

Regional Education Laboratory (REL) Pacific: Random Assignment of Evaluation of Principles- Based Professional Development to Improve Reading Comprehension for English Language Learners (Task 2)

OMB Supporting Statement, Part A

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Introduction

This submission is a request for approval of data collection instruments that will be used to support the Evaluation of the Random Assignment of Principles-Based Professional Development to Improve Reading Comprehension for English Language Learners (Pacific-CHILD). The Pacific Communities with High-performance in Literacy Development (Pacific CHILD), is a professional development program for 4th and 5th grade teachers of secondary English Language Learners (ELL) in the Pacific region, developed by Pacific Resources for Education and Learning (PREL) with funding from Regional Education Laboratory-Pacific (REL-P). The Pacific CHILD program of professional development uses research-based instructional strategies appropriate for schools across the Pacific region. The Pacific CHILD program focuses on:

1. Using *informational* text to build reading comprehension skills.
2. Building the capacity of all students to use three reading comprehension strategies (vocabulary acquisition; question generation; and text structure) to improve reading achievement.
3. Improving pedagogy with targeted classroom organization and management practices (differentiated instruction).
4. Creating a format of instruction for 100% student engagement across the continua of reading skills and English language proficiency (interactive learning).
5. Refining practice in and with existing reading/language arts curriculum and texts.
6. Standards-based instruction, with an emphasis on closing the achievement gap between language minority and language majority students.

This study consists of two primary objectives. The first objective is to a) to determine the impact of the Pacific CHILD professional development for teachers in terms of their content knowledge, self-efficacy, and pedagogical skills, and b) to measure the impact of the Pacific CHILD professional development for teachers on student reading achievement. The second primary objective is to examine the extent to which schools and teachers receive the Pacific CHILD training and support as intended and the extent to which the Pacific CHILD model is implemented as intended. This study will also serve to inform future program improvement and replication of the Pacific CHILD program. Pacific Resources for Education and Learning (PREL) and its subcontractor, Berkeley Policy Associates (BPA), are conducting this study for the Institute of Education Sciences (IES) of the US Department of Education. While PREL delivers Pacific CHILD professional development, BPA serves as an independent evaluator. All data collection activities related to evaluation will be carried out by BPA staff.

The study adopts a cluster random assignment research design, in which the unit of random assignment is the school. Approximately 50 elementary schools in Hawai'i, the Commonwealth of the Northern Mariana Islands (CNMI), and American Samoa will be recruited for this study. The 50 schools selected and their participating 4th and 5th grade teachers will be randomly assigned to treatment and control conditions. Participating teachers in the 25 program schools will begin the two-year Pacific CHILD professional development during the 2007-2008 school year in American Samoa and CNMI and in the 2008-2009 school year in Hawai'i. Professional development services will be available to control schools and teachers after a 2-year embargo period in an effort to make participation in the study less of an obvious burden for control schools, which otherwise might feel that they do not benefit from the study. Data collection activities to support the study will begin only upon receipt of OMB approval.

Supporting Statement for the Paperwork Reduction Act

PART A: JUSTIFICATION

1. Circumstances that Make Data Collection Necessary

This information collection is being conducted as one of the Task 2 Studies (Rigorous Applied Research and Development) of the 2005-2010 Regional Education Laboratories Program. The current authorization for the Regional Educational Laboratories program is under the Education Sciences Reform Act of 2002, Part D, Section 174, administered by the Institute of Education Sciences' National Center for Education Evaluation and Regional Assistance. In addition, Title III of No Child Left Behind Act (NCLB) of 2002 calls for increased reform and accountability in the practice of instructing English language learners (ELLs) and all students reading below grade level in all American schools. The legislation specifically states that it is not acceptable for these students to continue to fall behind their peers. Closing existing achievement gaps in reading, math, science, and other areas of study is the primary goal of federal education policy. It is well-known that most schools need help achieving this goal, particularly in the jurisdictions (state education agencies) of the Pacific region. Although the figures vary from one geographic entity to the next, the challenges facing ELLs are pervasive and substantial across the region. In most Pacific communities, classes are taught in English, which is a second or third language for many students. In Hawai'i, where—with the exception of the Hawai'ian immersion schools—all instruction is in English, the number of ELL children in classrooms varies across the state, with an overall average of 7 percent. Instruction is also officially in English in the U.S. territories; however, the percentage of ELLs there is dramatically higher. ELLs constitute 78 percent of students in CNMI. In American Samoa, all students are ELLs—the mother tongue of students, teachers, and school administrators is generally Samoan.

PREL will implement and evaluate the Pacific Communities with High-performance In Literacy Development (Pacific CHILD) program, a professional development program for 4th and 5th grade teachers who teach English language learners (ELLs) across the Pacific region. There are three reasons PREL has selected this as a topic of investigation:

- (a) Various Pacific jurisdictions state in their educational plans the need to improve the quality of teachers in the areas of content knowledge and classroom instructional practices, especially as it relates to the reading comprehension of ELLs;
- (b) Under NCLB, schools in Hawai'i, the Commonwealth of the Northern Mariana Islands (CNMI), and American Samoa are held accountable for achievement in reading comprehension; and
- (c) This will contribute to the research on successful strategies in professional development, building on the previous work of PREL on the earlier version of Pacific CHILD which targeted 2nd and 3rd grade teachers (see Appendix A for features of previous and current Pacific CHILD programs). A study of the earlier version of Pacific CHILD has shown some promising results for both teacher and student outcomes (Chesswas, et al. 2005).

The Pacific CHILD program addresses the needs of teachers of English language learners (ELLs) by providing teachers with an intensive professional development designed to enhance their instructional skills to develop reading comprehension of all students in their classroom, particularly among ELLs. This professional development is a year round two-year program that combines intensive training sessions with regular and on-going demonstrations and modeling in teachers' classrooms, and weekly peer support group meetings.

The intervention's effectiveness will be assessed in approximately 50 schools in three jurisdictions in the Pacific. Twenty-five of these schools will be randomly assigned to a treatment group, which will be eligible to participate in Pacific CHILD for two years, and twenty-five will be assigned to a control group, which will be excluded from Pacific CHILD for two years. It is expected that the overall study sample will have approximately 270 teachers and approximately 6,600 students.

PREL's evaluation of Pacific CHILD proposes to collect data under its two main components and implementation and an outcome study.

Implementation Study

The primary purpose of the implementation study is to examine the extent to which schools and teachers in the study sample receive the Pacific CHILD professional development as intended and the extent to which the Pacific CHILD model is implemented with fidelity.

Key research questions regarding the implementation of Pacific CHILD include the following:

- Is the Pacific CHILD program as implemented providing all the activities, materials, and services planned?
- Are the activities delivered in the originally planned format, sequence, and timeframe?
- Are the appropriate personnel, training, supervision, and resources available at the right time and place to achieve program objectives?
- What are the characteristics of teachers participating in the program and their students?
- What is the teachers' level of exposure to program components?
- What barriers to achieving program objectives emerge?
- What is done to overcome these barriers?
- How are emerging strengths and weakness addressed via midcourse corrections in program design and implementation? What measures are taken to improve the program long-term?
- What is the level of satisfaction and of impact on attitudes and intentions of participants? How do these levels vary by subgroup (i.e., do teachers in different schools and/or entities report equal levels of participation? of satisfaction? How does level of satisfaction vary by degree of program exposure? by participant characteristics?)

These research questions will be addressed with data gathered from several implementation research activities. The Teacher Survey will be used to measure teachers' general experiences with professional development and, for treatment teachers only, their experience with the Pacific CHILD program. Some teacher background information will be also collected through this survey. The principal survey will be used to collect information on school policies and practices in professional development and school environment factors that might contribute to the implementation of a PD model. In addition, there will be data collection through observations and focus groups that are related to teachers' professional development in Pacific CHILD program to monitor the fidelity of the model.

Outcome Study

The primary purpose of the outcome study is to test PREL's hypothesis that: (a) Pacific CHILD improves teacher quality, in terms of their content knowledge, self-efficacy, and pedagogical skills, and (b) as teacher quality improves, so will the reading comprehension of students.

Key research questions regarding the impact of Pacific CHILD include the following:

- Do teachers who participate in Pacific CHILD demonstrate significant improvement in their content knowledge of reading comprehension and self-efficacy as compared to teachers who do not participate in Pacific CHILD?
- Do teachers who participate in Pacific CHILD demonstrate significant improvement in their classroom instructional skills for reading comprehension as compared to teachers who do not participate in Pacific CHILD?

- Do the students of teachers who participate in Pacific CHILD demonstrate improved academic achievement in reading comprehension, as compared to students in schools whose teachers do not participate in Pacific CHILD?

This study will measure outcomes in three different domains: (1) teacher pedagogical knowledge and self-efficacy, (2) teacher practice and classroom environment, and (3) student achievement. The Impact Survey will be used to assess teachers' understanding of using appropriate pedagogy for ELLs. The Teacher Survey (the same survey mentioned under the implementation study) will be used measure teachers' attitude and sense of self-efficacy. The teacher practice and classroom environment measures will be collected with in-class observations. Student achievement will be measured using existing standardized test score records. We will also collect available student information to be used as control variables.

Most of these data collected will be analyzed by estimating hierarchical linear model, taking into account the nested nature of the data (detailed analytical procedures are discussed in Section 16 of this document). Qualitative data such as in-depth observations of program implementation and the classroom environment will be analyzed using special software designed to identify and systematically describe pertinent aspects of the implementation of the Pacific CHILD program to inform subsequent replication and refinement.

Data Collection Instruments

Exhibit 1 below lists the instruments and the proposed dates for new data collection activities under the implementation and outcome studies. These instruments are included as Appendix B-I.

Exhibit 1: Data Collection Instruments and Proposed Implementation Dates

Data Collection Instruments	Proposed Fielding Dates	OMB Approval Required?
Teacher Survey (Appendix B)	Jan.- May 2008-2009 (AS & CNMI) Jan.- May 2009-2010 (Hawaii)	Yes
Impact Survey (Appendix C)	Jan.- May 2008-2009 (AS & CNMI) Jan.- May 2009-2010 (Hawaii)	Yes
Principal Survey (Appendix D)	Jan.- May 2007-2009 (AS & CNMI) Jan.- May 2008-2010 (Hawaii)	Yes
Teacher Focus Group/Interview Discussion Guide (Appendix E-F)	Jan.- May 2007-2009 (AS & CNMI) Jan.- May 2008-2010 (Hawaii)	Yes
PREL Staff Focus Group Discussion Guide (Appendix G)	To be administered annually during the treatment years.	No (Instrument provided for information only)
Professional Development Observation Guide (Appendix H)		
Classroom Observation Protocol (Appendix I)		

2. The study Purposes and Uses of the Data

The evaluation includes a study of implementation of the Pacific CHILD professional development program and a study of the intervention's impact on teachers and students. IES will use information from this study to assess the impact of Pacific CHILD on student reading comprehension in the Pacific. The lessons from this study will inform pedagogical practices (teacher quality) that improve students reading achievement in ELL contexts as well as mainstream classrooms. This study will not only affect future policy decisions about curriculum and pedagogical practices, but will also be highly relevant to similar efforts underway in the continental U.S., especially in remote, rural, and/or indigenous areas. The implementation data will serve to inform future program improvement and replication, and will provide documentation of the details of Pacific CHILD implementation for use by other institutions and entities that plan to implement a similar intervention.

3. Use of Improved Technology to Reduce Burden

Wherever possible, the study team will use current information technologies to maximize the efficiency and completeness of the information needed for the study and to minimize the burden placed on respondents. Web-based surveys may be considered in areas where respondents have access to technology. If web-based surveys are used, teachers and principals will be provided with a login name and password to protect their data. The web-based application will simplify completing the surveys, thus reducing the burden on respondents. Paper and pencil surveys will be used in areas where respondents are not expected to have access to technology or have difficulty utilizing available technology.

4. Efforts to Identify and Reduce Duplication

This study represents the only known effort to implement a random assignment of a professional development model to improve reading comprehension for English language learners in the Pacific region. Random assignment is considered a preferred study approach for measuring the impact of an intervention, as it allows researchers to make causal inferences with far more certainty than other methods. In non-randomized studies, no matter how well a comparison group is constructed, it is not possible to eliminate concerns for selection bias stemming from unobservable factors. By randomly assigning the subjects into control and treatment groups, researchers can conclude that any difference in outcome measures between the two groups is due to the intervention and not due to other factors. PREL's previous study of Pacific CHILD's design was not a random assignment study and it did not specifically focus on reading comprehension. As the proposed research is one of few rigorous studies employing randomized trials, it has the potential benefit of not only examining the impacts of the Pacific CHILD program with more certainty but also demonstrating the feasibility of conducting a rigorous study in the Pacific context.

5. Efforts to Minimize Burden on Small Businesses

The primary entities for this study are teachers, principals, and students (located within schools). Burden is reduced for all respondents by requesting only the minimum information required to meet the study objectives.

Schools (or districts) will transmit electronic files of student achievement data to the researchers. Only existing and necessary data (e.g., standardized test scores) will be requested from these entities, thereby reducing the burden to schools/districts.

6. Consequences of not Collecting the Information

This research effort is aligned with the mission of the Department of Education's Institute of Education Sciences (IES), which is to conduct rigorous research (based on a randomized controlled trial) that supports the solution of educational problems in the United States. Thus, if this data is not collected, the U.S. Department of Education, Congress, and other stakeholders will not have detailed information about the effects of the Pacific CHILD professional development program on improving service to ELLs. Moreover, if this data were collected less frequently, then there would be no sufficient documentation of how Pacific CHILD was implemented in the schools, or the impact of the intervention on teachers' instructional practices.

7. Special Circumstances

None of the special circumstances, as listed in 5 Code of Federal Regulations Section 1320.5(d)(2), apply to this study.

8. Federal Register Comments and Outside Consultants

A notice about the study will be published in the *Federal Register* when the final OMB package is submitted.

The data collection instruments were developed at Berkeley Policy Associates by a team under the direction of Dr. Yasuyo Abe and Dr. Raquel Sanchez. Input was obtained from PREL staff members, Dr. Roger Chesswas and Dr. Margaret Ho. During the course of this study we will draw on the experience and expertise of a technical working group (TWG). The TWG is comprised of nationally renowned research methodologists and content experts throughout the United States. TWG members include:

- Dr. Geoffrey Borman, University of Wisconsin-Madison
- Dr. Robert Boruch, University of Pennsylvania
- Dr. Daniel Brown, University of Hawai`i
- Dr. Thomas Cook, Northwestern University
- Dr. Margo Gottlieb, Illinois Resource Center
- Ms. Rosa, Salas Palomo, University of Guam
- Dr. Hiro Yoshikawa, Harvard University
- Dr. Shuquiang Zhang, University of Hawai`i

9. Payments to Respondents

Respondents will not receive payments as incentives to participate in this study.

10. Assurance of Confidentiality to Respondents

PREL and BPA will follow the confidentiality and data protection requirements of IES (The Education Sciences Reform Act of 2002, Title I, Part E, Section 183). Specifically, the Education Sciences Reform Act of 2002, Title I Part E, Section 183 requires "All collection, maintenance, use and wide dissemination of data by the Institute of Education Sciences "to conform with the requirements of section 522 of title 5, United States Code, the confidentiality standards of subsection (c) of this section, and sections 444 and

445 of the General Education Provision Act (20 USC 1232g, 1232h). These citations refer to the Privacy Act, the Family Educational Rights and Privacy Act, and the Protections of Pupil Rights Amendment.

We will protect the confidentiality of all information collected for the study and will use it for research purposes only. Any information that is obtained in connection with this study and that can be identified with any teachers, schools, or students will remain confidential and will be disclosed only with the participants written permission or as required by law. Information from participating schools and respondents will be presented at aggregate levels in reports. Information on teachers and students will be linked to their school but not to any individually identifiable information.

In addition, participant surveys include the following text regarding confidentiality: "Your responses to this survey will be used only for the research purposes. The results from this survey will be reported only in an aggregated format, and your name or your school will not be revealed. We will not provide information that identifies you or your school to anyone outside the study team, except as required by law".

Personal identifying information (e.g., name, address, institutional ID numbers) will be used by the study team only to link the different sources of data to each other. We will do this by creating a new ID number that is unique to the study. All individuals will be identified by this study ID number. Once the study ID number is created, the individually identifiable information will be de-linked from the data. We will keep a separate list that links the study ID to the individual in a secure location, according to our strict data-protection protocols. The privacy of the information collected will be protected by keeping all paper data in locked files (see Appendix N for data security policy and procedures). All computer records will be kept in password-protected, secure storage under the direct control of the researcher team. All person-identifying identifiers will be destroyed when they are no longer required. We will obtain signed affidavits of nondisclosure from all employees, subcontractors, and consultants that have access to the data containing individual-identifying information. Participation in the program and in the research study is completely voluntary. Volunteers may withdraw at any time and without consequences of any kind. Informed consent will be obtained from teachers who will participate in the study. A copy of these consent forms are included in Appendix J.

Information Sheets and Consent Forms

PREL will distribute information sheets and consent forms to each teacher during the recruitment process. Signed consent forms will be submitted to BPA. The information sheets, consent forms, and IRB approval are included in Appendix J and K.

Teachers

Each participating teacher will be provided with a consent form during recruitment. The consent form and information sheet will address all aspects of the study, including random assignment of the treatment group, confidentiality, participation in the focus groups and/or interviews, surveys, and classroom observations. The consent forms and information sheets clearly state that participation in the data collection activities is voluntary. Teachers will be asked to sign the consent form once during the study period. BPA researchers will also provide each teacher with a separate information sheet for each data collection activity, detailing the specific procedures for that activity (see Appendix J).

Students

We will seek passive parent consent for accessing student records. The study will not directly contact students or collect any information directly from students or their parents. We will utilize the existing data maintained by the schools or districts. Passive parental consent will be sought for all students enrolled in the participating schools as 4th or 5th graders during the study period.

11. Justification for Questions of a Sensitive Nature

No questions of a sensitive nature will be included in the teacher surveys or in the focus groups.

12. Estimate of Information Collection Burden

Estimates of the frequency and burden hours for each data collection activity are provided in Exhibit 2 below. Note that the number of years for data collection activities is three. During the first year of the study, the data collection mainly takes place in American Samoa and CNMI. During the second year, it will take place in all three jurisdictions. During the third year, it will take place only in Hawai'i. Exhibit 2 shows estimated burden hours for which OMB approval is sought for each year.

In addition to the data collection activities listed in Exhibit 2, we plan to conduct focus group interviews with PREL staff, collect existing standardized student achievement test results, and observe training sessions, teachers' classroom practices, coaching sessions, and teacher peer support activities. The participation in focus groups by PREL staff is considered as part of their implementation task and does not create any additional burden. The collection of existing test data will not cause any additional burden on students or teachers. Similarly, observations of persons during the normal course of their activities will not cause burden to the respondents. Consequently, these additional activities planned for the proposed evaluation are not presented in Exhibit 2.

Exhibit 2: Yearly Burden Estimates

Number of Respondents for the Entire Study Period

Respondent Type	Sample Size	Number of Respondents	Frequency of Data Collection Per Respondent	Instrument Administered
Teachers	256 (124 in Hawai'i & 132 in AS/ CNMI)	205 (99 in Hawai'i & 106 in AS/CNMI, with a response rate @ 80%)	3 per year	<ul style="list-style-type: none"> ▪ Teacher Survey ▪ Impact Survey ▪ Teacher Focus Group/Interview
Principals	50 (24 in Hawai'i & 26 in AS/CNMI)	40 (19 in Hawaii & 21 in AS/CNMI)	1 per year	<ul style="list-style-type: none"> ▪ Principal Survey
State or SEA administration	3 entities	3 entities	1 per year	<ul style="list-style-type: none"> ▪ Administrative data transfer
TOTAL	306 persons (148 in Hawai'i & 158 in AS/CNMI), and 3 institutions	245 persons (118 in Hawai'i & 127 in AS/CNMI) and 3 institutions		

Exhibit 2: Yearly Burden Estimates (Continued)

Burden Estimates: Study Year 1

Task	Sample Size Per Task	Expected Response rate	Number of Respondents Per Year	Yearly Response (Frequency of Data Collection)	Total Number of Responses	Time per Response (in hours)	Total Hours	Hourly Rate*	Total Cost Burden
Teacher Survey	132	80%	106 teachers (80% X 132 in sample) & 21 principals (80% X 26 in sample)	1 per year	106	0.50	52.8	\$20	\$1,056
Impact Survey	132	80%		1 per year	106	0.75	79.2	\$20	\$1,584
Principal Survey	26	80%		1 per year	21	0.33	6.9	\$40	\$277
Teacher Focus Group/Interview	66	80%		1 per year	53	1.50	79.2	\$20	\$1,584
Administrative data transfer	2	100%	2	1 per year	2	4	8	\$50	\$400
TOTAL			127 persons 2 institutions		287		226.1		\$4,901

Burden Estimates: Study Year 2

Task	Sample Size Per Task	Expected Response rate	Number of Respondents Per Year	Yearly Response (Frequency of Data Collection)	Total Number of Responses	Time per Response (in hours)	Total Hours	Hourly Rate*	Total Cost Burden
Teacher Survey	256	80%	205 teachers (80% X 256 in sample) & 40 principals (80% X 26 in sample)	1 per year	205	0.50	102.4	\$20	\$2,048
Impact Survey	256	80%		1 per year	205	0.75	153.6	\$20	\$3,072
Principal Survey	50	80%		1 per year	40	0.33	13.3	\$40	\$533
Teacher Focus Group/Interview	128	80%		1 per year	102	1.50	153.6	\$20	\$3,072
Administrative data transfer	3	100%	3	1 per year	3	4	12	\$50	\$600
TOTAL			245 persons 3 institutions		555		434.9		\$9,325

Burden Estimates: Study Year 3

Task	Sample Size Per Task	Expected Response rate	Number of Respondents Per Year	Yearly Response (Frequency of Data Collection)	Total Number of Responses	Time per Response (in hours)	Total Hours	Hourly Rate*	Total Cost Burden
Teacher Survey	124	80%	99 teachers (80% X 124 in sample) & 19 principals (80% X 24 in sample)	1 per year	99	0.50	49.6	\$20	\$992
Impact Survey	124	80%		1 per year	99	0.75	74.4	\$20	\$1,488
Principal Survey	24	80%		1 per year	19	0.33	6.4	\$40	\$256
Teacher Focus Group/Interview	62	80%		1 per year	50	1.50	74.4	\$20	\$1,488
Administrative data transfer	1	100%	3	1 per year	3	4	12	\$50	\$600
TOTAL			118 persons 3 institutions		270		216.8		\$4,824

Exhibit 2: Yearly Burden Estimates (Continued)

Burden Estimates: 2010-2011

Task	Sample Size Per Task	Expected Response rate	Number of Respondents Per Year	Yearly Response (Frequency of Data Collection)	Total Number of Responses	Time per Response (in hours)	Total Hours	Hourly Rate*	Total Cost Burden
Administrative data transfer	1	100%	1	1 per year	1	4	4	\$50	\$200
TOTAL			1 institution		1		4		\$200

13. Estimate of Total Annual Cost Burden

There are no direct start-up costs to respondents other than their time to participate in the study, as estimated above. Estimations of the value of participation time for each task are presented in Exhibit 2 above.

14. Estimate of Annual Cost to the Federal Government

The total cost to the federal government for the study, including the implementation of the intervention program, is expected to total approximately \$7.7 million over 5 years. The cost for the proposed random assignment study (excluding the implementation of the intervention) in Year 1 of the contract (March 2006-April 2007) was about \$560,000, which included costs for the redesign of the study, development of data collection instruments, background data collection, site selection, training of local contractors, IRB and OMB package preparation. The cost for the study in Year 2 (April 2007-March 2008) is estimated to be about \$488,000 which includes costs related to recruitment, baseline data collection, training of site visitors and observers, the first-round implementation study data collection (surveys and site visits) in American Samoa and CNMI. The cost for the study in Year 3 (April 2008-March 2009) is estimated to be about \$918,000, which includes costs related to baseline data collection in Hawai'i, the first-round implementation in Hawai'i, the first-round follow-up data collection in American Samoa and CNMI, the second-round implementation data collection in American Samoa and CNMI, and training of site visitors and observers. The costs for the study in Year 4 (April 2009-March 2010) is estimated to be about \$1,025,000, which includes cost related to the first round follow-up data collection in Hawai'i, the second round implementation data collection in Hawai'i, the second-round follow-up data collection in American Samoa and CNMI, the student records collection, and the processing and analysis of the collected data. The cost for the study in Year 5 (April 2010-March 2011) is estimated to be about \$994,000, which includes costs of the second round follow-up data collection for Hawai'i, the student data collection, data analysis, writing, and preparing reports. (The cost will be re-estimated each year depending on the progress of the project. The cost numbers presented here are only preliminary estimates and are expected to be adjusted, with the total target budget for about \$3.6 million for the study over 5 years.)

15. Change in Annual Reporting Burden

This request is for a new information collection, with a reporting burden of 226.1 hours for the 2007-2008 study year. (As indicated in Exhibit 2, an estimated annual reporting burden for the proposed study in subsequent years is 434.9 hours in 2008-2009, 216.8 hours in 2009-2010 and 4 hours in 2010-2011).

16. Plans for Tabulation and Publication

Plans or Analysis and Estimation Procedures

The study will produce four types of analysis which are intended to describe: (a) the study sample and study conditions, (b) the programs and their implementation, (c) the program effects, and (d) the relationship between program implementation and program outcomes. Key features of these analyses are summarized as follows.

Description of Context and Background

Even more than in education research conducted in the continental U.S., the correct interpretation of research findings from the study will depend on a good understanding of the study's political and cultural context, the varied background characteristics of participating teachers and students, and the sometimes extraordinary conditions under which professional development services will be delivered. To provide such understanding, the study design includes extensive baseline and background data collection even before random assignment of schools takes place. This data will be carefully analyzed to provide a comprehensive description of the study's context and to identify variation in study conditions and sample composition that can subsequently be used to analyze variation in program effects across sites and across subgroups of students or teachers. These baseline analyses will be both quantitative and qualitative in nature, combining statistical data collected from teachers, schools, and local education agencies (LEAs) with data garnered from qualitative observations and document review.

Description of Program Implementation

BPA will collect detailed qualitative and quantitative data on the implementation of the program. This data will be used to monitor the fidelity of program implementation, and will also be analyzed to provide a comprehensive description of the treatment as it was implemented on the ground. Such analyses serve two primary purposes: (a) to convince the study audience that any program effects reflect a fair test of the program as conceptualized, and (b) to provide a detailed program description that others can use to replicate the program, both within and outside the Pacific region. Questions that will be addressed in the implementation analysis include: *How intensive were the services provided to schools and teachers? How well did teachers take to the opportunities they were given? And, How much does implementing a program like this cost per school, per teacher, or per student?* The data collected from observations of the intervention program activities, focus group with teachers and reading specialists, and surveys of teacher and school administrator will provide the main input for the program implementation and fidelity monitoring analyses.

Description of Program Impacts

The description of program impacts is the central objective of this random assignment study design. The key outcome variables examined in the impact analysis are: teacher knowledge and self-efficacy, classroom teaching skills, and student reading comprehension. All three outcomes will be tracked over time to ascertain the impact the professional development implemented.

The random assignment study design assures that post-intervention differences between outcomes for teachers and students in the program and control groups are unbiased estimates of the program effects. However, there are significant benefits to using baseline covariates in the impact analysis, mostly in terms of increased statistical power. Thus, we plan to use multiple regression models to analyze the outcome data for this study. These models will control for student, school, and teacher background characteristics, all collected prior to random assignment.

For covariates at the student level, PREL plans to use mostly school-level or grade-level covariates, because individual-level student background data is not always available and may lead to observations being dropped from the analysis due to missing data. For the purposes of increasing statistical power, it is most important to control for student outcomes at the aggregate (school) level. School-level covariates minimize random school-to-school variation in background characteristics between the program and control group schools. To create these aggregate covariates, PREL will assess reading test outcomes measured prior to random assignment. At the teacher level, PREL plans to control for teacher education level and experience, as well as basic demographic characteristics, such as age, gender, and ethnicity. A somewhat simplified format for a student-level impact regression model would appear as follows:

$$Y_{ijk} = \beta_0 + \beta_1 P_k + \sum \beta_z Z_i + \sum \beta_x X_j + \sum \beta_s S_k + \gamma_k + \delta_j + \varepsilon_i \quad (1)$$

In this model, Y_{ijk} represents outcome Y (a standardized reading comprehension test score, for example), measured for student i with teacher j in school k . P_k is a program variable, which is measured at the school level and has a value of 1 for program schools and 0 for control schools. β_1 is the program effect associated with this variable. Z_i , X_j , and S_k are three vectors of control variables, for students i , teachers j , and schools k , respectively. Each of these vectors is accompanied by a series of regression coefficients (β_z , β_x , and β_s). Separate error terms for schools, teachers, and students are represented by γ_k , δ_j , and ε_i , respectively. Although Equation (1) as written appears to represent a fixed effects regression model, PREL does not plan to estimate it that way, because doing so would not be appropriate given the hierarchical nature of the data. Instead, the models will be estimated as a series of three nested hierarchical models (at the school, teacher, and student levels), in which the unexplained error at one level becomes the outcome to be explained at the next level. After estimating these regression models, PREL will use the estimated coefficients to calculate regression-adjusted mean outcomes for program and control schools. The regression-adjusted means will be presented in tables and figures so that readers do not have to interpret regression coefficients to learn about the impacts of the program.

Reporting Plan

PREL will report findings based on the key study questions in technical and nontechnical reports. PREL will prepare a technical report for U.S. ED/Institute of Education Sciences (IES) peer review and for possible publication in peer reviewed journals, and make revisions based on the feedback. PREL will then translate the technical report into a user-friendly, nontechnical version for dissemination across the region to policymakers and educational practitioners, and to the state and federal resource centers. After the approval of the technical report by the U.S. ED, PREL will submit the draft nontechnical report to the U.S. ED for review and comment. Based on the U.S. ED's comments on the draft nontechnical report, PREL will submit a final non-technical report to the U.S. ED. Both reports will include a structured abstract and a nontechnical stand-alone executive summary. PREL will provide the U.S. ED with an electronic copy of the data collected for public use, along with an electronic codebook with information about the data file structures, fields, and variable labels in each file. The reports and data to be shared with the U.S. ED will be stripped of all names and information that could identify school, teacher or student. PREL will review the risk of deductive disclosure and will exclude any information that would allow the identification of school or individual. If exclusion of certain variables to protect the identify of the school or individual leads to the loss of key information, we will provide appropriately aggregated data with respect to those variables.

Study Timeline

The study's time-table is as follows:

Exhibit 3: Overview of Planned Study Timeline

Finalize the Revised Task 2 Research Design	
Final	January 2007 (<i>Completed</i>)
Instrument for Implementation Data Collection	
Draft	January-March 2007 (<i>Completed</i>)
Pilot	April 2007 (<i>Completed</i>)
Revised Instruments	May 2007 (<i>Completed</i>)
Instruments for Outcomes Data Collection	
Draft	January-March 2007 (<i>Completed</i>)
Pilot	April 2007 (<i>Completed</i>)
Revised Instruments	May 2007 (<i>Completed</i>)
OMB Approval	
Submission to ED (for 60-day posting)	May 21, 2007 (<i>Completed</i>)
Publish 60-day Federal Register Notice	June 28, 2007 (<i>Completed</i>)
Submission to OMB (for 30-day posting)	September 4, 2007 (<i>Completed</i>)
Publish 30-day Federal Register Notice	September 15, 2007
Approval	October 30, 2007
IRB Approval	
Conditional Approval	April 2007 (<i>Completed</i>)
Full Approval	June 2007
Technical Working Group Meetings	August 2007 (<i>Completed</i>), 2008, 2009, & 2010
Implementation of the Intervention (treatment group)	2007/08 – 2008/09 (AS and CNMI) 2008/09 – 2009/10 (Hawai'i)
Site Selection and Random Assignment	
Sampling	2007/08 (<i>Completed</i>)
Recruitment	2007/08
Random Assignment	2007/08
Data Collection	
Baseline Data Collection*	2007-2008
Implementation Study Data Collection	2007/08-2008/09 (AS and CNMI) 2008/09-2009/10 (Hawai'i)
Teacher Outcomes Data Collection	March –May 2008, March- May 2009
Collection of Existing Student Test Data	As they become available.
Reporting	
Draft Technical Report	July 2010
Final Technical Report	December 2010
Draft Non-Technical Report	January 2011
Final Non-Technical Report	March 2011

Note: *Baseline data collection does not include any instruments that required OMB approval.

17. OMB Expiration Date

All data collection instruments will include the OMB expiration date.

18. Exceptions to Certification Statement

No exceptions are requested.

References:

Chesswas, R., Keir, S., Leung, E., & Terada, W. (2005). *Evaluation of the outcomes and impact of the Pacific CHILD professional development model*. Honolulu, HI: Pacific Resources for Education and Learning.

U.S. Bureau of Labor Statistics (2006) "U.S. Department of Labor: Occupational Employment Statistics." *May 2006 State Occupational Employment and Wage Estimates: Hawaii: Education, Training and Library Occupations*. Accessed 12 June 2007. http://www.bls.gov/oes/current/oes_HI.htm#b25-0000