitchcock has served as Co-Instructor with Dr. Kim-Rupnow on the ELL-ACE Project and has made solid contributions to the PD courses offered. She has 15 years experience as a School Psychologist with the Hawaii State Department of Education, assessing and developing programs with culturally and linguistically diverse students and their families. She developed the ACE literacy-improvement programs in Molokai, Hawaii, and trained teachers and community members. She has published research in peer-reviewed journals, including articles on literacy topics, and use of technology to promote learning with young children. She has presented her research at national and international conferences and won the HERA Distinguished Paper Award in 2002 (VSM and reading) and 2009 (Cultural Competence in Education). Dr. Hitchcock will bring her expertise with development of PD training modules for science and mathematics as well as multicultural proficiency to the project.

(2) Instructor: JoAnn W. L. Yuen, Ed.D. (.10 FTE). Dr. Yuen is Associate Professor at CDS and has been the P.I. on a variety of U.S. DOE grants, including, Community Technology Center (Full TLT2: Teen Literacy through Technology) and Native Hawai'i Education Grants (Hana Like: Education of Native Hawaiians). Her considerable experience includes the coordination of current and new multimedia ACE programs at schools and agencies.

Dr. Yuen has expertise in designing and conducting qualitative research. She has published research on ACE, Asian and Pacific Island education, and best practices to promote self-determination, self-advocacy, and self-esteem in students who are at-risk. Dr. Yuen will also contribute her background knowledge as journalist, computer-based multimedia specialist, and educator. She has more than 20 years experience with the Hawai'i Departments of Health and Education. She will work closely with the P.I. and other instructors, teaching one of the PD courses--Teen ACE Literacy for Mathematics.

(3) Project Coordinator: Loryn Gum, M.Ed. (1.00 FTE). Ms. Gum is a Junior Specialist at CDS. She has been the ELL-ACE Project Coordinator since September 2008 and will continue her role in the proposed project. She has been instrumental in organizing and managing the Project's daily operations and moving the Project forward. She coordinates efforts with the partnering education offices and internal UH partners; promotes the project and its courses; creates and manages the online course sites; informs, coaches, trains, and advises instructors, mentors, and participants; and compiles surveys and evaluations; and performs other administrative duties. Ms. Gum earned an M.Ed. and a B.A. in Teaching ESL from the UH, a top school for second language learning studies. She has worked in the field of ESL for over 25 years with populations from over 45 countries in various ESL, academic, literacy, workplace, healthcare, and welfare programs to improve their life opportunities. Ms. Gum will work closely with the P.I. on daily operations of the project, and curriculum and materials design, coordination of activities with partners, and professional development courses for in-service teachers.

(4) Evaluator: Chuan Chang, Ph.D. (.20 FTE). Dr. Chang is an Assistant Specialist in research design and evaluation at CDS and has extensive background in quantitative research. Her research interests include evaluation of community-based intervention programs, cultural

competence issues, and positive immigrant youth development. She has done external and internal program evaluation using mixed methods for several federal and state funded projects, including community-based literacy development projects and a 5-year youth transition project funded by the National Science Foundation. She will provide the needed expertise for the collection, collation, and analysis of data from the school sites. Her contribution will emphasize her expertise in standardized academic assessments, evaluations, and literacy interventions. She will monitor the integrity and outcomes of this project and ensure quality evaluation across all sites to address appropriately competitive priority 2 in the proposed project.

C. MANAGEMENT PLAN

C.1. Adequacy of the Management Plan

The project will be run by the overall management of CDS, building on the expertise and experience of its staff. The project is a *collaboration* across the participating sites. Current and new personnel will work together to ensure that all project goals and objectives are met in a timely and effective manner. As indicated in Table A, the Project Design and Work Plan sets forth the project with specific goals and objectives. Included within the objectives are specific project activities, responsible personnel, targeted outcomes (milestones), and timelines.

C.2. Time Commitments of Key Personnel

The project will be properly staffed (§B). The time commitments of project staff and other support persons are appropriate and adequate to meet the objectives of the proposed project (see Table A, Project Objectives and Timelines; and the Personnel Time commitments in §B and Budget Narrative).

Adequacy of Procedures for ensuring feedback and continuous Quality Improvement in the proposed project's operation. *New Beginnings for ELL* will adapt the successful system for

planning and managing resources and activities now used by CDS in conducting training projects. The management system includes these components: project staff meetings every two weeks; quarterly face-to-face, tele-conference, or web-conference meetings with SC and advisory board members to coordinate activities and update work plans; semi-annual progress reports by Master Teachers; and annual work plans and evaluation reports by project staff (with objectives, activities, timelines, resources needed, and projected products and outcomes). These planning and management activities are directly integrated with this project's overall evaluation and management systems and will be the P.I.'s primary responsibility. She will also maintain regular phone and e-mail contact (monthly or as often as needed) with the Project Officer. Personnel in schools implementing ACE strategies will communicate often through online forums (weekly during the semester) as part of PD course website. The feedback received through formal evaluation (see §D) and informal communication will be used to improve all project components.

D. PROJECT EVALUATION

D.1. Methods of Evaluation as Thorough, Feasible, and Appropriate

The evaluation is designed to achieve the goals and objectives in Table A. Project Design and Work Plan, and also as specified below, based on recommendations by Owen (2006), Fetterman and Wandersman (2005), and current federal rules. The *evaluation goals* address federal (GPRA) goals as follows: (1) improve in-service teacher education to better prepare teachers to effectively instruct ELLs (**Goals 1, 2, 4, 6**); (2) conduct pre- and post-training assessment and collect pre- and post-implementation data on the effectiveness of completers and program graduates to determine the project's impact on the academic achievement and English language development of ELLs (**Goals 2, 3, 4**); and (3) support high-quality professional development for secondary content teachers to improve the academic achievement, literacy, and

language development of ELLs, and to provide instruction that reflects aligned State English language proficiency standards, content standards, and assessments (**Goals 1, 2, 4, 5**).

The local evaluation goals and person(s) responsible are: (1) provide evidence of integrity and compliance under the grant funding agreement (**PI**); (2) meet the needs of teachers, students, families, and local schools, including the partnering educational agencies (**PI, PC**); (3) provide process and performance information that allows continual realignment and improvement of project goals (**PC, Ins, SC, MT, EV**); (4) respond to the reality of community variables (both helpful and unhelpful) that may influence the project beyond its control (**PI, PC, SC**); and (5) meet objective and subjective measures of quality of life, value of goals (**PC, MT, EE**), etc.

Thorough, feasible, and appropriate evaluation methods are achieved because all activities (under the 6 goals and 20 objectives) and outcomes are readily and objectively determined (see Table A). We will regularly review progress—at each site with support from staff and the external evaluator—via *outcome, impact*, and *implementation,* embracing a "logic model" of tracking progress (see headings on next page). The evaluation plan is based on strategies developed under the Government Performance & Results Act (GPRA) (1993) by attending a workshop at Project Directors' meetings and teleconferences provided by U.S. DOE, a background in grant reporting, and from previous federal grant evaluations.

D.2. Measures Related to Intended Outcomes and Data (Quantitative and Qualitative)

Evaluation strategies are clearly set out in this Section and in Table A. Much of the data is for the immediate benefit of PD participants and their ELLs. Ongoing data collection will be conducted on ELLs in State-specified standards for all aspects of literacy, science, and math, and school records for overall educational progress (attendance, grades, etc.), especially rates of

existing ESL designation. Independent evaluation will corroborate changes and observations, further strengthening the rigor.

Online courses have many components and dimensions. Both the form (structure) and the content (expression) are situated in an overall environment, and their sum results in student outcomes and learning. To facilitate construction and evaluate the quality of our online courses, we will use a 4-part rubric designed by Ternus, Palmer, & Faulk (2007): Structure (context, organization, and environment), Content (presentation of information), Processes (relationships and interactions), and Outcomes (mastery of content and course evaluation).

Dr. Chang will review overall grant performance from process and outcome data collected, and through direct observation, interviews, and surveys. She will examine Goals 1-6, in particular: (1) community needs assessment, satisfaction; (2) student outcomes on literacy, math, and science; (3) implementation plan analyses and fidelity; (4) program integrity; and (5) training evaluation and sustainability.

In addition, Governance Performance and Results Act (GPRA) performance measures will be used to judge the effectiveness of project implementation: (1) the percentage of in-service teacher completers who are providing instructional services to limited English proficient students (Goals 1, 2, 4); (2) the effectiveness of graduates/completers in the instructional meeting; measured in local and NCLB standards and language and literacy gains in their students (Goals 1, 2, 3, 4); (3) the degree to which IHE pre-service and in-service training programs are aligned with grades K-12 State standards and assessments, including English language proficiency standards and content standards (Goals 1, 2, 4, 5, 6).

D.3. Periodic Assessment of Progress towards Achieving Intended Outcomes to Provide Performance Feedback

Further evidence of thorough, feasible, and appropriate evaluation methods is included below. We will regularly examine all progress via performance measures, as indicated in Table A. Project Design and Workplan. **First, direct effects** on participating teachers, education assistants, community members (tutors), students, and the knowledge base will be evaluated by measures of **outcome and impact.** Each activity will be assessed using relevant outcome variables measured in terms of integrated use of technology in ELL classes, generalizing ACE strategies to similar learning environments, literacy and language, improved quality of life for participants (e.g., enjoyment of teaching and learning, persistence, increase in roles and responsibilities), and the amount of systems change (e.g., policies, especially new ones, adopting new teaching styles, budgets).

Measurable objectives for the project are specified in the activities listed in Table A. Each site will define broad goals (e.g., teacher involvement) *and* measurable objectives (e.g., student outcomes). **Second**, we will continually monitor the **planned activities** to ensure the project is **on track**. Revisions to programs will be identified during monthly tele- or web-conferences with each site. Site team meetings will be quarterly; the Evaluator and PI will consolidate all outcomes annually. These revisions will be classified into one of three levels of changes, to reflect the significance of the revision, following the Iterative Evaluation paradigm (Dowrick et al., 1996). **Third**, the *quality* of the project and its products, as suitable for replication, dissemination, and further development will be evaluated.

At the first level are ***Major Changes***, defined as those involving the development of procedures pertaining to substantial *new* areas of concern. For example, if new technology becomes available that automates video editing, thus incorporating feedforward for writing videos into the home setting, new goals, associated objectives, and activities would be needed.

At the next level are ***Secondary Changes,*** modifications *of scale* to existing goals or objectives. In the example above, we may need to reduce some previously planned activity to make room for new ones. Secondary Changes may become necessary on the basis of project findings or other new information. For example, if some participants show strong preferences for individualized/project-based learning, then programs will be adjusted accordingly.

At the third level are ***Technical Changes,*** defined as modifications to timelines, sequences, or other programmatic details. Examples include the frequency of meetings or the number of participants in specific training. **Revisions** will incorporate the **Logic Model** of Performance-Based Evaluation mandated for U.S. government agencies (P.L. 103-62, 1993; Wholey et al., 1994). Each month, we will review performance under 7 headings (**Logic Model**):

1. *Resources*: staff, community members, teaching protocols, etc.
2. *Processes (activities)*: training, measuring, designing, etc.
3. *Outputs*: protocols, skills learned, stories written, etc.
4. *Intermediate outcomes or results*: increased awareness, changed expectations, etc.
5. *More intermediate outcomes*: increased participation (person-hours, referrals)
6. *End outcomes/results*: increased literacy skills, improved quality of life, jobs, funding.
7. *Key external factors*: illnesses, hurricanes, bus strikes, and other uncontrollable events.

Thus, we can recognize intermediate events that *connect* processes to outcomes and include external factors that bear on the impact, even though they are beyond the designer's control. By Year 5, we expect to need no major or Secondary Changes, and only minor Technical Changes.