CENTER FOR APPLIED LINGUISTICS

Washington, DC

Proposal

Request for Proposal: *"Professional Development Options for VPI+ Early Learning Providers" (RFP# DOE-PDO-215-11)*

Commonwealth of Virginia, Department of Education, VA

July 8, 2015

CENTER FOR APPLIED LINGUISTICS

About CAL

The Center for Applied Linguistics (CAL) is a private, non-profit organization founded in 1959. Headquartered in Washington DC, CAL has earned an international reputation for its contributions to the fields of English as a second language, bilingual and dual language education, world languages education, language policy, assessment, immigrant and refugee integration, literacy, dialect studies, and the education of linguistically and culturally diverse adults and children.

CAL's mission is to promote language learning and cultural understanding by serving as a trusted source for research, resources, and policy analysis. Through its work, CAL seeks solutions to issues involving language and culture as they relate to access and equity in education and society around the globe.

CAL is led by a team of highly qualified and talented researchers, language scholars, and experienced practitioners, many of whom are recognized leaders in their fields. Our Board of Trustees, composed of leaders in the fields of applied linguistics, language education, research, testing, finance, and marketing, provides guidance and direction to accomplish our mission.

Services Provided by CAL

CAL's experienced staff conduct research, develop language assessments and instructional materials, provide professional development and technical assistance services, offer online courses, and disseminate information and resources related to language and culture.

Our clients include federal and state agencies, school districts, universities, refugee service providers, foundations, associations, and businesses. CAL typically operates as many as 50 projects at any given time, with periods of performance from a few days to 5 years or more.

CAL conducts large-scale and small-scale research projects on a wide variety of topics related to our mission, including language teaching and learning, literacy, assessment, and the use of language in society.

CAL offers extensive research-based professional development and technical assistance services, many of them with an online component. Our cadre of experienced service providers can work with you to customize solutions to meet your needs.

For current information about CAL projects and products, visit our Web site at www.cal.org/solutions

1. TABLE OF CONTENTS

CALSolutions
PreK-12 ELL Education

Table of Contents

RFP Cover Sheet 1
Addendum No.1 Acknowledgment 2
Attachment A - State Corporation Commission Form 3
Confirmation of Offeror's Acceptance 4
Proprietary Information 6
Attachment B - Data Security Template 8
Attachment D - Offeror Data Sheet (D-I-1) 14
Attachment D - Offeror Data Sheet (D-I-2) 81
Attachment E - Pricing Schedule (D-I-1) 98
Attachment E - Pricing Schedule (D-I-2) 99

2. REQUESTED DOCUMENTS

i. RFP Cover sheet and addenda acknowlegments
ii. Attachment A
iii. Confirmation of Offeror's acceptance of RFP

CALSolutions
PreK-12 ELL Education

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF EDUCATION
REQUEST FOR PROPOSAL (RFP)

Issue Date: June 10, 2015 **RFP# DOE-PDO-2015-11**

Title: Professional Development Options for VPI+ Early Learning Providers

Commodity Code: 92416 and 92441

Issuing Agency: Commonwealth of Virginia
Department of Education
101 North 14th Street
Richmond, Virginia 23219

Using Agency And/Or Location
Where Work Will Be Performed: Virginia Public School Divisions

Initial Period Of Contract: From Date of Contract Award Through June 30, 2019 (renewable).

Sealed Proposals Will Be Received Until **2:00 P.M, July 10, 2015** For Furnishing The Goods/Services Described Herein. No proposal shall be accepted after this deadline unless the due date has been previously changed by an Addendum.

All Inquiries For Information Should Be Directed To: Marie Williams Via E-mail marie.williams@doe.virginia.gov by **5:00 P.M., July 1, 2015.**

PROPOSALS MUST BE DELIVERED TO THE JAMES MONROE BUILDING, 101 N. 14TH STREET, RICHMOND, VA, 23219, 21ST FLOOR, DEPARTMENT OF EDUCATION PROCUREMENT OFFICE, TO THE ATTENTION OF: Marie Williams (See Section X, #7. Identification of Proposal Envelope.) This is NOT a mailing address. It is recommended that proposals be hand delivered or express delivered in advance of the due date and time set for receipt of proposals.

In compliance with this Request For Proposals (RFP) and all conditions imposed in this RFP, the undersigned firm hereby offers and agrees to furnish all goods and services in accordance with the attached signed proposal or as mutually agreed upon by subsequent negotiation, and the undersigned firm hereby certifies that all information provided below and in any schedule attached hereto is true, correct, and complete.

* Virginia Contractor License No. _____
Class: _____ Specialty Codes: _____

* DSBSD-certified Small Business No. _____

Name And Address Of Firm:
Center for Applied Linguistics
4646 40th Street NW,

Washington DC Zip Code: 20016
eVA Vendor ID or DUNS #: VS0000051972
Fax Number: (202) 362 3740
E-mail Address: Contracts@cal.org

Date: 7/7/15
By: M. Beatriz Arias
(Signature In Ink)
Name: M. BEATRIZ ARIAS
(Please Print)
Title: Vice President
Telephone Number: (202) 362 0700

PREPROPOSAL CONFERENCE: An optional proposal conference will be held at **11:00 A.M on June 23, 2015**, in the Harrison Conference Room on the 24th floor of the Monroe Building, located at 101 N. 14th Street, Richmond, VA 23219 (Reference: Section X, Paragraph 8 herein). If special ADA accommodations are needed, please contact Marie Williams at 804 225-2040 or marie.williams@doe.virginia.gov by **11:00 A.M on June 18, 2015.**

Note: This public body does not discriminate against faith-based organizations in accordance with the *Code of Virginia*, § 2.2-4343.1 or against a bidder or offeror because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment.

June 29, 2015

ADDENDUM NO.1 TO ALL OFFERORS

Reference – Request for Proposal:	RFP #DOE-PDO-2015-11
Commodity Code:	92416 and 92441
Dated:	June 10, 2015
For Delivery To:	Department of Education
Offer Due:	Until 2:00 PM, July 10, 2015
Pre-proposal Conference:	11:00 a.m., June 23, 2015

The above is hereby changed to read:

1. Reference Section II. BACKGROUND, Page 5, Table I, Total # New Classrooms Years 1-4 for Henrico: change "10" to "53."
2. Reference Section IV. STATEMENT OF NEEDS, page 9, D: change text to "The contractor must certify that all employees and subcontractors who will provide services on school property have not been convicted of a felony or any offense involving the sexual molestation or physical or sexual abuse or rape of a child, and agree to provide such certification on a form required by the local school division, if requested (see VA Code§ 22.1-296.1)."
3. Reference Section V. B. SPECIFIC PROPOSAL INSTRUCTIONS #2: add "iv. Certification that all employees and subcontractors who will provide services on school property have not been convicted of a felony or any offense involving the sexual molestation or physical or sexual abuse or rape of a child, and agreement to provide such certification on a form required by the local school division, if requested (see VA Code§ 22.1-296.1)."
4. Reference Attachment D and references to Attachment D on page 12 and 24: Replace original Attachment D with "Attachment D – Revised Response Template for Professional Development Offering."
5. Reference Attachment E and references to Attachment E on page 12 and 24: Replace original Attachment E with "Attachment E – Revised Pricing Schedule."

Note: A signed acknowledgment of this addendum and attachment must be received at the location indicated on the RFP either prior to the proposal due date and hour or attached to your proposal. Signature on this addendum does not substitute for your signature on the original RFP document. The original RFP document must be signed.

Marie Williams, VCO
Director of TCP, Procurement, & FA
804-225-2040

Center for Applied Linguistics
Name of Firm

Signature /Title VP & COO

7/02/15
Date

Attachment A

State Corporation Commission Form

<u>Virginia State Corporation Commission (SCC) registration information</u>. The offeror:

☒ is a corporation or other business entity with the following SCC identification number: R171740-3**-OR-**

☐ is not a corporation, limited liability company, limited partnership, registered limited liability partnership, or business trust **-OR-**

☐ is an out-of-state business entity that does not regularly and continuously maintain as part of its ordinary and customary business any employees, agents, offices, facilities, or inventories in Virginia (not counting any employees or agents in Virginia who merely solicit orders that require acceptance outside Virginia before they become contracts, and not counting any incidental presence of the offeror in Virginia that is needed in order to assemble, maintain, and repair goods in accordance with the contracts by which such goods were sold and shipped into Virginia from offeror's out-of-state location) **-OR-**

☐ is an out-of-state business entity that is including with this proposal an opinion of legal counsel which accurately and completely discloses the undersigned offeror's current contacts with Virginia and describes why those contacts do not constitute the transaction of business in Virginia within the meaning of § 13.1-757 or other similar provisions in Titles 13.1 or 50 of the Code of Virginia.

****NOTE** >>** Check the following box if you have not completed any of the foregoing options but currently have pending before the SCC an application for authority to transact business in the Commonwealth of Virginia and wish to be considered for a waiver to allow you to submit the SCC identification number after the due date for proposals (the Commonwealth reserves the right to determine in its sole discretion whether to allow such waiver): ☐

Confirmation of Offeror's Acceptance

Section IX and X. The Center for Applied Linguistics accepts the RFP General and Special Terms and Conditions, as stated in sections IX and X of this proposal.

3. PROPRIETARY INFORMATION

CALSolutions
PreK-12 ELL Education

Proprietary Information

Section V. A. f. The Center for Applied Linguistics (CAL) is invoking the protections of proprietary information and trade secrets of § 2.2-4342F of the *Code of Virginia.*

CAL has previously developed numerous materials for workshops and trainings delivered to teachers and administrators. The materials used in the performance of this contract may include, but will not limited to, the following:

Books

- Center for Applied Linguistics. (2002). *The SIOP model: Shelter instruction for Academic Achievement, DVD.* Washington, DC: 2002
- Echevarría, J., Vogt, M., & Short, D. (2013). *Using the SIOP Model with Pre-K and Kindergarten English Learners*. Boston: Pearson.
- Levine, N.L., Smallwood, B.A., & Haynes, E (2012). *Listening and Speaking: Oral Language and Vocabulary Development for English Learners*. Washington, DC: Center for Applied Linguistics.

Videos and DVDs

- Himmel, J. & Mazrum, J. (Producers) (2014). *Learning the SIOP video*. Washington, DC: Center for Applied Linguistics.
- Moore, S. C. , Mazrum, J., & Himmel, J. (Producers). (2013). *SIOP in action video.* Washington, DC: Center for Applied Linguistics.

Printed handouts and PowerPoint presentations marked as copyrighted materials.

All proprietary materials shared during the performance of this contract will be marked accordingly.

4. ATTACHMENT B

Data Security Plan

Data Security Template

If professional development offerings are delivered online, or sensitive data is collected or transferred as part of the professional development offering, the Offeror must complete this template. If any questions are not applicable, the Offeror must explain why.

This is not applicable to our offer, the Center for Applied Linguistics is not proposing online training services at this time.

1. A list of variables collected or transferred;

Insert response here.

2. Format(s) in which data will be provided;

Insert response here.

3. Methods used to ensure secure data transfer, including a method of protecting against unauthorized access to sensitive data;

Insert response here.

4. The number of data transfers and timeframe within which data can be made available to authorized personnel;

Insert response here.

5. A method of protecting against unauthorized access to sensitive data;

Please explain here.

6. Weekly backups with incremental daily backups and a 48-hour recovery from the loss of a data center including the loss of only 2 hours of data;

Please describe the disaster recovery plan here.

7. A suitable hosting environment;

Please describe the environment including primary site location(s) and disaster recovery location(s), internet connectivity, power management and site security and describe the relationship between the primary site(s) and recovery site(s) and any industry certifications that these facilities have achieved (e.g. Tier III/IV, SAS70, SOC1, SOC2, etc.).

8. Data archival policies and any data purge policies;

Please describe here.

9. A process for handling and notification of a breach of non-public data;

Please describe here.

10. A process for the authorization of various roles associated with data access;

Please describe.

11. A policy for only allowing remote access using industry standard network security processes;

Please describe the methods used for remote access.

12. A process for ensuring security of data stored at the offeror's site as well as any server security policies;

Please describe and indicate whether the service has periodic and ongoing vulnerability and penetration testing.

13. A process for identifying and remediating software defects;

Please describe.

14. A process for incident management, change management, and release management;

Please describe.

15. A process for how school divisions will get their data back in a form that can be used in the event of contract termination or expiration or if the a different service is desired;

Please describe.

16. Network-layer vulnerability scans conducted regularly;

Please describe.

17. Application-layer vulnerability scans conducted regularly;

Please describe.

18. Local operating system-layer vulnerability scans conducted regularly;

Please explain.

19. File integrity (host) and network intrusion detection (IDS) tools that are implemented to help facilitate timely detection, investigation by root cause analysis and response to incident;

Please explain.

20. Regular penetration testing, vulnerability management, and intrusion prevention;

Please explain.

21. Network devices that are located in secure facilities and under controlled circumstances (e.g. ID cards, entry logs);

Please explain.

22. A standard time frame regarding how quickly patches are applied from the time of supplier release;

Please explain.

23. Background checks on your firm's personnel with physical and/or administrative access to network devices, servers, applications and customer data;

Please explain.

24. Processes for authenticating callers and resetting access controls, as well as establishing and deleting accounts;

Please explain.

25. Protection against denial-of-service attack;

Please describe.

26. Technical measures and techniques for detection and timely response to network-based attacks such as distributed denial-of -service (DDoS) attack; and

Please explain.

27. A statement confirming that the offeror shall:
    a. Comply with Virginia's Information Technology Security Policy and Standards (http://www.vita.virginia.gov/library/default.aspx?id=537#securityPSGs);
    b. Comply with the Family Educational Rights and Privacy Act (FERPA);
    c. Meet cloud security requirements by a certifying body such as Fed-RAMP (http://cloud.cio.gov/fedramp), if applicable
    d. Include a product support program for users and administrators;
    e. Be Section 508 compliant (http://www.vita.virginia.gov/uploadedfiles/vita_main_public/unmanaged/library/contingencyplanningguideline04_18_2007.pdf);
    f. Include a backup and recovery plan that is tested at least annually;
    g. Include an outage plan. Users shall be notified of anticipated and unanticipated outages;
    h. Adhere to the Student Privacy Pledge, located in http://studentprivacypledge.org/?page_id=45;

i. Ensure that all data processed, stored and maintained by the offeror shall NOT leave the borders of the United States (including all online storage as well as data backups and archived data);
j. Include a process that allows the State to audit the physical environment where a service is hosted;
k. Include a process for securing non-public data at rest and non-public data in motion;
l. Allow access to incident data for investigative purposes;
m. Allow access to system security and audit logs;
n. Patch software vulnerabilities routinely or automatically on all servers; and
o. Encrypt data at motion and at rest.

5. ATTACHMENT C

Offeror Data Sheet

Attachment C

OFFEROR DATA SHEET

Note: The following information is required as part of your response to this solicitation. Failure to complete and provide this sheet may result in finding your bid nonresponsive.

1. Qualification: The vendor must have the capability and capacity in all respects to satisfy fully all of the contractual requirements.

2. Vendor's Primary Contact:

   Name: Center for Applied Linguistics Phone: (202) 362-0700

3. Years in Business: Indicate the length of time you have been in business providing this type of good or service:

   56 Years _____ Months

4. Vendor Information:

   eVA Vendor ID or DUNS Number: 049515919

5. Indicate below a listing of at least three (3) current or recent accounts, school districts or states, for which the same or similar services proposed were provided. Include the length of service and the name, address, email address, and telephone number of the point of contact.

   A. Company: Arlington Public Schools
      Contact: Kate Graham

      Phone :(703).228.6157 Email: eve.graham@apsva.us
      Project: Using the Sheltered Instruction Observation Protocol (SIOP) to Plan and Implement Effective Instruction for Young English Learners

      Dates of Service: October 2013-Feburary 2015$ Value: please see budget for SIOP professional development under 50 miles from DC

   B. Company: Office of Specialized Instruction, Early Childhood Education Professional Learning
      Contact: Dr. Lori Adams Chabay, PhD

      Phone: (202) 698-1067 Email: lori.chabay@dc.gov

      Project: What's Different about Teaching Reading to Students Learning English: A 2-day Direct Strategies Training for PreK Teachers.

      Dates of Service: July 9-10, 2014 $ Value: please see budget for Oral Language professional development under 50 miles from DC

   C. Company: Charlotte-Mecklenburg Public Schools
      Contact: Sarah Lang

      Phone :(980) 343-0438 Email: sarahm.lang@cms.k12.nc.us
      Project: Using the Sheltered Instruction Observation Protocol (SIOP) to Plan and Implement Effective Instruction for Young English Learners

      Dates of Service: April 2013-May 2015 $ Value: please see budget for SIOP professional development over 200 miles from DC

I certify the accuracy of this information.

Signed: N. Beatriz Arias Title: VICE PRESIDENT Date: 7/7/15

Center for Applied Linguistics

6. ATTACHMENT D -- D-I-1

PD Offerings

Revised Response Template for Professional Development Offering

Complete and include a separate Attachment D for each Professional Development Offering to be included in your proposal. For each different Professional Development Offering, first enter the name and description and then answer Question 1 below. Based on your response to Question #1 below, insert -I, -II, -III, or -IV in the header above after "Attachment D." If you have the same delivery method for more than one professional development offering to be included in your proposal, add a number after the Roman numeral indicating the category. For example, if your proposal includes three different professional development offerings that will be delivered face-to-face (in-person), two different professional development offerings that will be delivered via an online interactive format, and one professional development offering that will be delivered via a combination; you will have attachments D-I-1, D-I-2, D-I-3, D-II-1, D-II-2, and D-IV.

Within Tab 6 of your proposal, include separate tabs so that each offering is in a separate tab with the name indicated in the header. For the example above, within Tab 6 include Tabs D-I-1, D-I-2, D-I-3, D-II-1, D-II-2, and D-IV.

Name of Professional Development Offering

SIOP (Sheltered Instruction Observation Protocol) Model Professional Development for Early Childhood Educators

Brief (15 to 20 Word) Description

SIOP Model professional development teaches early childhood educators how to effectively integrate language and content instruction for English learners.

1. What method will you use to deliver the professional development? Indicate one and only one delivery method set out below as (I, II, or III) per separate Attachment D. (Also see Attachment E, Pricing Schedule.) Indicate the delivery method I – III to the right of "Attachment D" in the header above.

   Select one and only one:

   ☒ I. In-person (face-to-face)

   ☐ II. Virtual or online (e.g., via Webinar)

   ☐ III. Combination of live and virtual/online

   Briefly describe the approach and why it is appropriate for meeting the learning objectives.

   The Sheltered Instruction Observation Protocol (SIOP) Model is an empirically tested, research-based model of sheltered instruction that groups 30 features of effective instruction

for English learners into eight components: Lesson Preparation, Building Background, Comprehensible Input, Strategies, Interaction, Practice/Application, Lesson Delivery, and Review & Assessment. Many features, such as cooperative learning, rigorous vocabulary development, and differentiated instruction, are recommended for high quality instruction for all students (Genesee, Lindholm-Leary, Saunders, & Christian 2006); others, such as addressing language objectives in every content lesson, providing opportunities for oral language practice, developing background knowledge and content-related vocabulary, and emphasizing academic reading and writing, are essential for young English learners' academic success. The SIOP Model is not a step-by-step approach, but a framework for applying best practices strategically within the context of established curricula and standards. It gives teachers specific lesson features that, when implemented consistently and to a high degree, lead to improved academic outcomes for English learners (Echevarría, Richards-Tutor, Chinn, & Ratleff, 2011; Echevarría, Short, & Powers, 2006; McIntyre, Kyle, Chen, Munoz, & Beldon, 2010; Short, Fidelman, & Louguit, 2010). In four days, or 24 contact hours, teachers are introduced to the entire SIOP Model through activities, mini-lectures, readings, videos, and demonstrations to illustrate how each feature of the SIOP Model is implemented for PreK learners. Workshops include a variety of activities, such as demonstration and explanation, analysis of video teaching sequences, small group learning tasks, and the development of instructional activities and SIOP lesson plans. Teachers will have the opportunity to work in grade level clusters, content, and/or school teams in order to foster collaboration during and beyond the workshop.

Table A. **Check all that apply to this stand-alone product:**

	Professional Development Category
X	a. Quality of teacher-child interactions
X	b. Providing developmentally appropriate preschool learning environments
X	c. Early literacy skills
X	d. Early mathematics skills
X	e. Early scientific development skills
	f. Promoting preschool children's critical thinking, problem solving, and other executive functions
	g. Promoting preschool children's social and emotional development
	h. Instructional services and support for students with disabilities
X	i. Instructional services and support for English language learners
	j. Behavior management techniques for diverse preschool children

	Professional Development Category
	k. Preschool classroom management techniques
	l. Elementary school leadership development to support and strengthen early learning programs
	m. Communicating with diverse parents of preschool children
	n. Aligning early childhood education programs from birth through third grade or preschool to third grade
	o. Family engagement and support services, including comprehensive preschool services, and effective family engagement strategies designed to sustain improved early learning outcomes through third grade

2. Which of the Essential Domains of School Readiness does this stand-alone professional development offering focus on (Check one or more)

   ☒ Language and literacy development;

   ☐ Cognition and general knowledge (including early mathematics and early scientific development);

   ☐ Approaches toward learning (including the utilization of the arts);

   ☐ Physical well-being and motor development (including adaptive skills); and

   ☐ Social and emotional development.

3. Who is your target audience? (Check all that apply.)

   ☒ Teachers

   ☒ Coaches

   ☒ Administrators

   ☐ Teacher Assistants

   ☐ Other service providers (specify here:_____)

   ☐ Parents and families

4. What is the length of delivery in hours (time required excluding self-study or other assignments)?

   _24____ Total Hours for Delivery

EXAMPLES

Face-to-Face Professional Development

The example "X" below provides the time for professional development delivery for a series of 4 workshops that are 4 hours each and require completion of a 10 hour assignment "on your own."

__4__ Days

__4__ Hours per day

__16__ Total (4 x 4)

Online Professional Development

The example "Y" below provides the time for professional development delivery for a series of 2 online interactive workshops that are 8 hours per day.

__2__ Days

__8__ Hours per day

_16__ Total (2 x 8)

The example "Z" below provides the delivery time for online professional development that is in a "listen and learn" format scheduled for completion in 10 hours but may take some individuals longer. .

_10__ Total Hours

5. What are the goals and learning objectives of the professional development offering?

   Overarching Goals:

   - Educators will be able to identify how all of Sheltered Instruction Observation Protocol (SIOP) Model components and features work together as an effective tool for lesson planning and teaching young English learners
   - Educators will be able to utilize knowledge of the SIOP Model to plan and implement lessons that effectively integrate content and language instruction for young English learners

Day 1:

Content Objectives

Participants will be able to…

- Analyze the components and features of the SIOP Model
- Identify SLA research findings relevant to the SIOP Model
- Distinguish between content and language objectives

Language Objectives

Participants will be able to…

- Orally define sheltered instruction
- Describe the features of the Lesson Preparation component
- Write content and language objectives and discuss how to implement with young English learners

Day 2

Content Objectives

Participants will be able to…

- Analyze and apply features of the Building Background component
- Design activities that incorporate strategies for teaching vocabulary
- Identify ways to provide students with comprehensible input

Language Objectives

Participants will be able to…

- Discuss ways to link concepts to student backgrounds and past learning
- Describe activities that incorporate vocabulary strategies
- Read and check ways to improve comprehensible input

Day 3

Content Objectives

Participants will be able to

- Synthesize the features of Strategies and Interaction
- Identify a variety of learner strategies and apply them in early classroom literacy practices
- Create a list of questions in order to scaffold higher level thinking questions
- Design an interactive activity to promote more oral language development

Language Objectives

Participants will be able to

- Watch a video and listen for opportunities for academic language development
- Orally share a variety of learning strategies and how they can be applied in the classroom
- Draft questions that are scaffolded for higher order thinking
- List sentence stems to use in interactive activities

Day 4

Content Objectives

Participants will be able to

- Distinguish between Practice and Application
- Analyze and apply the features of the Lesson Delivery and Review & Assessment components
- Evaluate the language demands of assessments and identify ways to adapt formative assessments

- Synthesize learning of the SIOP Model and decide how to continue implementation

Language Objectives

Participants will be able to…

- Orally compare Practice and Application.
- Write and discuss what contributes to student engagement
- Read assessments and explain their difficulties for young language learners.
- Takes notes on and discuss their plans for continuing SIOP implementation in the classroom

6. Describe the measurement process you will use to determine whether participants met the learning goals and objectives.

The facilitator will conduct multiple formative assessments throughout the session to gauge participant engagement and mastery of objectives. These formative assessments include but are not limited to: reflection journals, table talks and group discussions, "make and takes", presentations of group projects and peer critique, and reflection assignments that accompany student artifacts completed between workshop sessions Facilitators will also collect Tickets Out (a summative assessment) at the conclusion of each workshop session and a final evaluation will be collected at the end of the four-day series and provided to the districts. Facilitators will use the formative assessment and summative assessment data to adjust their instruction and tailor the content for the current professional learning session and subsequent ones.

7. Describe how this offering is consistent with the definition of high-quality professional development as defined in Section III of the Request for Proposals.

The SIOP Model is a lesson design and delivery system that, when implemented with fidelity, helps teacher integrate language development with techniques to make content curricular topics more comprehensible to English learners in order to increase their academic achievement (Echevarría, Short, & Vogt, 2014). Professional development in the SIOP Model has been widely employed in the United States to help teachers develop the English language proficiency of their students while they teach grade-level content concepts (Short, 2013). Each feature is supported by empirical evidence (Genesee et al., 2006) and research on the entire SIOP Model suggests that teacher implementation of the model leads to improved student literacy and language outcomes (Collins, 2000; Echevarría, Short, & Powers, 2006; Echevarría, Richard-Tutor, Canages, & Francis, 2011; Honingsfeld & Cohan 2008; McIntyre, Kyle, Chen, Muñoz, & Beldon, 2010; Read, 2009; Short et al.,2012).

Facilitators use the following SIOP Workshop Instructional Cycle (figure 1) to ensure that each professional learning session includes: active learning, clearly communicated and assessable objectives for the participants, collective participation, authentic and integrated learning opportunities, and activation of participant background knowledge and schema from which to build new knowledge.

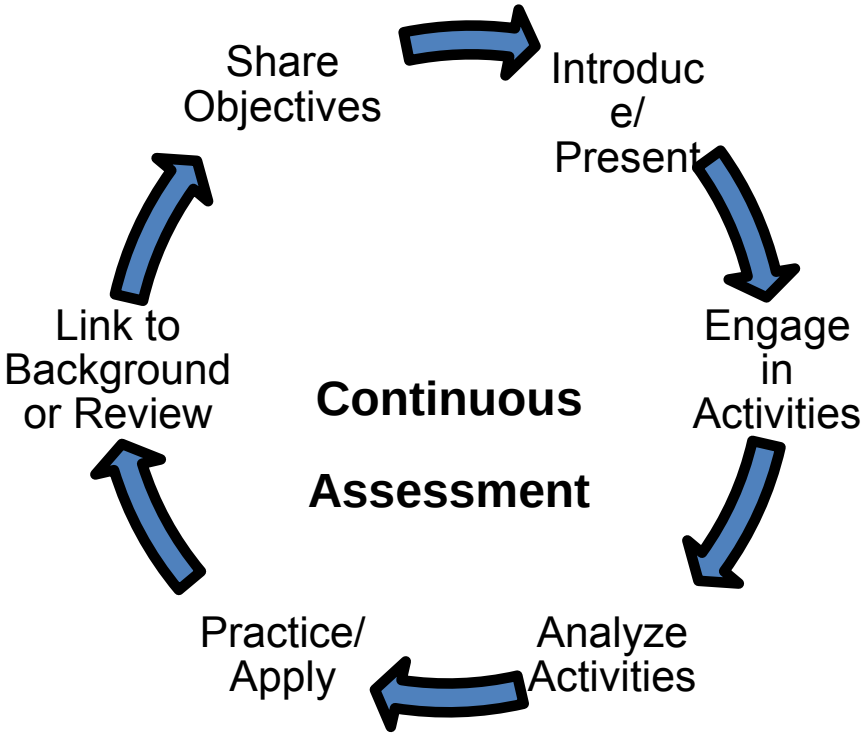


Figure 1

Workshop sessions begin with activities to activate participant background knowledge on the feature (e.g., Think-Pair-Share: How do you current emphasize and teach key vocabulary for young English learners?). Next participants are introduced to the research that supports each features use with young English learners through mini-lecture, readings, or video. Then the participants see the feature in action through demonstration, video, or lesson plans. For example, the participants might learn how to do a Vocabulary Grab Bag instructional activity with their young learners by first participating in the activity themselves using sheltered instruction content (e.g., review of the Comprehensible Input component) and then seeing the classroom application. See Figure 2 for an example.

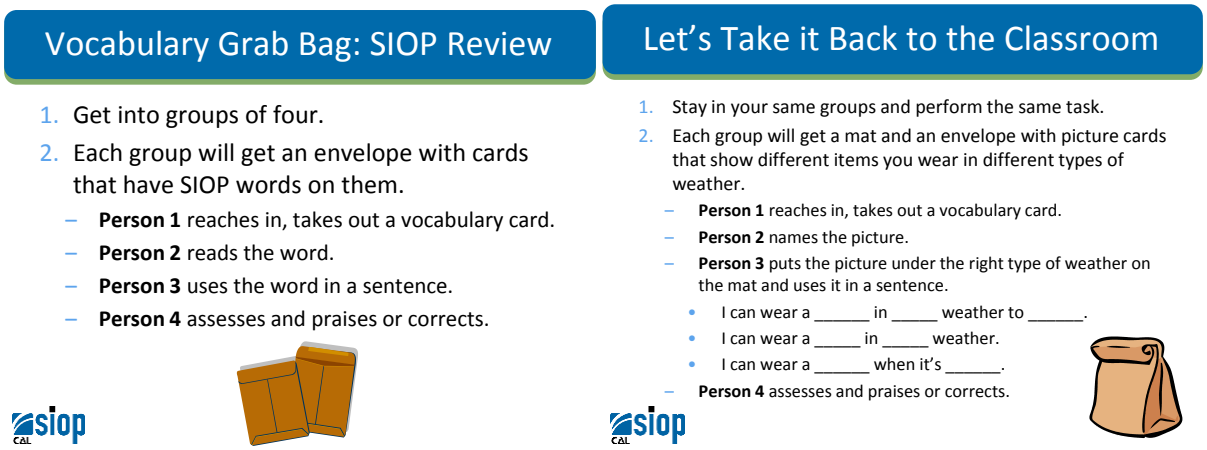


Figure 2

Lastly, the participants incorporate the new knowledge into their existing pedagogical practice by creating an activity or lesson that embodies the demonstrated SIOP Model feature. Teachers do this in groups in order to receive support from colleagues and to foster collective participation. Participants share their activities and the facilitator leads participants in a debrief session to solidify the new knowledge.

8. Describe qualifications of the individuals/staff who developed this offering.

The SIOP Model was developed in a national research project sponsored by the Center for Research on Education, Diversity & Excellence (CREDE), a national research center funded by the U.S. Department of Education from 1996 through 2003 to assist the nation's population of diverse students, including those at risk of educational failure, to achieve academic excellence.

One of the goals of CREDE was to develop an explicit model of sheltered instruction. When the research began, sheltered instruction was widely advocated as an effective instructional strategy for language minority students, but there was little agreement among practitioners as to what constitutes an effective sheltered lesson.

Through literature review and with the collaboration of practicing teachers, researchers at the California State University, Long Beach (Jana Echevarría and Mary Ellen Vogt), and the Center for Applied Linguistics (Deborah J. Short) identified instructional features of high-quality sheltered lessons. The model was refined over several years of field testing.

Deborah J. Short, Ph. D., directs Academic Language Research & Training, a consulting company, and provides professional development on sheltered instruction and academic literacy worldwide. Formerly she was a Division Director at the Center for Applied Linguistics, Washington, DC where she co-developed the research-validated SIOP® Model

for sheltered instruction. She has directed numerous research studies on English language learners funded by the Carnegie Corporation of New York, the Rockefeller Foundation, and the U.S. Department of Education, among others. Her publications include journal articles, the SIOP® Model book series, and several ESL textbook series for National Geographic Learning/Cengage. She taught English as a second/foreign language in New York, California, Virginia, and the Democratic Republic of the Congo.

Jana Echevarría, Ph.D., is a Professor Emerita at California State University, Long Beach. She has taught in elementary, middle, and high schools in general education, special education, ESL, and bilingual programs. She has lived in Taiwan, Spain and Mexico. An internationally known expert on second language learners, Dr. Echevarría is a Fulbright Specialist. Her research and publications focus on effective instruction for English learners, including those with learning disabilities. Currently, she is Co-Principal Investigator with the Center for Research on the Educational Achievement and Teaching of English Language Learners (CREATE) funded by the U.S. Department of Education, Institute of Education Sciences (IES). In 2005, Dr. Echevarría was selected as Outstanding Professor at CSULB.

MaryEllen Vogt, Ed.D. is Distinguished Professor Emerita of Education at California State University, Long Beach. Dr. Vogt has been a classroom teacher, reading and special education specialist, district reading resource teacher, and university teacher educator. She received her doctorate from the University of California, Berkeley. A co-author of fourteen books, including the SIOP® Series and Reading Specialists and Literacy Coaches in the Real World (2007), Dr. Vogt has provided professional development in all fifty United States, and in eight other countries. She served as President of the International Reading Association in 2004-2005.

9. Describe the qualifications of the individuals/staff who deliver the professional development program and their previous experience providing professional development aimed at strengthening early learning environments for children from economically disadvantaged families.

10. Describe the alignment to Virginia's *Foundation Blocks for Early Learning*, Kindergarten *Standards of Learning*, and *Milestones for Child Development*, as applicable. For example, professional development related to behavior management techniques for preschool children would need to align with the Foundation Blocks for Personal and Social Development.

    All professional development content will based on and aligned with the *Virginia Kindergarten Standards of Learning* (2010), *Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Old*s, and *Milestones of Child Development: A Guide to Young Children's Learning and Development from Birth to Kindergarten.* (2008). Thus, facilitators will situate all content delivery in the instructional day of early childhood educators in Virginia. For example, facilitators will describe and demonstrate how a technique like Writing From Boxes is aligned to the Virginia Literacy Foundation Block 6 (Copy or write letters and numbers using various materials) and to Strand 5 E7 (Early Writing) and Strand 2, Sub-strand B6 (Use senses to observe and explore materials and natural phenomena) from the *Milestones of Child Development*. See Figure 3.

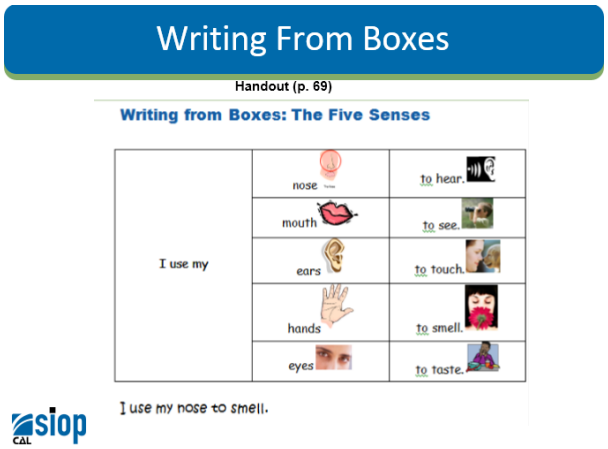


Figure 3

The facilitators will also lead the participants through discussions and reflections on how the activity can be implemented for young English learners at different language proficiency levels.

Additionally, the facilitator will address how the Foundation Blocks and Milestones can be integrated for enhanced literacy achievement for young English learners. For example, for Science Foundation Block 1, facilitators will show participants how to provide scaffolds for young English learners, like sentence starters or sentence stems, to help young English learners make predictions about science demonstrations in order to encourage the development of oral

language in the content of science. To further illustrate how the facilitator will draw on the Milestones and Foundation Blocks to inform the workshop content, when demonstrating how Information Gaps can be utilized in PreK classrooms to develop Virginia Literacy Block 1, the facilitator will provide examples of Information Gaps appropriate for PreK learners and lead participants through debrief questions that will help them understand how the activity meets *Virginia's Foundation Blocks for Early Learning* and to help teachers brainstorm additional scaffolds for English learners. See Figure 4.a and 4.b for example

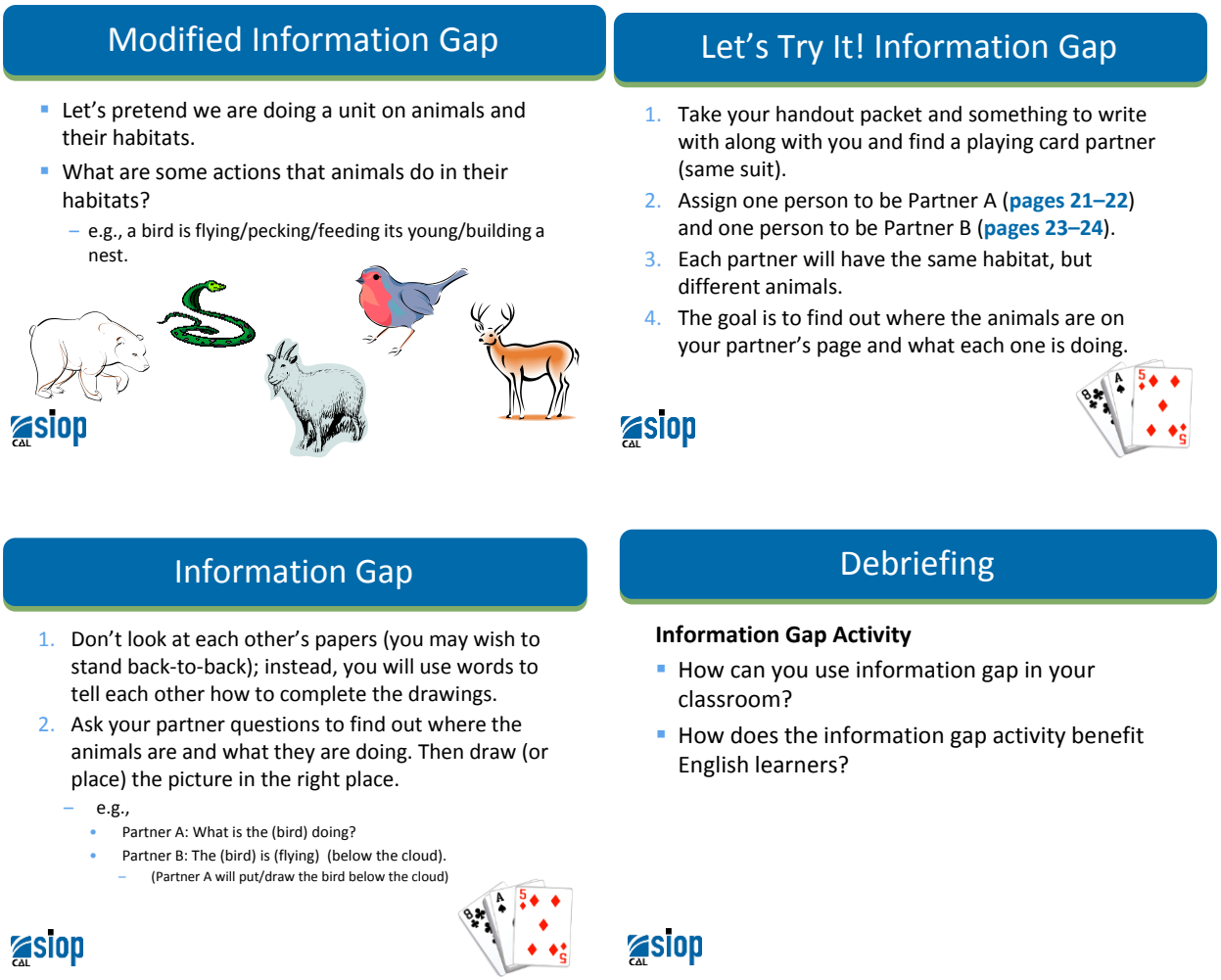


Figure 4

.

11. Describe any pre-requisites for participation, resources needed (if any), and space requirements (if any) for participation.

No pre-requisites for participation is required. However, CAL requests the following from the district for each workshop:

- Secure a workshop site with movable tables and chairs, and sufficient space for teachers and administrators to participate in interactive activities and group in different grouping configurations.
- Make the following IT equipment available: a laptop computer with a DVD drive that can play videos, speakers for the laptop computer, LCD projector, and white screen; and ensure the availability of IT support services at the beginning of each workshop.
- Provide chart paper, thick color markers, tape, sticky notes, note cards, and nametags.
- Reproduce the workshop handouts and ready them for distribution to participating teachers and administrators.

12. Has the proposed professional development offering been subject to rigorous evaluation as defined in Section III of this Request for Proposals?

☐ No

x Yes.

If yes, in the space below, summarize the evaluation methods, the population in which the program has been subject to rigorous evaluation (as defined in this proposal), and provide documentation verifying the results have been subject to an external peer review process by including a copy of the study just after this attachment. (For example, if the Attachment name is D-I-1, within Tab 6 of your proposal, include it after attachment D-I-1).

The SIOP Model has been the subject of numerous qualitative and quantitative empirical studies over the years, with many studies appearing in refereed journals. CAL does not have access to all of the studies since many are owned by the journals where they were published. However, we are including one journal article that summarizes the outcomes from empirical studies CAL has conducted (Short, Echevarria, & Richards-Tutor, 2011).

If no, is the proposed professional development offering currently undergoing rigorous evaluation, as defined in Section III of this Request for Proposals?

☐ No

☐ Yes.

If yes, in the space below, summarize the evaluation methods and the population in which the program is undergoing rigorous evaluation (as defined in this proposal), when the evaluation will be completed, and if it will be subject to an external peer review process.

13. How much time will your participants need to commit? (Provide total number of days, hours per day, and the total time frame in months in which participants will be expected to participate, and a justification for the time commitment needed to meet the objectives of the professional development opportunity.) If you are also proposing another delivery method for this professional development offering, describe both delivery methods in your narrative, including any differences in the time commitment required.

Face-to-Face Professional Development

__4___ Days
__6 (contact hours) Hours per day
__12-24 Months to complete

Online Professional Development (whether interactive or not)
_____ Total Hours
_____ Minimum time for each segment/lesson

Combination
_____ Days of Face-to-Face Professional Development
_____ Hours per day of Face-to-Face Professional Development

_____ Total Hours Online Professional Development
_____ Minimum time for each segment/lesson of Online Professional Development

Please describe, including the time participants will need to commit, here.

Insert justification for the time commitment needed to meet the objectives of the professional development opportunity here.

Research on the SIOP Model indicates that teachers need at least four days of professional development in the model in order for them to fully understand each component and begin to implement the new knowledge and techniques with fidelity (Short, Fidelman, & Louguit, 2012).

References

Center for Applied Linguistics. (2002). *The SIOP model: Shelter instruction for Academic Achievement, DVD.* Washington, DC: 2002.

Collins, J. (2009). *What's good for the goose is good for the gander: Implementing the SIOP model into an urban elementary classroom of African American students*. (Order No. 3388956). Available from ProQuest Dissertations & Theses Full Text. (305095533). Retrieved from http://search.proquest.com/docview/305095533?accountid=14696\

Echevarría, J., Richards-Tutor, C., Canages, R., & Francis, D. (2011). Using the SIOP model to promote the acquisition of language and science concepts with English learners. *Bilingual Research Journal, 34*(3), 334–351 García, E. and Frede, E. (Eds.; 2010). *Developing the Research Agenda for Young English Language Learners.* NYC: Teachers College Press.

Echevarria, J., Richards-Tutor, C., Chinn, V., & Ratleff, P. (2011). Did they get it? The role of fidelity in teaching English learners. *Journal of Adolescent and Adult Literacy, 54* (6) 425-434.

Echevarría, J. E., Vogt, M.E., & Short, D.J. (2014). *Making Content Comprehensible for English Learners.* New York: Allyn & Bacon.

Echevarría, J., Short, D., Powers, K. (2006). School reform and standards-based education: A model for English-language learners. *Journal of Educational Research, 99*(4), 195–210.

Genesee, F. Lindholm-Leary, K. Saunders, W., & Christian, D (Eds). (2006). *Educating English Language Learners: A Synthesis of Research Evidence*. New York, NY: Cambridge University Press.

Himmel, J. & Mazrum, J. (Producers) (2014). *Learning the SIOP video*. Washington, DC: Center for Applied Linguistics.

Honingsfeld, A., & Cohan, A. (2008). The power of two: Lesson study and SIOP help teachers instruct ELLs. *Journal of Staff Development, 29*(1), 24–26.

McIntyre, E., Kyle, D., Chen, C., Munoz, M., & Beldon, S. (2010). Teacher learning and ELL reading achievement in sheltered instruction classrooms: Linking professional development to student development. *Literacy Research & Instruction, 49*(4), 334–351.

Moore, S. C. , Mazrum, J., & Himmel, J. (Producers). (2013). *SIOP in action video.* Washington, DC: Center for Applied Linguistics.

Read, F. D. (2009). The impact of the Sheltered Instruction Observation Protocol (SIOP) on the instructional practices of elementary school teachers and on the reading achievement of English language learners. *Dissertation Abstracts International Section A, 69*(12-A), 4605.

Short, D.J. (2013). Training and sustaining effective teachers of sheltered instruction. *Theory into Practice.* 52, 118-127. Echevarría, J., Vogt, M., & Short, D. (2013). *Using the SIOP Model with Pre-K and Kindergarten English Learners*. Boston: Pearson.

Short, D. J., Fidelman, C. G., & Louguit, M. (2012a). Developing academic language in English language learners through sheltered instruction. *TESOL Quarterly, 46*(2), 334–361.

LANGUAGE
TEACHING
RESEARCH

Language Teaching Research
15(3) 363–380
© The Author(s) 2011
Reprints and permission: sagepub.co.uk/journalsPermissions.nav
DOI: 10.1177/1362168811401155
ltr.sagepub.com
SAGE

Research on academic literacy development in sheltered instruction classrooms

Deborah J. Short
Center for Applied Linguistics, Washington, DC, USA

Jana Echevarría and Catherine Richards-Tutor
California State University, USA

Abstract
This article describes an extended program of research in sheltered instruction and the effects on the academic literacy development of English language learners. It also highlights the challenges of scaling up an instructional intervention. The intervention was the Sheltered Instruction Observation Protocol (SIOP) Model, an approach that teaches subject area curriculum to students learning through a second language using techniques that make the content material accessible and also help develop the students' second language skills. Three successive studies looked at teacher change over time and student achievement on standardized assessments and researcher-developed measures. Results of the three studies reveal that students with teachers who were trained in the SIOP Model of sheltered instruction and implemented it with fidelity performed significantly better on assessments of academic language and literacy than students with teachers who were not trained in the model. The article offers guidance for strengthening professional development for teachers so the quality of instruction they deliver to English language learners improves and the students strengthen their English language and academic outcomes.

Keywords
classroom research, second language teacher development, sheltered content instruction, academic literacy

Corresponding author:
Deborah J. Short, Center for Applied Linguistics, 5719 South Third Street, Arlington, VA 22204, USA
Email: dshort@cal.org

I Introduction

'Sheltered instruction' in schools in the USA generally refers to a subject class such as mathematics, science, or history taught through English wherein many or all of the students are second language learners. This article relates the story of an extended program of research in sheltered instruction and the effects on the academic literacy development of English language learners (ELLs). It also highlights the challenges of scaling up an instructional intervention. The intervention was the Sheltered Instruction Observation Protocol (SIOP) Model, an approach that teaches subject area curriculum to students learning through a second language using techniques that make the content material accessible and also helps develop the students' second language skills. Results of the three studies discussed here reveal that students with teachers who are trained in the SIOP Model and implement it with fidelity perform better on assessments of academic language and literacy than students with teachers who are not trained in the model.

The SIOP Model was developed initially for content teachers of students learning the subject matter through their second language. It evolved also as an approach for teachers of English to use to integrate content material (e.g. subject matter vocabulary, expository reading passages) in their lessons. Therefore, it is an approach for integrating language and content instruction in either content areas or language development classes.

II The CREDE SIOP Model development study

The SIOP Model was developed through a seven-year research study (1996–2003), 'The effects of sheltered instruction on the achievement of limited English proficient students', for the Center for Research on Education, Diversity & Excellence (CREDE) and funded by the US Department of Education. Researchers from California State University Long Beach and the Center for Applied Linguistics collaborated with middle-school teachers in three metropolitan districts in the USA (east and west coasts) to build and test a model of sheltered instruction. An observation tool for researchers to measure teachers' implementation of sheltered instruction was developed first, the Sheltered Instruction Observation Protocol (SIOP). During the first four years of the study, the teachers field-tested variations of the model in their classrooms and the researchers monitored the effects. By 2000, the SIOP had grown into a lesson planning and delivery approach known as the SIOP Model. It has 30 features of instruction grouped into eight components: lesson preparation, building background, comprehensible input, strategies, interaction, practice & application, lesson delivery, and review & assessment (Echevarría et al., 2008).

The SIOP Model is a framework for teachers to present curricular content concepts to ELLs through strategies and techniques that make information comprehensible to the students. While doing so, teachers develop student academic language skills across the domains of reading, writing, listening, and speaking. The model combines features recommended for high quality instruction for all students, such as cooperative learning and reading comprehension strategies (Genesee et al., 2006) with specific features for second language learners, such as language objectives, oral language practice, and academic vocabulary development. The model allows for some natural variation in teaching styles and lesson delivery but attention to academic literacy is required. Teachers may accomplish their language and content goals in multiple ways suited to a particular lesson, such as

engaging students in peer discussions about a science experiment using specific language frames or holding a class debate about the impact of immigration on the economy.

1 SIOP instrument reliability and validity study

We formalized the observation protocol with a 5-point scale for each feature on the SIOP Model, so the level of implementation could be measured for any lesson. Researchers and coaches could rate teachers' lessons over time using this protocol and provide explicit feedback to help them implement the model with more fidelity. A separate study with independent raters established the SIOP protocol as a highly reliable and valid measure of sheltered instruction (Guarino et al., 2001).

2 SIOP writing assessment study

After finalizing the SIOP Model as a lesson delivery system and ensuring teachers could teach it with high fidelity, we investigated the model's effects on student academic language achievement in a small quasi-experimental study with 19 treatment teachers and four comparison teachers. The main research question was:

> Are there significant differences in achievement data for students of treatment teachers who receive SIOP training vs. students in sheltered classes whose teachers have not received SIOP training?

At that time, most ELLs in our districts were exempted from the standardized testing process. So, we used the Illinois Measurement of Annual Growth in English (IMAGE) writing assessment as an outcome measure of academic literacy. This Illinois standardized test was developed specifically for ELLs and measured their annual growth in reading and writing skills for Grades 3 (mainly 8-year-olds) and higher. The test was valid and reliable and had correlational and predictive value for English language learners' scores on the state standardized assessments of reading and mathematics designed for native English-speaking students (Illinois State Board of Education, Assessment Division, 2004). It had five subtests: language production, focus, support/elaboration, organization, and mechanics.

During the 1998–99 school year, we administered the IMAGE writing pre-test to middle-school ELLs in the fall and the post-test in the spring. Participants were ELLs in sheltered classes whose teachers were trained in the SIOP Model (treatment group, $n = 241$) and ELLs in the same district programs whose teachers had no exposure to the SIOP Model (comparison group, $n = 77$). Students in both groups were in Grades 6–8 (10–14-years-olds), with mixed English proficiency levels and over 10 different native languages.

Mean score analyses of the pre- and post-test writing samples (for total score and subtest scores) revealed that treatment students performed less well on all pre-tests compared to the comparison students but significantly better on the post-tests (Echevarría et al., 2006); see Table 1.

Because of these differences, analyses of co-variances (ANCOVA) were conducted with adjusted post-test means to determine whether treatment students made statistically significant gains in writing compared to the other students. The ANCOVA results in Table 2 show significant main effects for the treatment condition on the total score and on three of the five

Table 1 CREDE SIOP: Writing mean scores for treatment and comparison groups

	Treatment		Comparison	
	Pre-test	Post-test	Pre-test	Post-test
Language production:				
M	2.65	3.22	2.77	3.09
SD	.78	.79	.78	.73
n	240	240	77	77
Focus:				
M	2.81	3.30	3.01	3.17
SD	.87	.98	.88	.94
n	239	239	77	77
Support/elaboration:				
M	2.65	3.26	2.83	3.18
SD	.78	.72	.70	.81
n	241	241	77	77
Organization:				
M	2.77	3.31	3.16	3.21
SD	.96	.78	.92	.71
n	241	241	77	77
Mechanics:				
M	2.72	3.28	2.84	3.17
SD	.88	.87	.86	.94
n	241	241	77	77
Total:				
M	13.55	16.36	14.61	15.81
SD	3.42	3.33	3.36	3.45
N	238	238	77	77

subtests. Participants whose teachers were trained in the SIOP Model made significantly greater gains than the comparison group in the total writing score ($p = .001$) and on language production ($p = .026$), organization ($p = .018$), and mechanics ($p = .044$). The treatment group also made gains over the comparison group in the focus and support/elaboration subtests, but the gains did not reach statistical significance (Echevarría et al., 2006).

We also calculated the effect size (Cohen's *d*) of the intervention, which was .833. This effect size is considered large by most indices (Cohen, 1998), suggesting significant gains over time in students' overall writing performance as a result of the SIOP intervention.

3 Discussion

The CREDE study revealed positive effects of the SIOP Model on student literacy achievement as measured with the IMAGE writing assessment. The treatment group made greater gains during the school year, increasing an average of 2.9 points between pre-test and post-test administrations compared to an average gain of 0.7 points for the comparison group, based on adjusted post-test means. Although two subtest gains did not reach significance, the overall results were persuasive, given that none of the classes

Table 2 Analysis of covariance of post-test writing results by treatment condition

Variable	*M* square	*F*-ratio	*p*
Language production	2.133	5.004	0.026*
Focus	2.904	3.706	0.055
Support/elaboration	1.247	2.680	1.030
Organization	2.842	5.651	0.018*
Mechanics	2.065	4.101	0.044*
Total	78.276	10.785	0.001*

Note: Pre-test scores served as the covariate for post-test dependent measures. * $p < .05$

were English as a second language (ESL) classes where writing is directly instructed. These results indicated that the SIOP Model offered a promising approach for helping English language learners develop academic literacy skills needed for success in school, in this case academic writing.

4 SIOP professional development

In the final two years of CREDE, with additional support from the Fund for the Improvement of Postsecondary Education, researchers designed a professional development program to help teachers learn and implement the model. The resources included a professional development manual (Short et al., 2002), and two videos demonstrating the model in classrooms with varied grade levels, English proficiency levels, and subject areas (Hudec & Short, 2002a, 2002b). These professional development resources were utilized extensively in later research studies.

III The New Jersey SIOP quasi-experimental study

The next step in the SIOP program of research was a larger quasi-experimental study, 'Academic literacy through sheltered instruction for secondary English language learners', to determine SIOP Model effects on middle-school and high-school student performance. It also examined the SIOP professional development intervention offered in the 2004–05 and 2005–06 school years. Funded by the Carnegie Corporation of New York and the Rockefeller Foundation, it was conducted by researchers at the Center for Applied Linguistics. The study focused on two main research questions:

- Will English language learners in one district with teachers who received professional development in the SIOP Model show significantly higher achievement in reading, writing, and oral proficiency in English on a standardized measure than ELLs in a comparable district with teachers who had no SIOP Model professional development?
- Do teachers reach high levels of implementation of the SIOP Model during a sustained professional development program after one or two years?

The study took place in two matched districts (one treatment, one comparison) in northern New Jersey and compared groups of teachers and students in the secondary schools and analysed student achievement on state standardized tests. Each district has two middle schools and one high school. The outcome measure of academic literacy was the IDEA Language Proficiency Tests (IPT), the state standardized assessment of English language proficiency. We also looked at student performance on several state content achievement tests and measured teacher fidelity to SIOP implementation using the SIOP protocol.

We recruited a representative sample of teachers in both districts who taught in Grades 6–12. More than half of the teachers were veterans, with 10 years or more of experience. Most were voluntary participants, although a few were assigned to the project.

Two cohorts of teachers joined were trained in the treatment district. Cohort 1 began in Year 1 (2004–05) and 35 teachers participated for two years. Cohort 2 joined in Year 2 (2005–06) with 23 teachers. Treatment teachers taught mathematics, science, history, language arts, ESL, special education, and technology. The treatment district also had three coaches in the first year and five in the second. All the coaches were current or former ESL teachers and had been trained in the SIOP Model. The comparison district did not have cohorts. Nineteen teachers participated both years. The comparison teachers taught mathematics, science, history, and ESL.

Students who were in the ESL programs in Grades 6–12 in both districts were included in our data collection. Treatment students (n = 387) spoke more than 15 different native languages and were from 35 countries of origin. Comparison students (n = 193) spoke eight different native languages with 25 countries of origin. Spanish, Polish, Arabic, and Portuguese were the most common languages.

Administrative interest was strong in the treatment district. The superintendent was supportive of the project and stayed informed of the progress as did the school principals. The ESL/bilingual director was involved in many ways, from securing funding for the coaching assignments to hand-scheduling high-school ELLs so that more would have classes with SIOP-trained teachers.

1 SIOP intervention professional development

The professional development program in the treatment district included (1) workshops for coaches and teachers, (2) classroom observations and coaching, and (3) technical assistance via electronic media. The program focused on instructional strategies for teaching academic English literacy skills and content knowledge to ELLs through the SIOP Model. It utilized the print and video resources developed during the CREDE study. Researchers used a participatory approach with modeling, hands-on activities, cooperative mini-projects, analysis of videotaped instruction, and integration of research and theory to help teachers incorporate the model into their teaching. Each cohort had seven days of professional development in its first year of participation. Cohort 1 had three additional days in the second year.

Coaches and researchers observed and gave feedback to teachers to assist with implementation. Because the coaches were on-site, some teachers also sought advice from them informally. The project website posted sample lesson plans and step-by-step explanations of instructional techniques. Teachers could participate in online chats with the

researchers and use the closed group electronic list to share information, challenges, and successes. Some teachers took more advantage of the coaching and technical support than others.

Comparison teachers did not receive SIOP Model professional development. They participated in regular district trainings two or three days each year. Each school also had a one-hour workshop to discuss student diversity and accommodations for ELLs in classrooms. ESL teachers had additional workshops on topics such as designing thematic units, using the new content-based ESL textbooks, and demonstrating instructional techniques.

2 Data collection and analysis of teacher implementation

Knowing that sheltered instruction has been addressed in ESL teacher education for 20 years (Crandall, 1993; Short, 2006), we anticipated that comparison teachers might incorporate some characteristics of SIOP lessons in their classrooms. We therefore observed, took field notes, and rated lessons of each participating treatment and comparison teacher twice per year, in the fall and spring, to determine whether features of the SIOP Model were being implemented. Using the SIOP protocol's rating scale, we scored the lessons and assessed teachers' fidelity to the intervention and how their level of implementation changed over time. Low implementers scored 50% or below on the scale; medium implementers scored between 50% and 75%; and high implementers scored 75% or higher.

Teacher implementation data revealed that treatment teachers incorporated more features of sheltered instruction than comparison teachers. At the treatment site, after one year of professional development, 56% of Cohort 1 and 74% of Cohort 2 were high implementers of the SIOP Model. After two years, 71% of Cohort 1 reached a high level. At the comparison site, only 5% of the teachers reached a high level in the first year; only 17% by the second year. The features of the SIOP Model were thus implemented more extensively in the treatment district (Short et al., to appear).

3 Data collection and analysis of student achievement

a English language proficiency: We collected the IPT oral language, reading, writing and total English proficiency scores for ELLs in both districts. First, we gathered baseline IPT data on all ELLs from the spring 2004 administration, before the study began. In 2005 and 2006, in the treatment district, we collected IPT scores of ELLs with at least one SIOP teacher. In the comparison district, we collected the IPT scores of ELLs with participating teachers.[1] In these district ESL programs, new students enter and others exit annually. As a result we had a cross-section of students that was not matched across the years and so we examined the average mean scores of the groups. Because the districts had a high level of student mobility, only a small number participated in all three IPT administrations, so no longitudinal analyses were undertaken.

We compared IPT mean proficiency level scores for treatment and comparison groups each year. Then, using Year 2 data, we employed analysis of variance (ANOVA) measures to determine if the teachers' SIOP training influenced the students' English

Table 3 New Jersey SIOP: Comparison vs. SIOP treatment group IPT mean scores

	03–04 Baseline			04–05 Year 1			05–06 Year 2			Change 03–04 to 05–06
	n	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	
Oral proficiency level:										
Comparison	(192)	3.66	1.28	(169)	3.65	1.32	(168)	3.66	1.33	0.00
SIOP	(387)	3.67	1.37	(278)	3.76	1.26	(268)	4.00**	1.06	+0.33
Reading proficiency level:										
Comparison	(188)	3.95	.92	(169)	3.98	1.01	(168)	3.97	.92	+0.02
SIOP	(387)	3.82	.92	(278)	3.91	.88	(268)	4.10	.83	+0.28
Writing proficiency level:										
Comparison	(176)	4.16	.94	(169)	4.04	1.16	(168)	4.02	1.13	–0.14
SIOP	(386)	4.06	1.08	(278)	4.16	.94	(267)	4.32**	.83	+0.26
Total proficiency level:										
Comparison	(193)	3.69*	1.04	(166)	3.61	1.23	(168)	3.65	1.12	–0.04
SIOP	(386)	3.11	1.06	(278)	3.70	1.00	(267)	3.88**	.92	+0.77

Notes: * statistically significant in favor of Comparison group ($p < .05$); ** statistically significant in favor of Treatment group ($p < .05$)

language achievement. We focused on Year 2 because by then most of the treatment teachers were adequately trained in the SIOP Model and thus the SIOP intervention might have a meaningful impact on student achievement. We also calculated the effect sizes (Cohen's *d*) for the differences in results between the treatment and comparison districts.

Table 3 illustrates the comparison and treatment groups' average IPT mean scores for oral language, reading, writing, and total proficiency. Regarding oral language proficiency, the two districts were at about the same level in the baseline year, but treatment students overtook comparison students in Year 1 and continued to outperform them in Year 2. By Year 2, the average mean score in the treatment district was significantly higher than in the comparison district, $F(1, 434) = 8.49$, $p = .004$, $d = 0.29$. Reading had a similar trend except that treatment students overtook comparison students only in Year 2 and the differences in average mean scores did not reach statistical significance, $F(1, 434) = 2.49$, $p = .12$, $d = 0.16$. In writing, comparison ELLs had slightly higher performance in baseline year; however, in Years 1 and 2, treatment students had higher mean scores. By Year 2, this difference was statistically significantly higher, $F(1, 433) = 9.74$, $p = .002$, $d = 0.31$.

Total English proficiency level scores showed the same trends as the oral language and writing data results but were moderated by reading results. Nonetheless, we found that although comparison students had better total proficiency scores than treatment students in the baseline year, treatment students surpassed them in Years 1 and 2, showing a statistically significant difference in mean scores in Year 2, $F(1, 433) = 5.36$, $p = .02$, $d = 0.23$. Overall, the comparison scores were relatively flat or decreased over time while the treatment district scores increased for each measure.

The ANOVA results provided some evidence of SIOP as a predictor of achievement in oral language, writing, and total English proficiency. The analyses of β coefficients revealed that comparison students could expect to score lower than treatment students on all tests (Oral: $\beta = -.32$; Reading: $\beta = -.12$; Writing: $\beta = -.29$). For example, comparison students could expect to score about one third of a proficiency level lower on a scale of 0 to 5 than treatment students (Short et al., to appear).

The effect size calculations (interpretable as the standard deviation difference between the two groups) show the SIOP intervention had a small effect. The treatment group's scores were more than one fourth of a standard deviation higher than those of the comparison group for oral (0.29), almost one third of a standard deviation higher for writing (0.31), and close to one fourth for total English (0.23).

b Content area achievement: We collected and analysed student achievement data from New Jersey state tests in reading, math, social studies, and science for Grades 6–7[2]; reading, math, and science for Grade 8; and reading and math for Grade 11. The students in the treatment and comparison districts took these tests only once. The results showed a significant difference in mean scores in favor of SIOP students in the treatment district on six state content tests: in 2005, TerraNova reading ($p = .04$), language ($p = .03$), and total (reading + language + math) ($p = .02$) for Grade 6; and in 2006, NJ Ask language ($p = .01$) for Grade 6, NJ Ask language ($p = .01$) for Grade 7, and HSPA mathematics ($p < .01$) for Grade 11. There was a significant difference in mean scores in favor of students in the comparison district on one state content test: in 2005, TerraNova social studies ($p = .02$) for Grade 7. There were no significant differences between groups on the other 19 content tests (for more detailed results, see Center for Applied Linguistics, 2007).

The content achievement results indicate some promise for the SIOP Model but the number of student participants was very small for each test, and therefore the results are not generalizable. Further, because the state gives different tests in all three content areas for Grades 6, 7, 8, and 11, there are no pre- and post-test options for the same group of students. Moreover, with no tests administered in Grades 9, 10 or 12, students in Grades 8 and 11 do not have two successive years of testing in the same subject.

4 Discussion

As a result of this study, we felt the SIOP Model had merit as a successful intervention for academic literacy among ELLs. The significant differences in the average means in favor of the treatment group on oral language, writing, and total English scores indicate that the SIOP Model professional development had a positive impact on the development of English language proficiency among the English language learners in classes with SIOP-trained teachers. Although the IPT reading proficiency scores did not show significant differences between comparison and treatment groups, the trend favored the treatment schools.

The academic English scores for the treatment group improved significantly even though most of the ELLs' SIOP instruction took place in mathematics, science, and social studies classes. This suggests that the SIOP Model's attention to language development

influenced student English language performance and improved the quality of content area teaching. The comparison students' scores remained relatively constant over this time, representing what we more customarily find in districts with English language learners because each year new beginning-level students enter the ESL program while advanced level students exit. Therefore, the steady academic language growth of the treatment student group is striking.

There were small effect sizes on IPT oral, writing, and total English proficiency for ELLs with SIOP-trained teachers. When interpreting these differences, we should consider that effect sizes for treatment differences tend to be greatest at the primary grades with a steady decline as the grades progress (Bloom et al., 2008). Further, effect sizes for ELLs are often lower and more variable than those for native English-speaking students in literacy intervention studies (August & Shanahan, 2006). The English language learners in this study were in Grades 6–12 so, although small, the effect sizes of .29 to .31 for the difference in means on the oral language and writing measures show the potential of the SIOP training.

In response to our research question about teacher development, we found that 56% of the treatment teachers in Cohort 1 became high implementers of the SIOP Model after one year. Notably, 74% of the Cohort 2 teachers reached the high implementation level in just one year. We argue that the context of the SIOP Model initiative played a role in this difference. Cohort 1 teachers participated in a new, district-level initiative in Year 1. The coaching support was limited, the notion of focusing on language development in content courses was new, and a culture of working in a cross-disciplinary way was lacking. In contrast, Cohort 2 teachers entered an existing structure and joined a team of teachers and coaches who had already experienced success with the SIOP Model. The SIOP Model was also viewed favorably at that point by the administration, which devoted more staff time to coaching, thus affording teachers more support.

IV The CREATE SIOP experimental study

In the New Jersey SIOP study, we scaled up the initial CREDE SIOP research with a greater number of teachers, students, grade levels, and outcome measures. The next project expanded the program of research in four ways:

- We moved to an experimental design.
- We focused on middle-school science.
- We explored strategies to reduce the time needed for teachers to become high SIOP implementers; and
- We added native English speakers and former ELLs to the analysis.

The next investigation, 'The impact of the SIOP Model on middle-school science and language learning', was sponsored by the Center for Research on the Educational Achievement and Teaching of English Language Learners (CREATE) and funded by the US Department of Education. The multi-phase project began in the 2005–06 school year and was conducted by researchers at California State University Long Beach, the Center for Applied Linguistics, and the University of Houston.

Using a small cluster-randomized trial with randomization at the school level, the study investigated the impact of the SIOP Model on student achievement in middle-school science and tested alternative delivery systems of SIOP professional development. Science was selected because of its importance in schooling and because it was a recent addition to federal testing mandates. The research question was:

> What are the effects of the SIOP Model on the acquisition of academic language and science concepts among English language learners in middle-school science classrooms?

1 Phase 1: Pilot study

Phase 1 of the project was a pilot study to design and refine Life Science curriculum units in order to infuse SIOP Model instruction. The goal of the modified units was to jump start the teachers' SIOP implementation. The units were aligned to state standards in science, English language arts, and English language development. They were designed using the district textbook and other curriculum materials and followed the district pacing guide. The language objectives in the units targeted language and literacy skills necessary for ELL achievement in science. While lesson activities varied, key elements were present throughout: activities to practice all four language skills, frequent opportunities for student–student interaction, use of manipulatives and graphic organizers, modeling of lesson tasks, and review of key vocabulary and content concepts at each lesson's end. The units were revised for the Phase 2 study.

We also created and field-tested science language assessments aligned to the units to measure ELLs' acquisition of science vocabulary, reading, and writing skills. The process was informed by the World-class Instructional Design and Assessment (WIDA) *Access for ELLs*® test design and by research from the Center for Research on Evaluation, Standards, and Student Testing (CRESST) on writing test tasks. Specifically, these researcher-developed assessments included graphic support, text elaboration and simplification, items ranging in levels of difficulty, and task types similar to lesson activities. Each assessment had a reading passage on the topic being tested, such as photosynthesis, followed by multiple choice, short answer, and essay questions.

2 Phase 2: Randomized study

In Phase 2, 10 middle schools in one large urban district in southern California with large (over 25%) and moderate (4%–10%) numbers of ELLs were selected for this study. Schools in each category (large and moderate) were randomly assigned to either treatment (SIOP Model) or control (typical science instruction) conditions ensuring an equal distribution of ELL population type. Following randomization, but prior to data collection, two control schools withdrew, leaving a total of three control schools and five SIOP treatment schools.

Following state requirements, science teachers in both conditions had certifications or endorsements for teaching English language learners. However, treatment teachers ($n = 8$) were trained in the SIOP Model and provided with SIOP science curriculum units so that they would be prepared to implement the lesson plans effectively. Treatment teachers

received an intensive two-and-one-half-day workshop before the school year began where researchers introduced them to the SIOP Model components and second language acquisition theory. Participants watched videos illustrating effective classroom implementation of each component's features, rated the lessons using the protocol, justified their ratings, and engaged in a thorough group discussion of each feature. They also practiced SIOP techniques to deepen their understanding. Participants then reviewed the SIOP lesson plans in the Life Science units (cell structure and function, photosynthesis and respiration, cell division, genetics), including activity procedures, student handouts, and the assessments.

Life Science was taught at Grade 7 in this district and for only one semester. This situation unfortunately condensed the time for professional development, data collection, and potential impact. Over nine weeks, teachers taught the four units using the SIOP lesson plans. Coaching was provided to each treatment teacher by researchers experienced in implementing the model. The coaching process included three steps:

1. teacher and coach reviewed the lesson plan together in advance;
2. coach observed and rated the lesson using the SIOP protocol; and
3. the two held a debriefing and feedback session.

Control teachers (n = 4) taught the same four topics of study in the same time frame using their typical methods. They received neither SIOP training nor coaching. They were observed by researchers and their lessons were rated with the protocol as well.

Students in both conditions were given the CREATE science language assessments as a pre-test at the beginning of each unit and as a post-test at the end to measure growth in acquisition of science language. The essays were scored using the IMAGE writing rubric. At the end of the semester, all students were given a science content measure developed and administered by the district.

In the data analysis, we compared the assessment results of students in the SIOP classes (n = 649) to those of control students (n = 372). The sample included:

- students who were native English speakers (English Only = EO);
- students who had been redesignated as fluent English proficient for more than 3 (FEP3);
- students who had been more recently redesignated (FEP) (3 years or less); and
- English language learners.[3]

To determine if the SIOP instruction affected students' science language and concept development, hierarchical linear modeling (HLM) was used, with pre-test scores serving as the covariate. Our statistical model used students within sections, section within teacher, and school as the random effects. In addition, because student-level and teacher-level fixed-effect variables may influence student outcomes, we examined the students' pre-test science scores and their language classification (e.g. EO, ELL) as student variables, and condition (treatment or control) and level of SIOP implementation (high, medium, low) as teacher variables. The outcome variables were the composite post-test scores created by aggregating the four specific post-test assessments into separate scores for the essay and non-essay (multiple choice and short answer) components.

Table 4 CREATE SIOP: Science language mean scores for non-essay and essay components

	Control (n = 372)				Treatment (n = 649)			
	Pre-test		Post-test		Pre-test		Post-test	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Non-essay component	15.48	7.31	19.36	8.60	15.86	7.81	20.83	8.72
Essay component	41.77	20.89	56.41	24.62	43.78	24.72	61.21	29.63

Table 4 presents the mean scores for the composite non-essay and composite essay components. Results from the conditional ANCOVA model of HLM indicated that students in the treatment condition – regardless of language proficiency classification – outperformed, on average, those in the control, although not to a statistically significant degree. There was an approximate 0.9 point advantage ($\gamma = 0.9$, s.e. = 2.1, $t = .429$, $p = .67$) for students in SIOP schools on the non-essay component of the post-test and an approximate 5.5 point advantage ($\gamma = 5.5$, s.e. = 6.8, $t = .809$, $p = .418$) on the essay component.

We also considered the effect sizes using a pooled within-groups estimate of the standard deviation taken from a simple calculation of the within-group means and standard deviations (Hedges, 2007). The effect of SIOP instruction on the non-essay component of the post-test was associated with Hedges' $g = .103$, whereas the effect on the essay component of the post-test was $g = .197$. These results indicate small positive effects.

Based on our observations of the teachers in both groups, we were not surprised that significant differences between the treatment and control groups did not occur. Many SIOP-trained teachers did not implement the model to a high degree, and some control teachers implemented many SIOP features, resulting in high ratings on the SIOP protocol. For this reason we explored the relationship between teacher implementation level and student achievement, regardless of condition. The results indicated a positive relationship between teacher implementation level and average student gains. In other words, students whose teachers implemented the SIOP Model to a high degree performed significantly better on the assessments than students whose teachers were weak implementers ($R^2 = .22$, $p < .05$), emphasizing the importance of fidelity to the model (Echevarría et al., 2011).

3 Discussion

Several reasons may explain why the overall differences between the treatment and control groups were not stronger. First, at the research design level, power was limited due to the small number of schools and teachers. Although we had 27 sections in the SIOP group, 15 in the control group, and over 1,000 students in the study, we were limited with only eight schools and 12 teachers agreeing to participate. Ideally, the study would have involved a larger number of schools, more teachers, and a more balanced representation of sections within teachers.

However, increasing the sample size in any of these dimensions heightens the difficulty in implementing the SIOP treatment. Changing teacher practice requires significant time and on-going support (Saunders et al., 2009), and both are necessary for most teachers to reach a high level of implementation. In this study the intervention lasted only 9 weeks. It is unlikely that in this very short time teachers were able to develop a strong working knowledge of the SIOP Model. Moreover, this period of time was too brief for a change in instruction to significantly impact student achievement. Yet, the effect sizes, despite the short intervention, are affirmative, and it is possible that given more exposure to high quality SIOP science instruction, the students would have performed better.

The level of SIOP implementation varied greatly among teachers for many reasons including level of commitment to the project, skill, and teaching style. Although some variability in adoption of a new practice is expected, in a study such as this one, with a limited number of schools and teachers, this variability further reduces power and undermines the impact. The initial teacher professional development was only two-and-one-half days long and was conducted just prior to the beginning of data collection. It is possible that with longer, more sustained training, teachers would have implemented the SIOP features to a greater degree, which would have had greater effect on student achievement. Nonetheless, when teacher implementation was high, student achievement did increase.

V Challenges and benefits to scaling up SIOP research

It is expected in educational research for promising interventions to be scaled up. As we conducted this program of SIOP research over time, however, we realized that scaling up yields both challenges and benefits.

1 Teacher commitment

Teacher commitment can be a challenge or a benefit. In our CREDE SIOP study, we worked with a small group of dedicated, enthusiastic, middle-school teachers who were recommended for participation due to their status as excellent teachers of ELLs. Their commitment to the research and development of a model of sheltered instruction was strong. Their willingness to work collaboratively after school, to invite us in to observe in their classrooms, to regard videotapes of their instruction with a critical eye, and to test the organic model was beneficial all around. As we moved to the writing assessment study, they recruited additional teachers, most of whom also had a keen interest in the results.

In the New Jersey study, with more teachers and the high-school level in the mix, it took more time to persuade many treatment teachers that the research had value and that SIOP instruction was both doable and useful in their classrooms. Fortunately, we had two years to work with the staff and, as noted, the second cohort acculturated more rapidly and, as a group, learned the model faster. In this study, most of the participants were volunteers and we had strong administrative commitment. These factors added to the positive environment. At the comparison site, however, there was much less commitment to the research. Teachers tolerated our observations but showed scant interest in the investigation.

The CREATE study in contrast assigned schools and teachers randomly to treatment or control conditions. While it provided science lessons to jump-start SIOP implementation in class, the professional development time was considerably truncated. Commitment felt qualitatively different here. More teachers went through the motions and despite coaching sessions to support their efforts, interest in implementing the lessons well was decidedly lacking.

Teacher commitment correlated to fidelity of implementation across the three studies. In general, the more committed the teachers, the harder they tried, the more they sought out coaching guidance, and the more enthusiasm they had. Some still took two years to reach high levels of implementation as in the New Jersey study, but they made consistent progress during that time.

2 *Accountability pressures*

We believe that the US educational context also played a role in the teachers' commitment. We began the research program before the 'era of accountability' was the norm. Prior to the No Child Left Behind's widespread enactment in the 2002–03 school year, teachers were less focused on test scores and had relatively more freedom in their classrooms. Teachers felt they had more time for activities outside their regular duties, such as collaborative research projects. They had no pressure to raise test scores in order to ensure that a school would make mandated adequate yearly progress (AYP) targets.

Even when we began our New Jersey study in the summer of 2004, the pressure was less than we find today. Schools may not have been performing as well as desired, but since the time that the study began, severe sanctions, such as school closures, have been carried out based on school performance. This, along with several years of bad press and growing resentment of students who 'bring down' AYP have changed the US classroom climate. At the time of the study, however, the New Jersey study teachers were concerned about student achievement, but not overly so. Moreover, New Jersey had an alternate graduation assessment available to students who did not pass the state high-school tests, and this option eased the pressure for teachers and students.

The climate was different during the CREATE study. Teachers were stressed by test scores and school performance. More paperwork and more test-taking practice were asked of them. They felt that they had less time for non-essential activities, which is how they viewed research participation. The situation was further impaired because we had less time to get to know the teachers and to help them understand and implement the SIOP Model.

3 *Comparison/control groups*

The selection of the comparison district in our New Jersey study posed an unexpected challenge. We easily identified the treatment district and received approval from the district superintendent and the state Department of Education. However, we needed a separate comparison district because the middle schools were not matched (one was a designated Title I school, a low socioeconomic indicator) and high-school students and teachers could not be placed in distinct groups. We looked for a district that matched on

several factors, i.e. linguistic diversity, socioeconomic status, achievement scores on state exams, and an ESL language program design; but convincing a district to act as the comparison site was difficult. Districts declined for several reasons. Some with predominantly native Spanish speakers provided a bilingual program in the middle schools. A few had participated in another intervention in recent years and were reluctant to take on a new project. Some districts objected to being labeled a comparison site, despite promised anonymity and free professional development. As a result, we caution other researchers to anticipate the challenge of securing a comparison or control site. As an educational community, we may need to develop new types of incentives for such participation.

4 Professional development

The professional development settings and time frames seemed to make a distinct difference in the outcomes of these studies. Having sufficient time to learn about the SIOP Model, try it out in class, and get feedback from coaches led to a higher level of implementation and more statistically significant results on measures of student academic literacy. In our CREATE study, we tried to condense the time needed to learn the model in order to test whether it could be shortened with the addition of SIOP-infused units and to conform to the district calendar. We found that a few days of training prior to data collection, even with lesson plans and coaching, were insufficient for teacher fidelity and significant student performance. However, in this study, the trend favored the treatment group and there was a small effect size, signaling some room for optimism if the professional development time were increased and if data collection occurred after teachers were more proficient in the model.

VI Suggestions for future research

In the New Jersey and CREATE studies, teachers were still engaged in the SIOP professional development process while data collection occurred. Some teachers had not completed the training and some did not implement the SIOP Model to a high degree before student achievement was assessed. Further, some students only had teachers who were low implementers of the model. Given the complexity of the model, should a similar study be done in the future, we recommend more time be given for teacher implementation before collecting student achievement data and an analysis of student performance linked to teacher level of implementation be conducted. We were unable to do this analysis in the New Jersey study because the subset of students with solely high or low implementers was too small for comparison purposes. The analysis in the CREATE study showed, however, that teacher level of implementation matters for student performance.

We also recommend a future study collect and analyse student performance data on content area exams, with pre- and post-measures, so that the impact of SIOP instruction on content achievement could be investigated. The content tests in New Jersey, as in most states, did not fit this goal. Students do not take the same test two years in a row. To examine student achievement then, other content tests are needed, but in the current educational climate in the USA with heavy testing already in place, more assessments are a burden that teachers and students may not deserve to bear.

A longitudinal, randomized study of the SIOP Model would also be welcome, but student mobility would need to be accommodated because turnover is high in these urban settings. Ideally, a randomized experimental study could look at the effects of SIOP Model instruction on the same cohort of students over three to five years and compare their achievement to that of a control group of students. Some schools are conducting program evaluations along these lines, but they usually lack a comparison or control group.

VII Conclusions

It is not often that educational researchers have a chance to build, test, and refine a model over an extended time period. We have had the advantage of working on SIOP research and professional development for more than 10 years. This has given us a chance to test the model in different settings and subject areas, with quasi- experimental and random experimental designs. We have studied ways to enhance the professional development and focused on one subject area to see if such concentration of teachers and curriculum units might have an impact. We have seen positive effects for ELLs, former ELLs, and native English speakers.

The findings from these studies indicate that the SIOP Model offers a promising approach to professional development that would improve the quality of instruction to ELLs and enhance their English language achievement. Although the effect sizes were small, they represent positive results. So far, we have found that teachers with SIOP Model training need 1–2 years of support to become high implementers. We will continue to test methods for reducing the time, but we acknowledge that changing teacher practice is a long-term endeavor. School reform policies need to anticipate and plan for such time frames and ought to provide not only a series of workshops but also additional support through coaching, lesson planning, and other technical assistance.

Acknowledgments

We would like to acknowledge Carolyn Fidelman and Mohammed Louguit of the Center for Applied Linguistics, Washington, DC, Kristin Powers of California State University Long Beach, CA, and David Francis of the University of Houston, TX for their assistance with statistical analyses, and Thomas Bauder, Beverly Boyson, Rebecca Canges, Lindsey Hillyard, Jennifer Himmel, Justine Hudec, Christopher Montone, and Marsha Vargas for their research assistance during these studies. This work was supported by the US Department of Education's Office of Educational Research and Improvement (grant number R306A60001), Institute for Education Sciences (grant number R305A05056), the Carnegie Corporation of New York (grant number 7609), and the Rockefeller Foundation (grant numbers 2004WC144 and 2005WC144).

Notes

1 Although the state of New Jersey switched language proficiency tests in the second year of the study, our two districts gave the IPT again.
2 New Jersey changed tests during the study. In the first year, Grade 6 and 7 students took the TerraNova in reading, language, math, social studies and science. In the second year, they were only tested in reading and math on the NJ Ask.
3 Because these were heterogeneous science classes, not only ELL, our research question was broadened to include all students.

References

August, D. & Shanahan, T. (2006). *Developing literacy in second-language learners: Report of the National Literacy Panel on Language-Minority Children and Youth*. Mahwah, NJ: Erlbaum.

Bloom, H., Hill, C., Black, A., & Lipsey, M. (2008). *Performance trajectories and performance gaps as achievement effect-size benchmarks for educational interventions*. MDRC Working Papers on Research Methodology. New York: MDRC.

Center for Applied Linguistics (2007). *Academic literacy through sheltered instruction for secondary English language learners.* Final Report to the Carnegie Corporation of New York. Washington, DC: Center for Applied Linguistics.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. 2nd edition. Hillsdale, NJ: Erlbaum.

Crandall, J. (1993). Content-centered learning in the United States. *Annual Review of Applied Linguistics*, *13*, 111–26.

Echevarría, J., Richards-Tutor, C., Chinn, V., & Ratleff, P. (2011). Did they get it? The role of fidelity in teaching English learners. *Journal of Adolescent and Adult Literacy*, *54*, 425–34.

Echevarría, J., Short, D., & Powers, K. (2006). School reform and standards-based education: An instructional model for English language learners. *Journal of Educational Research*, *99*, 195–211.

Echevarría, J., Vogt, M.E., & Short, D. (2008). *Making content comprehensible for English language learners: The SIOP Model*. 3rd edition. Boston, MA: Pearson/Allyn & Bacon.

Genesee, F., Lindholm-Leary, K., Saunders, W., & Christian, D. (2006). *Educating English language learners: A synthesis of research evidence*. New York: Cambridge University Press.

Guarino, A.J., Echevarría, J., Short, D., Schick, J., Forbes, S., & Rueda, R. (2001). The sheltered instruction observation protocol. *Journal of Research in Education*, *11*, 138–40.

Hedges, L.V. (2007). Effect size estimation in cluster-randomized trials. *Journal of Educational and Behavioral Statistics*, *32*, 341–70.

Hudec, J. & Short, D. (Prods.) (2002a). *Helping English learners succeed: An overview of the SIOP Model* [Video]. Washington, DC: Center for Applied Linguistics.

Hudec, J. & Short, D. (Prods.) (2002b). *The SIOP Model: Sheltered instruction for academic achievement* [Video]. Washington, DC: Center for Applied Linguistics.

Illinois State Board of Education, Assessment Division (2004). *The Illinois State Assessment: Technical Manual 2004*. Retrieved from: http://www.isbe.net/assessment/pdfs/isat_tech_2004.pdf (March 2011).

Saunders, W.M., Goldenberg, C.N., & Gallimore, R. (2009). Increasing achievement by focusing grade level teams on improving classroom learning: A prospective, quasi-experimental study of Title 1 schools. *American Educational Research Journal*, *46*, 1006–33.

Short, D. (2006). Content teaching and learning and language. In K. Brown (Ed.), *Encyclopedia of language and linguistics, volume 3* (pp. 101–05). 2nd edition. Oxford: Elsevier.

Short, D., Fidelman, C., & Louguit, M. (to appear). Developing academic language in English language learners through sheltered instruction. *TESOL Quarterly*.

Short, D., Hudec, J. & Echevarría, J. (2002). *Using the SIOP Model: Professional development manual for sheltered instruction*. Washington, DC: Center for Applied Linguistics.

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 1*

School reform and standards-based education: a model for English-language learners.

by Jana Echevarria, Deborah Short and Kristin Powers

The authors examined a model of instruction for English-language learners (ELLs) who were learning academic English while they tried to meet content standards required by the nation's education reform movement. In previous work (J. Echevarria, M. E. Vogt, & D. Short, 2000), the authors developed and validated a model of instruction (Sheltered Instruction Observation Protocol; SIOP model) for ELLs. In this study, the authors tested the model for its effects on student achievement. Findings revealed that students whose teachers implemented the SIOP model performed slightly better than did a comparison group on an expository essay writing task, which closely approximated academic assignments that ELLs must perform in standards-based classrooms.

Key words: English-language learners, instructional model, school reform, standards-based education

© COPYRIGHT 2006 Heldref Publications

School reform is a focus of the national education agenda--high academic standards are implemented in every state, and federal legislation requires annual testing of Title I students in Grades 3-8 and again in high school. Moreover, English-language learner (ELL) students are tested every year until they are proficient in English. Standards and the assessments that are aligned with them have become the rallying principles for improved academic performance in schools (Tucker & Codding, 1998).

The No Child Left Behind (NCLB) Act of 2001, the cornerstone of the present education agenda, provides significant federal dollars to states through a formula funding grant. States, in turn, provide funds to their local school systems. The monies constitute the largest increase ever in the funding of Title I programs, which were designed to educate economically disadvantaged students. Approximately 125 of the nation's poorest urban districts have received the increased funds. A similar increase in Title III funds has passed through states to districts with limited English-proficient (LEP) students. (Federal legislation refers to students who are not fluent speakers of English as LEP students. In practice, the term ELL is used more commonly. The term ESL, or English as a second language, refers to a type of class, instructional program, or curriculum.) Whereas increased funding indicates a considerable commitment to improved education for all children, it is unclear whether current instructional practices accomplish that goal for significant numbers of ELLs. Will many children inadvertently be left behind because educators missed the mark with the ELL population?

We tested a model of instruction for ELLs, the Sheltered Instruction Observation Protocol (SLOP) model, to ascertain its effects on academic literacy development. If schools are to provide a quality education for all children, it is critical that teachers implement empirically sound practices, especially for ELLs, who consistently underperform in academic settings (Moss & Puma, 1995; Snow & Biancarosa, 2003; Wainer, 2004).

The level of academic achievement for ELLs has lagged significantly behind that of their language-majority peers. For example, in California, where over 1.5 million ELLs attend public school, students who are not proficient in English perform less well on standardized tests than do students who are proficient in English. Eleven percent of 7th-grade ELLs who took the reading portion of the state test in 2002 scored at or above the 50th percentile, compared with 57% of English-proficient language-minority students and 48% of all students who took the tests (California Department of Education, Educational Demographics Unit, 2004).

Furthermore, most ELLs in U.S. schools are of Hispanic descent; recent national tests of reading and writing (i.e., the National Assessment of Educational Progress; NAEP) show that at the three grade levels tested (4, 8, 12), many more Hispanic students performed at the below-basic level than did White students and Asian/Pacific Islander students. Far fewer students performed at proficient or advanced levels than did those groups (National Center for Education Statistics, 2002). That finding is particularly noteworthy because the NAEP examinations usually exempt students at beginning levels of ESL proficiency (Grigg, Daane, Jin, & Campbell, 2003).

- Reprinted with permission. Additional copying is prohibited. -

GALE GROUP
Information Integrity

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 2*

School reform and standards-based education: a model for English-language learners.

It is also significant that ELLs have high dropout rates and are more frequently placed in lower ability groups and academic tracks than are language-majority students (Bennici & Strang, 1995; Cummins, 1994; "Latinos in Education," 1999; Snow & Biancarosa, 2003). Waggoner (1999) reported that about 13% of "newcomer and linguistically different" youth have either never been enrolled in U.S. schools or have left before completing high school. A recent study of high school attrition in Texas (Johnson, 2004) showed that 49% of Hispanic students who were ninth graders in 2000-2001 left high school before graduation, compared with only 22% of White students. Another study of districts in the South showed similar discrepancies between Hispanic dropout rates and White dropout rates (Wainer, 2004). Many of the students in both studies were ELLs.

Since the NCLB Act has been implemented, many states have required that students pass particular subject-area tests to obtain a high school diploma. Unfortunately, there is now an increase in the number of ELLs who are not receiving a diploma because they have failed such high-stakes tests despite fulfilling all other graduation requirements (Snow & Biancarosa, 2003).

Students have difficulty in school for a number of reasons; one is the mismatch between student needs and teacher preparation. Although the NCLB Act calls for highly qualified teachers in every core academic classroom by 2006 (2003 for new Title I teachers), the supply of certified ESL and bilingual teachers is too small for the demand. National studies (e.g., National Commission on Teaching and America's Future, 1996) and regional and district-level studies (e.g., Wainer, 2004) have-reported significant shortages of teachers qualified to teach students with limited English proficiency and of bilingual teachers trained to teach in a second language. Fewer than 13% of teachers in the nation have received professional development to prepare them for teaching linguistically and culturally diverse students (National Center for Education Statistics, 2002). To compensate, principals hire less qualified teachers, use substitute teachers, cancel courses, bus students elsewhere, require reading specialists to fill the void, increase class size, or ask teachers to teach outside their field of preparation (Vogt & Shearer, 2003; Wainer). It is not uncommon to find untrained paraeducators acting as English-language teachers for ELL students (Lavadenz, 1994; Pickett, 1999; Rueda, Monzo, & Higareda, 2004).

Moreover, federal guidelines regarding highly qualified teachers focus only on core subject-area teachers, requiring them to have a deep understanding of their subject matter but not requiring such teachers who have ELLs in their classes to have a commensurate level of understanding of second-language acquisition, ESL methods, or sheltered teaching methods. In the 1999-2000 Schools and Staffing Survey (National Center for Education Statistics, 2002), 41.2% of 2,984,781 public school teachers reported teaching ELL students, but only 12.5% of those teachers had 8 or more hr of training in the previous 3 years. Yet, the consensus from research on effective professional development is clear that 8 hr is not even the minimum that is needed to learn new approaches to teaching, such as strategies to teach ELLs well (Borko, 2004; Gonzales & Darling-Hammond, 1997).

As a result of those policies and practices, many ELLs receive much of their instruction from content-area teachers or paraeducators who have not had appropriate preparation or professional development to address their second-language development needs or to make content instruction comprehensible. This situation hinders their academic success. Not only do teachers need more preparation to work with ELLs but they also need to know the type of instruction that is most effective for these students, a population whose growing numbers require that educators take a serious look at their instructional programs.

Student Demographics

Across school districts in the United States, the number of students from non-English-speaking backgrounds has risen dramatically, representing the fastest growing segment of the student population. From the 1992-1993 school year through the 2002-2003 school year, the number of LEP students in public schools increased 84%, whereas total enrollment increased only 11% (National Clearinghouse for English Language Acquisition [NCELA], 2005). In 18 states, LEP enrollment grew more than 200% between 1992-1993 and 2002-2003. The 2000 U.S. Census reported that one in five school-aged children is a nonnative English speaker (Jamieson, Curry, & Martinez, 2001). As of the 2002-2003 school year, there were more than 5 million LEP students in the nation's pre-K-12 schools, approximately 10% of the total enrollment (NCELA).

The rise in the number of LEP students is related strongly to the increased immigrant population in the United States. The

- Reprinted with permission. Additional copying is prohibited. -

GALE GROUP

Information Integrity

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 3*

School reform and standards-based education: a model for English-language learners.

U.S. Census Bureau (Jamieson et al., 2001) determined that in 1999, 20% of school-aged children had at least one parent who was an immigrant, and 5% of the students were immigrants. However, when race or Hispanic origin is considered, the distinctions among students become more apparent. Sixty-five percent of Hispanic students and 88% of Asian and Pacific Islander students had at least one immigrant parent (Jamieson et al.). Although not all Hispanic students or Asian students are ELLs, Hispanic students comprise 75% of all students in ESL, bilingual, and other English-language support programs, according to the "Latinos in Education" report (1999) published by the White House Initiative on Educational Excellence for Hispanic Americans. The Office of English Language Acquisition, U.S. Department of Education, reported that in 2000, Asian English learners accounted for almost 10% of all ELLs in the nation.

According to Ruiz-de-Velasco and Fix (2000), the geographic distribution of immigrants is concentrated in urban areas. Six states account for three fourths of all immigrant children: California (35%), Texas (11.3%), New York (11%), Florida (6.7%), Illinois (5%), and New Jersey (4%). However, the number of immigrant children in states that are not among the top six increased by 40% from 1.5 million to 2.1 million between 1990-1995. Ruiz-de-Velasco and Fix found that those states were less likely to deliver language and other services that recent immigrant students needed. Although large urban centers are home to the majority of ELLs, smaller metropolitan, suburban, and even rural areas have experienced significant increases in their ELL population and often do not have the programs or teachers in place to adequately support their needs, especially in this age of education reform.

Who Are ELLs?

ELLs come to U.S. schools with many resources to share in classrooms, including linguistic resources in their native language. Yet, educators, policy makers, and the public should understand that all students who are learning English as an additional language are not alike. They enter schools with a wide range of language proficiencies (in English and in their native language) and of subject-matter knowledge. ELLs differ in their education backgrounds, expectations of schooling, socioeconomic status (SES), age of arrival in the United States, and personal experiences coming to, and living in, the United States (Waggoner, 1999).

Among immigrant students, some ELLs have strong academic preparation. They are at or above equivalent grade levels in the school curricula and are literate in their native language. For the most part, those students need English language development so that as they become more proficient in English, they can transfer their educational knowledge to their courses. A few subjects, such as U.S. history, may need special attention, because the students have not studied them previously. Those students have the greatest likelihood of having educational success if they receive appropriate language and content instruction in their schools.

Other immigrant students arrive at U.S. schools with limited formal schooling--perhaps because of war or the isolated location of their home. Ruiz-de-Velasco and Fix (2000) found that 20% of all LEP students at the high school level and 12% of the LEP students at the middle school level have missed 2 or more years of schooling since age 6. Among Hispanic students aged 15-17, more than one third are enrolled below grade level (Jamieson et al., 2001). Those students are not literate in their native languages and have not had schooling experiences such as changing teachers according to subject or taking a standardized test. They have significant gaps in their educational backgrounds, lack knowledge in specific subject areas, and often need additional time to become accustomed to school routines and expectations. They need literacy skills, English-language development, and content-area knowledge (Boyson & Short, 2003).

Schools also enroll students who have been raised in the United States but speak a language other than English at home. Although most of those students learn English during their elementary school years, some, nonetheless, reach secondary levels without having mastered English or the home language and may be caught in a state of semiliteracy, which is hard to escape (MacSwan & Rolstad, 2003; MacSwan, Rolstad, & Glass, 2002).

For the most part, when nonnative English speakers enter school, they do not have the same language skills and background in English as do native speakers from English-speaking homes. When native English-speaking children enroll in school, they have some oral proficiency and an understanding of the grammatical system. Some have knowledge of the alphabet and may have initial skills in reading and writing. Curricula and instruction build from the expectation that students know some English when they start school and rely especially on oral language proficiency. Yet, ELLs who enter school at all grades rarely have the level of proficiency in English found in native English-speaking students in

- Reprinted with permission. Additional copying is prohibited. -

GALE GROUP

Information Integrity

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 4*

School reform and standards-based education: a model for English-language learners.

kindergarten or first grade.

Although not acknowledged or understood by many educators, age-appropriate knowledge of the English language is a prerequisite for attaining content standards. Without oral and written English language skills, students have difficulty learning and demonstrating their knowledge of mathematical reasoning, science skills, social studies concepts, and so forth (Slavin & Cheung, 2003). Students who lack proficiency in English are at a decided disadvantage in school.

Students with limited formal schooling and below grade-level literacy are most at risk for educational failure. Although most ELLs show sufficient growth in acquiring social language skills (i.e., basic reading and conversational skills geared to many out-of-school and survival interactions) in a few years (Collier, 1987; Thomas & Collier, 2002), they are less successful in acquiring the language needed for school tasks like reading textbooks, participating in content-related classroom discourse, and writing research reports. Some studies of students placed in traditional ESL and bilingual programs reveal that most of those students need 5-9 years of instruction before their academic scores are at the average level of native English-speaking students (Collier, 1995; Thomas & Collier). That longer length of time is particularly difficult for educators to provide for secondary students who face graduation course requirements and high school exit examinations.

High Academic Standards for All Students

Historically, ELLs had time to learn English before they were placed in mainstream content classes and completed standardized tests in subjects such as reading and mathematics. Schools offered ESL or bilingual education programs to ELLs with specially trained teachers, yet kept those teachers and students separate from regular school programs. State and local policies typically exempted limited-English-proficient students from standardized tests for up to 3 years (Rivera, Stansfield, Scialdone, & Sharkey, 2000). However, that situation has shifted significantly.

In the past, ELLs would generally exit an ESL or bilingual program when they were proficient in English and able to perform subject-area coursework in regular English classrooms. At present, students exit ESL or bilingual programs before they are proficient in academic English for several reasons: (a) The number of ELLs increased without a comparable increase in certified teachers, so schools could not relegate the education of these students to separate specialized classes; (b) state legislatures have enacted policies that limit the number of years that students are permitted access to language-support services (California, Arizona, and Massachusetts require that students move into regular classrooms after 1 year), and bilingual education (an option whereby some ELLs can keep up with grade-level content) is severely restricted; and (c) districts place students in content subjects taught in English before they determine that such instruction will enable them to perform well on state standards-based assessments (Goto-Butler, Orr, Bousquet Gutierrez, & Hakuta, 2000).

The standards movement that began in 1989 at the National Governor's Association summit on education in Charlottesville, Virginia, resulted in an agreement on the need for national education goals (Tucker & Codding, 1998). Shortly after the summit, the National Council of Teachers of Mathematics (NCTM, 1989) released its national mathematics standards document, and subsequent federal legislation encouraged a widespread movement among other professional associations to develop standards for specific content areas. The intent was to (a) promote high expectations for student learning and (b) use the national standards as guidelines for state and local curriculum and assessment design and for professional teacher development.

Those laudable goals offered substantial opportunities for improving the education of ELLs. Whereas ESL instruction in the United States had been unsystematic and varied often from district to district and from state to state (Sheppard, 1995), the focus on standards served as a catalyst for educators involved in ELL schooling. The Teachers of English to Speakers of Other Languages (TESOL, 1997) developed ESL standards for students in pre-K-12 programs, and states adopted or adapted these standards to develop curriculum frameworks. The ESL standards focused on academic English-language skills, along with social-language proficiency and cultural norms of language use. ESL and bilingual educators thus had guidelines to increase the academic rigor of their language instruction and curricula. However, the other national content area standards did not make accommodations for second-language learners.

Thus, the challenge of teaching grade-level content to ELLs is acute because they have to learn academic concepts,

- Reprinted with permission. Additional copying is prohibited. -

GALE GROUP

Information Integrity

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 5*

School reform and standards-based education: a model for English-language learners.

discourse, skills, and behaviors in a language that they do not speak, read, or write proficiently. ELLs are expected to study the content subjects and demonstrate proficiency on the assessments, even though language acquisition is a long-term process, and beginning speakers of English are likely to need 4 or more years of instruction before they are proficient (Thomas & Collier, 2002). Furthermore, too few content teachers have the skills to teach content and promote language development simultaneously.

Besides instruction, assessment practices reveal another concern. Most states are developing or have adopted high-stakes tests based on state standards. As a result of the NCLB Act, all states are required to have standards-based reading and mathematics tests for students in Title I programs. As of February 2004, the U.S. Department of Education allows states to "not count" the scores of newly arrived ELLs in their accountability reports for the 1st year but still encourages all students to be tested. That practice has a negative implication for ELLs because most of the tests now used were designed for native English speakers who have spent their educational careers in U.S. schools.

Overall, the stakes for ELLs have been raised significantly as states and federal programs have restructured their accountability measures. The NCLB Act is an admirable goal but one that requires a specific plan for ELLs. Such a plan must include teachers' use of instructional practices that will facilitate students' academic literacy development so they can meet the high standards in all academic areas.

Academic Literacy Development

The focus of ELL education must be more than learning to speak and understand English. Students may learn to communicate in English, but there is a distinction between conversational English and academic English (Cummins, 1981, 2003; TESOL, 1997). Students who have a moderate command of spoken English in social settings require support when trying to comprehend academic English.

As an example of text that is difficult to comprehend, consider the following passage:

```
Traditionally, individuals enjoy ovembla, especially on weekends.
In fact, lack of ovembla can result in hard feelings when
overlooked or neglected. However, it should be noted that
some people shy away from ovembla. All in all, ovembla are
enjoyed by most people in many different cultures.
```

The passage has one word, ovembla, (a nonsense word that carries the meaning "parties" in this passage) that is unfamiliar to the reader and renders the passage difficult to comprehend. For many ELLs, additional words in the passage may be unfamiliar, such as "hard feelings" and "neglected." Moreover, contextual clues such as "especially on weekends" and idioms like "shy away from" may make the meaning even more confusing if the student does not have the background schema to use them. When one considers how many words and sociocultural referents are unfamiliar to ELLs, we begin to understand the difficulties they experience in the U.S. education system.

For ELLs to succeed in school, they must master not only English vocabulary and grammar but also the way that English is used in academic subjects. "Academic English" includes semantic and syntactic knowledge, along with functional language use. For example, students who use English must be able to (a) read and understand expository prose, such as that found in textbooks; (b) write persuasively; (c) argue points of view; and (d) take notes from teacher lectures. Those students also must articulate their thinking skills in English make hypotheses and predictions, express analyses, draw conclusions, and so forth. In their various content classes, ELLs must pull together their emerging knowledge of the English language with the content knowledge they are studying to complete academic tasks associated with the content area. They also must learn how to do those tasks, such as generate an outline, negotiate roles in cooperative-learning groups, and interpret charts and graphs. The combination of the three knowledge bases--English, content topic, and the manner in which tasks should be accomplished--constitute the major components of academic literacy (Short, 2002).

Another consideration for school success is the explicit socialization of students to the often-implicit cultural expectations of the classroom, such as turn taking, participation rules, and established routines. Erickson and Shultz (1991) reported that student comfort with the social participation structure of an academic task can vary according to culturally learned

- Reprinted with permission. Additional copying is prohibited. -

GALE GROUP

Information Integrity

The Journal of Educational Research March-April 2006 v99 i4 p195(16) *Page 6*

School reform and standards-based education: a model for English-language learners.

assumptions about appropriateness in communication and in social relationships, individual personality, and power relations in the classroom social system and in society at large. Many ELLs could therefore benefit from explicit guidance about expected appropriate classroom behaviors and interactional styles. However, Bartolome (1994) argued that teachers need to engage in culturally responsive teaching so their instruction is sensitive to, and builds upon, culturally different ways of learning, behaving, and using language.

Finally, the methods that teachers typically use, especially in the upper elementary and secondary schools, tend to not facilitate learning or literacy instruction for ELLs (Tharp, Estrada, Dalton, & Yamauchi, 2000). Reliance on oral instruction through lectures makes understanding information difficult. Paper-and-pencil tasks, like worksheets, that do not provide learning scaffolds for students also may be challenging. Textbook features intended to aid student understanding may have the opposite result for students who do not know how to use features such as bolded words, headings, sidebars, and graphs. Many ELLs have difficulty tracking the flow of information on cluttered pages. Furthermore, students who arrive in the United States beyond the initial age for literacy instruction and are not literate in their native language find that teachers are underprepared to teach basic literacy skills (Fillmore & Snow, 2002; Rueda & Garcia, 2001).

Sheltered Instruction for Accessing Core Content and Meeting Standards

One direction that educators have taken to accommodate the need for teaching more academic content to ELLs while they are still learning English has been to incorporate more sheltered instruction (SI), or specially designed academic instruction in English (SDAIE; as it is called in California), in their educational programs. SI is an instructional approach that makes grade-level academic content in areas such as social studies, mathematics, and science accessible for ELLs by incorporating specialized strategies and techniques that accommodate the second-language acquisition process (Genesee, 1999). SI teachers use the regular core curriculum and modify their teaching to make the content understandable for ELLs while promoting their English-language development.

Some of the techniques that characterize SI include slower speech and clear enunciation, use of visuals and demonstrations, scaffolded instruction, targeted vocabulary development, connections to student experiences, student-to-student interaction, adaptation of materials, and use of supplementary materials (Addison, 1988; Echevarria, 1995; Echevarria & Graves, 2003; Genesee, 1999; Kauffman, Sheppard, Burkart, Peyton, & Short, 1995; Short, 1991; Vogt, 2000). Such strategies for content-area teachers are promoted by school districts, teacher training programs, and the literature (Crawford, 2003); with the ever-growing number of ELLs in U.S. schools, all teachers need to be aware of these instructional approaches for content classes.

Although most educators agree on these features as being important for SI for ELLs, there has not been an explicit model for effectively delivering sheltered lessons nor many investigations in which researchers measure what constitutes an effective sheltered lesson (August & Hakuta, 1997). As a result, SI has been implemented unevenly across districts and schools (Sheppard, 1995). The underachievement of ELLs on state and national assessments indicates that for school success, teachers must do more than simply implement a few strategies from ESL methodologies, such as showing visuals or slowing down the rate of speech. Those strategies may help students access the content concepts, but without systematic language development, students never develop the requisite academic literacy skills needed for achieving success in mainstream classes, for meeting content standards, or for passing standardized assessments.

That situation can thus be a tremendous challenge for many regular classroom and content teachers who instruct ELLs in their classes. Most of those teachers are held accountable for their students' performance but are without key training or experience in effective instruction for ELLs. Although teachers can learn numerous techniques for helping ELLs understand the gist of subject content, teachers' overall successes to date have been limited with this population. What may contribute to the situation is the lack of a coherent, scientific model of SI that would facilitate teachers' systematic implementation of features known to be effective instructionally.

To address that need, we undertook a national research project to develop such a model of SI for ELLs, then ascertained its effects on their academic literacy development.

SIOP Model Development

- Reprinted with permission. Additional copying is prohibited. -
GALE GROUP
Information Integrity

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 7*

School reform and standards-based education: a model for English-language learners.

"The Effects of Sheltered Instruction on the Achievement of Limited English Proficient Students" is a 7-year research project (1996-2003) that we conducted for the Center for Research on Education, Diversity & Excellence (CREDE), a national research center funded by the U.S. Department of Education, Office of Educational Research and Improvement (now known as the Institute of Education Sciences). Housed at the University of California, Santa Cruz, CREDE supported 30 research studies throughout the United States.

We report on the following research questions that we addressed in the national research project:

1. Does SI improve the achievement of ELL students in content areas such as social studies?

2. Are there significant differences in achievement data (reading scores, writing samples, attendance) for students of project teachers versus students in sheltered classes whose teachers have not received SIOP development training?

In the first 2 years of the project, we collaborated actively with practicing middle school teachers to refine the SI model and to implement it in their classrooms. We identified, according to literature review and classroom research, effective teaching strategies involved in SI, such as scaffolding, learning strategies, literacy techniques, and meaningful curricula and materials.

With a process similar to a design experiment (Cobb, Confrey, diSessa, Lehrer, & Schauble, 2003; The Design-Based Research Collective, 2003), the SIOP model was developed through a cyclical process, wherein researchers and project teachers designed, used, analyzed, and redesigned features of the model. The model was developed initially as the SIOP, a research observation instrument. It is a rubric that allows researchers to score teachers along a continuum of performance for each feature, thus determining how well teachers were including the essential features of effective SI in their lessons (Echevarria & Short, 2004; Short & Echevarria, 1999). Figure 1 shows the evolution of the model and its various applications.

[FIGURE 1 OMITTED]

Teachers used the lesson planning guide to implement the model; researchers used the protocol to measure fidelity of the teachers' implementation of the SIOP model. Design-based research requires collaboration between researchers and practitioners to produce meaningful change in instructional practice by studying learning in context (Cobb et al., 2003); this was at the heart of our CREDE research.

The protocol evolved into a lesson planning and delivery approach known as the SIOP model (Echevarria, Vogt, & Short, 2000, 2004). It provides concrete examples of features of SI that can enhance and expand teachers' instructional practice. In brief, the SIOP model offers a framework for teachers to present curricular content concepts to ELLs through strategies and techniques that make new information comprehensible to the students. While doing so, teachers develop student language skills across the domains of reading, writing, listening, and speaking. Teachers might accomplish that task in ways that are suited to a particular lesson by asking students, for example, to (a) engage in peer discussions or a class debate, (b) read textbook chapters or supplementary materials, (c) complete a graphic organizer, (d) write in a journal, or (e) compose an essay. Some teachers might implement reader or writer workshops or a teacher-directed reading lesson.

The observation protocol is composed of 30 items that are grouped into eight components essential for making content comprehensible for ELLs (see Appendix): (a) Preparation, (b) Building Background, (c) Comprehensible Input, (d) Strategies, (e) Interaction, (f) Practice/Application, (g) Lesson Delivery, and (h) Review/Assessment.

The six features under Preparation examine the lesson-planning process, including the incorporation of language and content objectives, use of supplementary materials, and the meaningfulness of activities. Building Background focuses on making connections with students' background experiences and prior learning and developing their academic vocabulary. Comprehensible Input considers adjusting teacher speech, modeling academic tasks, and using multimodal techniques to enhance comprehension. Strategies emphasizes explicit teaching of (a) learning strategies so that students know how to access and retain information, (b) scaffolding instruction, and (c) promoting higher order thinking skills.

Interaction reminds teachers to encourage elaborated speech and to group students appropriately for language and

- Reprinted with permission. Additional copying is prohibited. -

GALE GROUP

Information Integrity

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 8*

School reform and standards-based education: a model for English-language learners.

content development. Practice/Application calls for activities that extend language and content learning, and Lesson Delivery ensures that teachers present a lesson that meets planned objectives. As part of Review/Assessment, four items consider whether the teacher (a) reviewed key language and content concepts, (b) assessed student learning, and (c) provided feedback to students on their output.

The SIOP model shares many features recommended for high-quality instruction for all students, such as linking lesson objectives to content standards, but adds key features for the academic success of students learning through a second language, such as inclusion of language objectives in every content lesson and development of background knowledge.

There is no required routine to follow when one implements the SIOP model. However, some specific attention to academic literacy development is required in each SIOP-designed lesson, particularly in the form of language objectives and contextual language practice. Moreover, the emphasis that SIOP lessons place on building vocabulary and background knowledge and developing learning strategies contributes to students' literacy development.

One strength of the SIOP model is that it allows for natural variation in classroom implementation while it provides teachers with specific lesson features that, when implemented consistently and to a high degree, are likely to lead to improved academic outcomes for ELLs. Another strength of the model is that the protocol provides a rating scale so that lesson observations may be scored. That feature is important for teachers' own professional growth and development; it allows administrators and university field supervisors to provide concrete feedback to the teachers they observe and evaluate. The rating scale also is effective as a coaching tool for schools in which peer coaching is used. A more detailed discussion of the SIOP model is found in Making Content Comprehensible for English Learners: The SIOP Model (Echevarria et al., 2004).

During the first months after the model was developed, Guarino and colleagues (2001) conducted a study to establish the validity and reliability of the SIOP instrument, which researchers use to rate teacher implementation of the SIOP model of sheltered instruction. A statistical analysis revealed an interrater agreement of .99. Additional analyses indicated that the SIOP instrument is a highly reliable and valid measure of SI.

Research Methodology

After we developed the SIOP model and validated the protocol, we trained a group of teachers to implement the model to a high degree (Short & Echevarria, 1999). That cadre of teachers provided the classrooms in which student achievement could be measured.

Setting

The research occurred in one West Coast and two East Coast public school districts (see Table 1) from 1998 to 2000. The West Coast school district was a large, diverse, urban school district with approximately 90,000 students, 89 schools, and a student population that was 45% Hispanic, 20% African American, 18% Caucasian, and 11% Asian/Pacific Islander (see Table 2). Approximately 32% of the students in the district were identified as ELLs. All West Coast data originated from students in three middle schools with similar demographics. Eight intervention teachers were from one middle school, two intervention teachers were at a second school, and three comparison teachers were from a third school.

The two East Coast districts were in a large metropolitan area with a combined number of approximately 166,000 students distributed across more than 220 schools. In one district, the student population was 41% Caucasian, 32% Hispanic, 17% African American, and 10% Asian/Pacific Islander. Twenty-three percent of the students in the district were identified as ELLs. In the other district, the student population was 61% Caucasian, 11% Hispanic, 11% African American, and 14% Asian/Pacific Islander. Eight percent of the students were identified as ELLs. The East Coast data came from the students of nine teachers at four middle schools; one additional teacher and school provided the comparison group.

The ELLs in the East and West Coast districts had a distinct program of study whereby they participated in sheltered classes for the core subjects--English-language arts, social studies, mathematics, and science. The students did not have a designated ESL class. On the East Coast, only ELLs were in the sheltered classes, and the teachers used district-developed sheltered curricula that were aligned with the regular grade-level curricula. On the West Coast, in a few

- Reprinted with permission. Additional copying is prohibited. -

GALE GROUP

Information Integrity

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 9*

School reform and standards-based education: a model for English-language learners.

teachers' classes some native English-speaking students were in the sheltered classes with ELLs because of issues of scheduling, but they were not part of the data collection. Teachers in the West Coast sheltered classes used the same core curriculum as in mainstream classes, but the sheltered teachers modified and adapted the curriculum to make it more understandable for their ELL students. In addition, social studies and English-language arts teachers functioned in teams to reinforce and support concepts across the subject areas. On both coasts, ELL students were mixed with native English speakers for the elective classes. All of the intervention classes were designated SI courses with the exception of one health class on the East Coast. In that class, only the ELL students participated in the data collection and analysis.

Participants

Three hundred forty-six students in Grades 6-8 participated in the intervention classes. Of those participants, 237 students were from the West Coast school district and 109 students were from the East Coast districts. Approximately 54% of the participants were boys, and 46% were girls. Among the intervention students, 56% were Hispanic, 41% Asian/Pacific Islander, 2% Caucasian, and 1% African American. Four percent of the students had identified disabilities and received special education services.

We identified a comparison group of students and, although not specifically matched student to student, the comparison group emanated from a different school on each coast with similar student populations in terms of ethnic makeup, proportion of ELLs, and free or reduced-price lunch status. Ninety-four students in Grades 6-8 participated in the comparison group and in the same instructional program as the students in the intervention classes (i.e., designated sheltered content classes). Approximately 57% of the participants were boys; 43% were girls. Among the comparison students, 69% were Hispanic and 31% were Asian/Pacific Islander. None of the students in the comparison group received special education services.

At the time of the study, all participants were designated as ELL by their school districts on the basis of their performance on the districts' language-proficiency assessments. The students represented the full range of proficiency from nonliterate beginners to advanced-level ESL students. One issue inherent in research with ELLs is the variability in identification and designation procedures. Goto-Butler and colleagues (2000) concluded in their studies of ELL students that "Districts vary considerably in both whom they included as LEP and non-LEP students ... and rates of redesignation vary from year to year, even within the same district" (p. 144). In the present study, each of the three districts used a different classification system, and the largest district used two classification systems. Thus, any comparisons among students' English-proficiency levels would be somewhat arbitrary. However, in each classification system, the majority of students fell within the midrange, meaning that the comparison and intervention groups were mostly advanced-beginning to intermediate speakers. Also, students in both groups shared similarities in related factors, such as ethnicity and schoolwide test scores. Rather than presuming to equate classification systems, we relied on the fact that all students in the study were ELLs who were enrolled in sheltered content classes (i.e., classes structured to give students extra support in designated academic areas.

Other important similarities existed between the two groups. Most students were from low-SES backgrounds, as measured by eligibility for the free and reduced-price lunches program. The predominant native language among the intervention and comparison students was Spanish (more than 50% in all districts); also, a large number of students spoke Cambodian, Vietnamese, and Korean. Some students spoke other Asian, African, Caribbean, European, or Native American languages. Ethnicities included Hispanic, Cambodian, Vietnamese, Arabic, and Korean. The participants' countries of origin were diverse and included Mexico, Cambodia, El Salvador, Pakistan, Vietnam, Bolivia, Somalia, Yemen, and others.

Procedures

In the 1st year of the study, participating school districts nominated the project teachers. Criteria for nomination included subject area, willingness to participate, and 2 or more years of experience with SI. In subsequent years, other teachers were invited to join the study or were recruited by current project teachers. Project teachers spent 1 or 2 years (some teachers joined the study in 1997 and others in 1998) learning and practicing the SIOP model through an extensive professional development process; we measured implementation with the SLOP. The project teachers and researchers formed a learning community to refine the model through an examination of the teachers' classroom practices and student

- Reprinted with permission. Additional copying is prohibited. -
GALE GROUP
Information Integrity

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 10*

School reform and standards-based education: a model for English-language learners.

response to the SIOP lessons.

On both coasts, teachers participated in 3-day staff development institutes on the SIOP model each summer and in several reunion meetings during each school year. During the workshop sessions, teachers and researchers (a) developed a common understanding of the SIOP model or practiced strategies that integrate language and content knowledge or (b) scaffolded instruction to enhance comprehension, examined state standards in their particular content areas to determine associated language objectives and academic tasks that ELLs could learn, and established a lesson planning process. Teachers discussed student reaction to SIOP lesson methods and shared samples of student work. Between meetings, teachers and researchers communicated via a closed electronic list. Teachers also wrote early reflections and evaluations.

Each intervention teacher implemented SIOP lessons in his or her designated course and was videotaped three times per year--fall, winter, and spring. We used the SIOP rating scale to analyze these videotaped lessons, as well as other classroom observations that we conducted. We shared the analyses with teachers on an ongoing basis to facilitate teacher growth and validate the research interpretations. We provided written feedback to the teachers. We subsequently analyzed SIOP data collected throughout the project to determine overall teacher change and significant development in specific areas of instructional practice (Short & Echevarria, 1999).

We selected comparison teachers to match the intervention teachers as closely as possible on the basis of their schools' demographics and setting, student demographics in their sheltered classes, and professional training with ELLs. The comparison teachers had credentials and teaching experience similar to the intervention project teachers (see Table 3) but did not participate in any SIOP training. Each of the comparison teachers was certified to teach ELLs, as was all but one of the intervention teachers. In addition, the ethnic background of the comparison teachers was similar to that of the intervention teachers (see Table 4). On the West Coast, the teachers used SDAIE techniques to teach content areas; on the East Coast, all the teachers (except one intervention teacher) were High Intensity Language Teaching (HILT)trained teachers. Teaching experience for the intervention teachers ranged from 1-15 years and from 3-14 years for the comparison teachers.

We videotaped the comparison teachers and rated them on the SIOP two times per year fall and spring. They did not receive feedback on their lessons or participate in any training. The ratings of all teachers provided important data on the fidelity and quality of SIOP model implementation.

Table 3 shows that project teachers had years of experience teaching ELLs that were similar to those of comparison teachers, but their SIOP scores were considerably different. Teachers certified to teach ELLs, like the teachers in our study, are familiar with effective strategies and techniques that make sheltered lessons understandable for their students. However, the difference in mean scores between the intervention and comparison teachers' implementation of SI may be attributed to the lack of a model to guide the comparison teachers' instruction. Although some of the comparison teachers were rated highly on certain features, they did not exhibit consistent use of best practices for ELLs that the intervention teachers used, as reflected in the SIOP model.

Qualitative data retrieved from written feedback from observations, electronic discussion, teacher evaluations and reflections, as well as periodic documentation in journals elucidate the kinds of instructional practices that account for some of the difference in intervention and comparison classrooms.

A comparison of observational notes from a SIOP sheltered English class and a non-SIOP sheltered English class indicates that both teachers began their lessons with a content objective, "Today we are going to....," but the SIOP teacher explicitly added a language objective that students would learn about editing their work. Furthermore, the SIOP teacher received the highest score of "4" for pacing, whereas the comparison teacher received a "2" because he "speeds through sections of the materials he may be assuming they understand" (Researcher field notes, March 15, 1999). Under the component Comprehensible Input, the SIOP teacher received a score of "4" because he "uses a variety of words to explain a concept" (Researcher field notes, April 14, 1999). In contrast, the comparison teacher's speech was somewhat inappropriate for students' proficiency level; it received a score of "2." To illustrate the professional development process that the SIOP English teacher experienced, his journal notes from March 26, 1999, stated,

- Reprinted with permission. Additional copying is prohibited. -

GALE GROUP

Information Integrity

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 11*

School reform and standards-based education: a model for English-language learners.

> **The last two years have been very rewarding. I have the luxury of having looped with the ELL group. Their writing and critical thinking skills have increased. It has been easier because of SIOP. Again, it has helped to focus the lessons in order to set objectives and methods which I teach.**

Although teachers in the comparison group were competent, experienced teachers of ELLs, they did not have the specific instructional goals that the SIOP project afforded (i.e., to systematically examine features of instruction, highlight academic language needs of students, and work to improve practice in discreet ways).

Student Outcome Measures and Data Collection

To measure students' academic literacy development over time, we used an expository writing assessment. We needed to use a measure that approximated the type of academic task that ELLs are regularly asked to perform in standards-based classrooms. Therefore, students wrote to a prompt that resembled typical writing tasks in content-area classes, in this case, social studies. We field tested the prompts in a school with a similar student body but in a nonparticipating district. For the pre- and posttest assessments, students wrote to the same prompt.

We had expected originally to use standardized test scores as an additional measure of student achievement. However, because the study preceded NCLB, most of the ELLs in the districts were exempted from the districts' testing process of using norm-referenced standardized tests. So, because of limitations in the education policies at that time, we could not rely on reading or writing test scores of that nature. Furthermore, the district-developed writing assessments that were given to the students for promotion within the district ESL programs called for narrative rather than expository text, thus they were less suited to the content-area classes being studied. Our goal was to investigate ELL students' performance on tasks that are critical to academic success; the writing assessment that we used was an important measure of academic literacy.

Given the limitations of this study, we used the writing assessment from the Illinois Measurement of Annual Growth in English (IMAGE) test. The IMAGE is the standardized test of reading and writing that the state administrators use to measure the annual growth of these skills for ELLs in Grades 3 and higher. The test is valid and reliable and has been correlated to and has predicted scores on the IGAP (the former Illinois test of achievement) that was administered to all students in Illinois, except those exempted because of linguistic development issues or learning disabilities.

Data collection for the pretest occurred within the first 6 weeks of class. The posttest assessment occurred within the last 6 weeks of the course. Seventy percent (n = 241) of all students in classes with SIOP-trained teachers were present for the pretest and posttest administrations. Eighty-two percent (n = 77) of the students in comparison classes were present for the pretest and posttest.

The testing procedures were similar to, but slightly modified from, those used in Illinois with the IMAGE (www.isbe.net/assessment/IMAGE.htm) to accommodate the schedules of participating schools. The test was untimed, whereas the IMAGE is normally given during two 40-min sessions. Most of the intervention and comparison students completed the assessment within a class period of 40-50 min. As with typical IMAGE administration, participants could draft their responses with a graphic organizer before writing a final product. Participants responded to only one prompt (Figure 2); for the IMAGE, they respond to four prompts. The researchers (authors and their research assistants) administered the test and monitored the classrooms during testing.

[FIGURE 2 OMITTED]

All of the pre- and posttest writing samples from the intervention and comparison classes were evaluated by an independent rater who had 2 years of experience scoring writing assessments for a school district and who was a former ESL teacher. The rater was blind to the conditions of the study. Because the IMAGE was unfamiliar to personnel in all districts, we opted for one rater who could learn about the test's specifications and scoring rubric and thus maintain intrarater reliability. The researchers randomized writing responses and essays of both groups of students and sent them to the rater for scoring.

- Reprinted with permission. Additional copying is prohibited. -

GALE GROUP

Information Integrity

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 12*

School reform and standards-based education: a model for English-language learners.

Over 640 writing samples were scored with the IMAGE writing rubric. The rubric has a 6-point scale and provides individual subscores for five dimensions of writing--language production, focus, support or elaboration, organization, and mechanics--as well as an overall score for each student. For each subtest, a student may have a score from 0 to 5; the total maximum score is 25 points. The five writing dimensions measure the following items:

1. Language production. Degree to which English-language acquisition is demonstrated in the written passage.

2. Focus. Degree to which the main idea is clear and maintained.

3. Support or elaboration. Extent that the main idea is explained or elaborated with specific evidence and supporting details.

4. Organization. Extent that the flow of ideas is logical and the text is connected.

5. Mechanics. A measure of use for standard English conventions (grammar, spelling, capitalization, punctuation).

Results

Table 5 shows the mean, standard deviation, and sample size for the performance of each group on the pre- and posttest writing samples. Each of the five IMAGE subtest scores appears after the total score is listed. The total score analysis was based on 315 students--those who had a pretest and posttest score for every subtest; however, subtest analyses were based on 318 students who had a score for each particular subtest, a slightly larger group for some subtests. Students in the SIOP classes performed less well on all pretests when compared with the comparison students, but they performed better on the posttests (see Table 6).

Because of differences between the two groups in their pretest scores prior to implementing the SIOP model, we conducted analyses of covariance (ANCOVAs) to determine whether students from the intervention classes made greater gains in writing than did students in the comparison classes. We calculated the adjusted means for the posttest results on the basis of the pretest covariate; Table 7 shows the ANCOVA results.

As indicated in Table 7, we found significant main effects for the intervention condition on the total score and on three of the five subtest scales. Comparisons between intervention and comparison groups on the total scores (i.e., aggregated across the five scales) indicated that the participants whose teachers were trained in the SIOP model made significantly better gains in writing than did the comparison group, $F(1,312) = 10.79$, $p < .05$. In follow-up analyses on student performance on the writing-assessment subtests, we found that the intervention group performed at a significantly higher level in language production, $F(1, 314) = 5.00$, $p < .05$, organization, $F(1,315) = 5.65$, $p < .05$, and mechanics, $F(1,315) = 4.10$, $p < .05$, than did those in the comparison group, whose teachers had not received the research-developed training and support to deliver SI. The intervention group did not make statistically significant gains over the comparison group in their performance on the writing focus and elaboration subtests.

The effect size of the intervention, calculated for the intervention group as d = [M.sub.1] - [M.sup.2]/[[sigma].sub.pooled] with [M.sub.1] = posttest total writing and [M.sub.2] = pretest total writing scores, was +.833. That effect size is considered large by most indexes; however, it may overestimate the effects of the intervention because some growth is expected as a result of maturation.

Discussion and Conclusions

The results of this study reveal positive effects of the SIOP model on student literacy achievement as measured with the IMAGE writing assessment. The intervention group scored lower on the total score and on all subtests of the pretest but higher on the posttest than did the comparison group. Thus, the intervention group made greater gains during the school year. The intervention group gained an average of 2.9 points (out of 25 points) between pretest and posttest administrations compared with a gain of 0.7 points for the comparison group, according to posttest mean scores adjusted for pretest performance (Table 6). The effect size of the intervention (d = +.833), estimated from the posttest gains made by the intervention group, suggest significant gains in students' overall writing performance. The differences between the

- Reprinted with permission. Additional copying is prohibited. -

GALE GROUP

Information Integrity

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 13*

School reform and standards-based education: a model for English-language learners.

intervention and comparison groups were statistically significant for the total score and the language production, organization, and mechanics subtests. Those results indicate that the SIOP model offers a promising approach for helping ELLs develop academic literacy skills needed for success in school, in this case, academic writing.

In this study, we offer a preliminary examination of the SIOP model. Further research is needed on the effects of the SIOP model on reading and other content-area test scores. In the future, as we learn more about effective professional development for teachers on the SIOP model, researchers can design a scale-up study in terms of an experimental quantitative evaluation (e.g., with randomized student and teacher assignment and larger subject sets for greater effect size).

If no child is to be left behind in school, regardless of English proficiency level or academic background, substantial changes must be made in the way that ELLs are educated. The goal of high academic standards for all students is laudable, but the way to accomplish that goal must be reexamined because the achievement of ELLs is poor at present (Olson, 2003). The impact of the status quo may be profound on our schools and society as the growth in numbers of ELLs continues to outpace the number of students who enter school with requisite background knowledge and fluent English proficiency (Fillmore & Snow, 2002).

We determined that certain features must be present in instruction so that content concepts are made comprehensible at the same time that academic English-language development is promoted (Echevarria et al., 2000, 2004). Deep understanding of the subject matter being taught, although necessary, is not sufficient when one works with ELLs. Effective SI, therefore, draws from and complements high-quality instructional methods advocated for regular classrooms but adds specific strategies for developing English-language skills. That is a shift in the teaching-learning relationship that requires teachers to engage students in listening, speaking, reading, and writing about the content in meaningful ways. In highly effective SI classrooms, explicit language instruction targeted to and slightly beyond students' level of English proficiency also is presented in every lesson.

SI provides useful strategies and techniques for making instruction more understandable for ELLs, but without a scientifically validated model to guide teachers in lesson planning and lesson delivery, it will not be consistent within and across classrooms. For change to occur in teaching practice that leads to improved academic performance by students, teachers cannot simply select their favorite techniques; implementation of high-quality instruction must be systematic and steered by research. Without a sheltered model, language development is apt to be disregarded as a result of the pressure that teachers face to cover the curriculum (Short, 2002). Teachers report that having a well-articulated model of high-quality instruction empowers them to work more effectively with ELLs (Hulquist, 2002; Short & Echevarria, 1999).

Our research has revealed that when certain features of instruction were consistently and systematically used with ELLs through the SIOP model, their performance in expository writing improved significantly over that of similar students whose teachers were trained in teaching ELLs but did not implement the features found in the model. We believe that finding is especially important because expository writing is one of the most challenging academic areas for ELL students, and it is the type of writing that is fundamental to academic literacy.

As changes in the allocation of federal funds for ELLs and economically disadvantaged students bring increased attention to the achievement of all students, including ELLs, educators need to examine the interaction between the SIOP model, teacher decision making, implementation procedures, settings, student populations, and other variables. Although the model is effective, it is not a panacea for the challenge of helping ELL students meet high academic standards. As researchers who endeavor to conduct research in "messy settings" have stated, "Even useable knowledge will not make complex educational problems simple" (The Design-Based Research Collective, 2003, p. 7).

APPENDIX The Sheltered Instruction Observation Protocol (SLOP) (Echevarria, Vogt, & Short, 2000, 2004)

Observer: --

Date: --

Grade: --

- Reprinted with permission. Additional copying is prohibited. -

GALE GROUP

Information Integrity

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 14*

School reform and standards-based education: a model for English-language learners.

Class: --

Teacher: --

School: --

ESL level: --

Lesson: Multi-day Single-day (circle one)

Directions:

Circle the number that best reflects what you observe in a sheltered lesson. You may give a score from 0-4. Cite under "Comments" specific examples of the behaviors observed.

Total Score: []

%Score []

Tape #: --

	Highly Evident		Somewhat Evident		Not Evident	
	4	3	2	1	0	NA
Preparation						
1. Clearly defined content objectives for students	[]	[]	[]	[]	[]	
2. Clearly defined language objectives for students	[]	[]	[]	[]	[]	
3. Content concepts appropriate for age and educational background level of students	[]	[]	[]	[]	[]	
4. Supplementary materials used to a high degree, making the lesson clear and meaningful (graphs, models, visuals)	[]	[]	[]	[]	[]	
5. Adaptation of content (e.g., text, assignment) to all levels of student proficiency	[]	[]	[]	[]	[]	[]
6. Meaningful activities that integrate lesson concepts (e.g., surveys, letter writing, simulations, constructing models) with language practice opportunities for reading, writing, listening, and/or speaking	[]	[]	[]	[]	[]	
Comments:						
Instruction						
Building Background						
7. Concepts explicitly linked to students' background						

- Reprinted with permission. Additional copying is prohibited. -

GALE GROUP

Information Integrity

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 15*

School reform and standards-based education: a model for English-language learners.

experiences	4	3	2	1	0	NA
8. Links explicitly made between past learning and new concepts	[]	[]	[]	[]	[]	[]
9. Key vocabulary emphasized (e.g., introduced, written, repeated and highlighted for students to see)	[]	[]	[]	[]	[]	
Comments:						
Comprehensible Input	4	3	2	1	0	
10. Speech appropriate for students' proficiency level (e.g., slower rate, enunciation and simple sentence structure for beginners)	[]	[]	[]	[]	[]	
11. Explanation of academic tasks clear	[]	[]	[]	[]	[]	
12. Uses a variety of techniques to make content concepts clear (e.g., modeling, visuals, hands-on activities, demonstrations, gestures, body language)	[]	[]	[]	[]	[]	[]
Comments:						
Strategies	4	3	2	1	0	
13. Provides ample opportunities for student to use strategies	[]	[]	[]	[]	[]	
14. Consistent use of scaffolding techniques throughout lesson, assisting and supporting student understanding such as think-alouds (see Glossary)	[]	[]	[]	[]	[]	
15. Teacher uses a variety of question types throughout the lesson including those that promote higher-order thinking skills (e.g., literal, analytical, and interpretive questions)	[]	[]	[]	[]	[]	
Comments:						
Interaction						
16. Frequent opportunities for interactions and discussion between teacher/student and among students, which encourage elaborated responses about lesson concepts	[]	[]	[]	[]	[]	
17. Grouping configurations support language and content objectives of the lesson (see Glossary)	[]	[]	[]	[]	[]	
18. Consistently provides sufficient wait time for						

- Reprinted with permission. Additional copying is prohibited. -

GALE GROUP

Information Integrity

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 16*

School reform and standards-based education: a model for English-language learners.

student response	[]	[]	[]	[]	[]	
19. Ample opportunities for students to clarify key concepts in L1 (see Glossary)	[]	[]	[]	[]	[]	[]
Comments:						
Practice/Application						
20. Provides hands-on materials and/or manipulatives for students to practice using new content knowledge	[]	[]	[]	[]	[]	
21. Provides activities for students to apply content and language knowledge in the classroom	[]	[]	[]	[]	[]	[]
22. Uses activities that integrate all language skills (i.e., reading, writing, listening, and speaking)	[]	[]	[]	[]	[]	
Comments:						
Lesson Delivery	4	3	2	1	0	
23. Content objectives clearly supported by lesson delivery	[]	[]	[]	[]	[]	
24. Language objectives clearly supported by lesson delivery	[]	[]	[]	[]	[]	
25. Students engaged approximately 90-100% of the period (see Glossary)	[]	[]	[]	[]	[]	
26. Pacing of the lesson appropriate to the students' ability level	[]	[]	[]	[]	[]	
Comments:						
Review/Assessment	4	3	2	1	0	
27. Comprehensive review of key vocabulary	[]	[]	[]	[]	[]	
28. Comprehensive review of key content concepts	[]	[]	[]	[]	[]	
29. Regularly provides feedback to students on their output (e.g., language, content, work)	[]	[]	[]	[]	[]	
30. Conducts assessment of student comprehension and learning of all lesson objectives (e.g., spot checking, group response) throughout the lesson (see Glossary)	[]	[]	[]	[]	[]	
Comments:						

Echevarria, J., Vogt, M. E., & Short, D. J. (2000). Making content comprehensible for English language learners: The SIOP model. Newton, MA: Allyn & Bacon.

- Reprinted with permission. Additional copying is prohibited. -

GALE GROUP

Information Integrity

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 17*

School reform and standards-based education: a model for English-language learners.

REFERENCES

Addison, A. (1988, July-August). Secondary focus on sheltered content instruction: Adapting core curriculum materials for LEP students. California Association for Bilingual Education Newsletter, 13.

August, D., & Hakuta, K. (Eds.). (1997). Improving schooling for language minority children: A research agenda. Washington, DC: National Academy Press.

Bartolome, L. I. (1994). Beyond the methods fetish: Toward a humanizing pedagogy. Harvard Educational Review, 64(2), 173-194.

Bennici, F. J., & Strang, E. W. (1995). An analysis of language minority and limited English proficient students from NELS 1998. Report to the Office of Bilingual Education and Minority Language Affairs. Washington, DC: U.S. Department of Education.

Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. Educational Researcher, 33, 3-15.

Boyson, B., & Short, D. (2003). Secondary school newcomer programs in the United States (Res. Rep. No. 12). Santa Cruz, CA: Center for Research on Education, Diversity & Excellence.

California Department of Education, Educational Demographics Unit. (2004). Statewide Stanford 9 test results for reading: Number of students tested and percent scoring at or above the 50th percentile ranking (NPR). Retrieved February 23, 2004, from http://www.cde.ca.gov/dataquest/

Cobb, P., Confrey, J., diSessa, A., Lehrer, R., & Schauble, L. (2003). Design experiment in education research. Educational Researcher, 32, 9-13.

Collier, V. (1987). Age and rate of acquisition of second language for academic purposes. TESOL Quarterly, 21 (3), 617-641.

Collier, V. (1995). Promoting academic success for ESL students. Elizabeth, NJ: New Jersey Teachers of English to Speakers of Other Languages--Bilingual Education.

Crawford, A. (2003). Communicative approaches to second-language acquisition: The bridge to second-language literacy. In G. Garcia (Ed.), English learners: Reaching the highest level of English literacy (pp. 152-181). Newark, DE: International Reading Association.

Cummins, J. (1981). The role of primary language development in promoting educational success for language minority students. In Schooling for language minority students: A theoretical framework (pp. 3-49). Los Angeles: California State University, National Evaluation, Dissemination and Assessment Center.

Cummins, J. (1994). Knowledge, power and identity in teaching English as a second language. In F. Genesee (Ed.), Educating second language children: The whole child, the whole curriculum, the whole community (pp. 33-58). Cambridge, England: Cambridge University Press.

Cummins, J. (2003). Reading and the bilingual student: Fact and fiction. In G. Garcia (Ed.), English learners: Reaching the highest level of English literacy (pp. 2-33). Newark, DE: International Reading Association.

The Design-Based Research Collective. (2003). Design-based research: An emerging paradigm for educational inquiry. Educational Researcher, 32(1), 5-8.

Echevarria, J. (1995). Sheltered instruction for students with learning disabilities who have limited English proficiency. Intervention in School and Clinic, 30(5), 302-305.

- Reprinted with permission. Additional copying is prohibited. -

GALE GROUP

Information Integrity

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 18*

School reform and standards-based education: a model for English-language learners.

Echevarria, J., & Graves, A. (2003). Sheltered content instruction: Teaching English language learners with diverse abilities. Boston: Allyn & Bacon.

Echevarria, J., & Short, D. (2004). Using multiple perspectives in observations of diverse classrooms: The Sheltered Instruction Observation Protocol (SLOP). In H. Waxman, R. Tharp, & R. S. Hilberg (Eds.), Observational research in U.S. classrooms: New approaches for understanding cultural and linguistic diversity (pp. 21-47). Boston: Cambridge University Press.

Echevarria, J., Vogt, M. E., & Short, D. (2000). Making content comprehensible for English language learners: The SIOP model. Needham Heights, MA: Allyn & Bacon.

Echevarria, J., Vogt, M. E., & Short, D. (2004). Making content comprehensible for English learners: The SIOP model (2nd ed.). Boston: Pearson Allyn & Bacon.

Erickson, F., & Shultz, J. (1991). Students' experience of the curriculum. In P. W. Jackson (Ed.), Handbook of research on curriculum. New York: Macmillan.

Fillmore, L. W., & Snow, C. (2002). What teachers need to know about language. In C. T. Adger, C. E. Snow, & D. Christian (Eds.), What teachers need to know about language (pp. 7-53). McHenry, IL: Delta Systems and Center for Applied Linguistics.

Genesee, F. (Ed.). (1999). Program alternatives for linguistically and culturally diverse students (Educational Practice Report No. 1). Santa Cruz, CA: Center for Research on Education, Diversity & Excellence.

Gonzalez, J., & Darling-Hammond, L. (1997). New concepts for new challenges Professional development for teachers of immigrant youth. McHenry, IL: Delta Systems and Center for Applied Linguistics.

Goto-Butler, Y., Orr, J. E., Bousquet Gutierrez, M., & Hakuta, K. (2000). Inadequate conclusions from an inadequate assessment: What can SAT-9 scores tell us about the impact of Proposition 227 in California? Bilingual Research Journal, 24, 141-154.

Grigg, W., Daane, M., Jin, Y., & Campbell, J. (2003). The nation's report card: Reading 2002. Washington, DC: U.S. Department of Education.

Guarino, A. J., Echevarria, J., Short, D., Schick, J. E., Forbes, S., & Rueda, R. (2001). The Sheltered Instruction Observation Protocol: Reliability and validity assessment. Journal of Research Education, 11 (1), 138-140.

Hulquist, J. (2002). The effect of sheltered instruction staff development for middle and high school teachers. Unpublished master's thesis, George Fox University, Portland, OR.

Jamieson, A., Curry, A., & Martinez, G. (2001). School enrollment in the United States--Social and economic characteristics of students. (Current Population Reports No. P20-533). Washington, DC: U.S. Government Printing Office.

Johnson, R. (2004, October). Texas school holding power improves--but progress is slow. Texas public school attrition study, 2003-04. IDRA Newsletter. Retrieved January 4, 2005, from http://www.idra.org/News lttr/2004/Oct/Roy.htm

Kauffman, D., Sheppard, K., Burkart, G., Peyton, J., & Short, D, (1995). Content-ESL across the USA (Vol. II, Tech. Rep.). Washington, DC: National Clearinghouse for Bilingual Education.

Latinos in education: Early childhood, elementary, undergraduate, graduate. (1999). Washington, DC: White House Initiative on Educational Excellence for Hispanic Americans. Retrieved May 21, 2001, from http://www.ed.gov/offices/OIIA/Hispanic/rr/ech.html

Lavadenz, M. (1994). The role of paraprofessionals in the instruction of limited English proficient students (Rep. No. ED

- Reprinted with permission. Additional copying is prohibited. -

GALE GROUP

Information Integrity

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 19*

School reform and standards-based education: a model for English-language learners.

368206). Los Angeles: Loyola Marymount University.

MacSwan, J., & Rolstad, K. (2003). Linguistic diversity, schooling and social class: Rethinking our conception of language proficiency in language minority education. In C. B. Paulston & R. Tucker (Eds.), Sociolinguistics: The essential readings (pp. 329-340). Oxford, England: Blackwell.

MacSwan, J., Rolstad, K., & Glass, G.V. (2002). Do some school-age children have no language? Some problems of construct validity in the Pre-LAS Espanol. Bilingual Research Journal, 26(2), 213-238.

Moss, M., & Puma, M. (1995). Prospects: The congressionally mandated study of educational growth and opportunity (First-year report on language minority and limited English proficient students). Washington, DC: U.S. Department of Education.

National Center for Education Statistics. (2002). Schools and staffing survey, 1999-2000: Overview of the data for public, private, public charter, and Bureau of Indian Affairs elementary and secondary schools. (NCES Publication No. 2002-313). Washington, DC: U.S. Department of Education, National Center for Education Statistics.

National Clearinghouse for English Language Acquisition. (2005). The growing numbers of limited English proficient students: 1992/93-2002/03. Retrieved January 14, 2005, from http://www.ncela.gwu.edu/policy /states/reports/statedata/2002LEP/Growing_LEP0203.pdf

National Commission on Teaching and America's Future. (1996). What matters most: Teaching for America's future. New York: Columbia University, Teachers College.

National Council of Teachers of Mathematics. (1989). Curriculum and evaluation standards for school mathematics. Reston, VA: Author.

No Child Left Behind Act of 2001. 107th Congress of the United States of America. Retrieved December 1, 2002, from http://www.ed.gov/legislation/ ESEA02/107-110.pdf

Olson, L. (2003, May 14). State debate exam polices for diplomas. Education Week, XXII(36), pp. 1, 22.

Pickett, A. L. (1999). Paraeducators: Factors that influence their performance, development and supervision. ERIC Digest. Reston, VA: ERIC Clearinghouse on Disabilities and Gifted Education.

Rivera, C., Stansfield, C., Scialdone, L., & Sharkey, M. (2000). An analysis of state policies for the inclusion and accommodation of English language learners in state assessment programs during 1998-1999. Arlington, VA: The George Washington University, Center for Equity and Excellence in Education.

Rueda, R., & Garcia, G. (2001). How do I teach reading to ELLs? Ninth in a series: Teaching Every Child to Read. Ann Arbor, MI: Center for the Improvement of Early Reading Achievement.

Rueda, R., Monzo, L., & Higareda, I. (2004). Appropriating sociocultural resources of Latino paraeducators for effective instruction with Latino students: Promises and problems. Urban Education, 39(1), 52-90.

Ruiz-de-Velasco, J., & Fix, M. (2000). Overlooked and underserved: Immigrant students in U.S. secondary schools. Washington, DC: Urban Institute.

Sheppard, K. (1995). Content-ESL across the USA (Vol. 1, Tech. Rep., Vol. I). Washington, DC: National Clearinghouse for Bilingual Education.

Short, D. (1991). How to integrate language and content instruction: A training manual. Washington, DC: Center for Applied Linguistics.

- Reprinted with permission. Additional copying is prohibited. -

GALE GROUP

Information Integrity

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 20*

School reform and standards-based education: a model for English-language learners.

Short, D. (2002). Language learning in sheltered social studies classes. TESOL Journal, 11 (1), 18-24.

Short, D., & Echevarria, J. (1999). The Sheltered Instruction Observation Protocol: A tool for teacher-researcher collaboration and professional development (Educational Practice Rep. No. 3). Santa Cruz, CA: Center for Research on Education, Diversity & Excellence.

Slavin, R., & Cheung, A. (2003). Effective reading programs for English language learners: A best-evidence synthesis (Res. Rep. No. 66). Baltimore, MD: Center for Research on the Education of Students Placed at Risk.

Snow, C., & Biancarosa, G. (2003). Adolescent literacy and the achievement gap: What do we know and where do we go from here? New York: Carnegie Corporation of New York.

Teachers of English to Speakers of Other Languages. (1997). ESL standards for pre-K-12 students. Alexandria, VA: Author.

Tharp, R., Estrada, P., Dalton, S., & Yamauchi, L. (2000). Teaching transformed: Achieving excellence, fairness, inclusion and harmony. Boulder, CO: Westview Press.

Thomas, W., & Collier, V. (2002). A national study of school effectiveness for language minority students' long-term academic achievement. Final report. Santa Cruz, CA: Center for Research on Education, Diversity & Excellence.

Tucker, M., & Codding, J. (1998). Standards for our schools: How to set them, measure them, and reach them. San Francisco: Jossey-Bass.

Vogt, M. E. (2000). Content learning for students needing modifications: An issue of access. In M. McLaughlin & M. E. Vogt (Eds.), Creativity and innovation in content area teaching (pp. 329-351). Norwood, MA: Christopher-Gordon.

Vogt, M. E., & Shearer, B. A. (2003). Reading specialists in the real world: A sociocultural view. Boston: Allyn & Bacon.

Wagonner, D. (1999). Who are secondary newcomer and linguistically different youth? In C. Faltis & P. Wolfe (Eds.), So much to say: Adolescents, bilingualism, and ESL in the secondary school (pp. 13-41). New York: Teachers College Press.

Wainer, A. (2004). The new Latino south and the challenge to public education: Strategies for educators and policymakers in emerging immigrant communities. Los Angeles: Tombs Rivera Policy Institute, University of Southern California.

JANA ECHEVARRIA

California State University, Long Beach

DEBORAH SHORT

Center for Applied Linguistics

KRISTIN POWERS

California State University, Long Beach

Address correspondence to Jana Echevarria, Department of Educational Psychology, Administration and Counseling, California State University, Long Beach, 1250 Bellflower Blvd., Long Beach, CA 90840. (E-mail: jechev@csulb.edu)

TABLE 1. Setting

Group	No. of districts	No. of schools	No. of teachers	No. of students

- Reprinted with permission. Additional copying is prohibited. -

GALE GROUP

Information Integrity

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 21*

School reform and standards-based education: a model for English-language learners.

Intervention	3	6	19	346
Comparison	2	2	4	94

TABLE 2. Student Demographics

Characteristic	Intervention students (%)	Comparison students (%)
Gender		
Female	46	43
Male	54	57
Race or ethnicity		
Hispanic	56	69
Asian/Pacific Islander	41	31
White	2	0
Black	1	0

TABLE 3. Teacher Background

Teacher	Mean years teaching	Years teaching SI	Mean Slop score (%)
SIOP project	9	5.7	77
Comparison	4	4	51

Note. SI = sheltered instruction; SIOP = Sheltered Instruction Observation Protocol.

TABLE 4. Teacher Race or Ethnicity

Race or ethnicity	SIOP teachers	Comparison teachers
Black	1	
White	16	3
Hispanic	2	1

Note. SIOP = Sheltered Instruction Observation Protocol.

TABLE 5. Mean Scores, Standard Deviations, and Sample Size for Intervention and Comparison Groups

	Intervention group		Comparison group	
Variable	Pretest	Posttest	Pretest	Posttest
Total score				
M	13.55	16.36	14.61	15.81
SD	3.42	3.33	3.36	3.45
N	238	238	77	77
Language production				
M	2.65	3.22	2.77	3.09
SD	.78	.79	.78	.73
n	240	240	77	77
Focus				
M	2.81	3.30	3.01	3.17
SD	.87	.98	.88	.94
n	239	239	77	77
Support and elaboration				
M	2.65	3.26	2.83	3.18
SD	.78	.72	.70	.81
n	241	241	77	77

- Reprinted with permission. Additional copying is prohibited. -
GALE GROUP
Information Integrity

The Journal of Educational Research *March-April 2006 v99 i4 p195(16)* *Page 22*

School reform and standards-based education: a model for English-language learners.

Organization				
M	2.77	3.31	3.16	3.21
SD	.96	.78	.92	.71
n	241	241	77	77
Mechanics				
M	2.72	3.28	2.84	3.17
SD	.88	.87	.86	.94
n	241	241	77	77

TABLE 6. Adjusted Means for Posttest Results

Variable	Intervention	Comparison
Total score	16.52	15.34
Language production	3.24	3.04
Focus	3.32	3.10
Support and elaboration	3.28	3.13
Organization	3.34	3.12
Mechanics	3.30	3.11

TABLE 7. Analysis of Covariance of Posttest Writing Results, by Intervention Condition

Variable	[M.sup.2]	F ratio	p
Total score	78.276	10.785	.001 *
Language production	2.133	5.004	.026 *
Focus	2.904	3.706	.055
Support and elaboration	1.247	2.680	1.03
Organization	2.842	5.651	.018 *
Mechanics	2.065	4.101	.044 *

Note. Pretest scores for each measure served as the covariate for posttest dependent measures. df = 1 for all variables.

* p < .05.

- Reprinted with permission. Additional copying is prohibited. -

GALE GROUP

Information Integrity

CREATE Brief

October 2012 www.cal.org/create

Effective Practices for Increasing the Achievement of English Learners

Jana Echevarría, California State University, Long Beach

Introduction

As schools focus on preparing students to be college and career ready, the achievement of English learners is a critical issue. It is widely acknowledged that English as a second language programs alone cannot adequately serve the large and growing numbers of English learners in U.S. schools (Brisk, 2010). These students also benefit from content area teachers using strategies and techniques that make subject matter understandable while at the same time developing students' English language proficiency. This dual approach (i.e., content teaching that incorporates language development, typically referred to as *sheltered instruction*) and how best to implement it have been the research focus of the Center for Research on the Educational Achievement and Teaching of English Language Learners (CREATE). Sheltered instruction is becoming a more common approach in schools as the number of English learners in U.S. schools increases.

Sheltered Instruction: Content and Language Teaching

Learning rigorous, standards-based subject matter can be challenging for many students, but it is particularly difficult for those students who are not yet proficient English speakers. Although these students learn in many of the same ways as English speakers, they benefit from adjustments made to instruction so that it is more understandable for them (August & Shanahan, 2010). Some of the features of instruction shown to be effective for enhancing learning for English learners include modeling, using multiple media to provide visual aids, providing repetition and additional practice, using students' background knowledge to make information meaningful, highlighting and teaching key vocabulary, building on students' native language proficiency, and planning opportunities for students to interact with one another on text-based tasks.

Although many of these features involve the use of language, explicit attention to teaching *academic language* within content lessons is required for students to develop English proficiency. Academic language differs from conversational English in that it is more complex and it is not typically encountered in everyday settings. Effective teaching includes planned speaking practice in content classes so that students have both formal and informal practice using academic English (Guthrie & Ozgungor, 2002). Consistent opportunities for oral interaction around formal academic language can facilitate more specialized uses of the academic register of formal writing and speaking (Gibbons, 2003).

Effective Sheltered Instruction in School Settings

While there exists a body of research on content and language teaching, the growth of the English learner population has outpaced research. As Coleman and Goldenberg (2012) state, "Although formal research to evaluate the effects of various sheltered strategies is ongoing, educators must help lead the way. There is simply no time to wait until researchers address all of the important issues regarding sheltered instruction" (p. 48). In that vein, this brief highlights two schools' successful efforts to improve the achievement of their students using the SIOP Model, one of the approaches that CREATE research studies have confirmed as being effective for teaching English learners.

Developed as an approach for integrating language development with content teaching, the SIOP Model offers teachers a model of instruction for planning and implementing effective lessons. It has been validated as a model of instruction that improves the achievement of students whose teachers use it (Echevarría, Richards-Tutor, Chinn, & Ratleff, 2011; Echevarría, Short, & Powers, 2006; Short, Fidelman, & Louguit, 2012). Its 8 components and 30 features provide a framework for lesson planning and for classroom observation. The eight components are Lesson Preparation, Building Background, Comprehensible Input, Strategies, Interaction, Practice & Application, Lesson Delivery, and Review & Assessment (see Echevarría, Vogt, & Short, 2013, for a comprehensive discussion). Each of the components is supported by empirical studies, and the model itself has a growing research base (Short, Echevarría, & Richards-Tutor, 2011).

Pasadena Memorial High School, Pasadena, Texas

Pasadena Memorial High School, located in an urban area outside of Houston, has a total population of approximately 2,700 students, including a population of English learners whose number fluctuates between 160 and 180 students. Most of these students are Spanish speaking, but there are also students from Asian countries. Many of the school's English learners have been in the United States for 3 or more years, and typically about 30 students are recent immigrants (i.e., in the United State 3 years or less).

Prior to SIOP Model Implementation

Prior to the school's beginning SIOP implementation, the English as a Second Language (ESL) program was unfocused, mainly because there was only one ESL teacher who was responsible for meeting the needs of all English learners. English learners lagged behind their English-speaking peers in vocabulary and content knowledge, and their overall academic needs were not being met. The program lacked a plan for determining students' needs and how to address them.

In 2008-2009, the principal recognized that schoolwide involvement in the education of the growing number of English learners was warranted. At that time, teachers had little knowledge of language development and how to deliver content effectively to students who were not native speakers of English. A commitment to professional development was made with the goal of improving state test scores, especially the scores of English learners.

SIOP Training and Implementation

It was decided that all teachers in the school would learn the SIOP Model, and to that end, they received SIOP professional development. District trainings introduced teachers to the components of the SIOP Model over the course of 3 days.

In addition, a SIOP peer facilitator was hired to assist teachers in implementing the SIOP Model at the school. To deepen teachers' understanding of the SIOP Model and facilitate effective implementation, a campus SIOP team of 28 teachers was selected. Teachers recommended for the team were considered to be among the strongest in their respective content areas (English language arts, science, math, and social studies) and at their grade levels. These teachers had designated SIOP classes that included English learners.

In the first 2 years (2009-2010 and 2010-2011), the SIOP facilitator met with SIOP teachers every 3 weeks during their conference period and focused on one SIOP component every 12 weeks (two 6-week periods). In the first year of SIOP implementation, the components covered were Lesson Preparation (with a focus on writing content and language objectives), Building Background, Comprehensible Input, and Interaction. Components covered in the second year were Strategies, Practice & Application, Lesson Delivery, and Review & Assessment. During meetings, teachers received training in the features of the component, and activities for the targeted component were modeled so that the teachers could try them in their classrooms. Content area SIOP team teachers planned lessons collaboratively during their additional conference period. The SIOP facilitator would meet with newer teachers who required more support every 2 weeks.

In addition to conference period meetings, formal walk-through observations were conducted by the site coach, the assistant principal, and district instructional ESL specialists. Observers visited classes for 5 to10 minutes at a time and used the SIOP protocol to see which components were visible. The focus was on observing the level of implementation of the targeted components. Walk-throughs were sometimes unannounced; at other times teachers requested an observation when they were doing something they wanted the coach to see. Usually, there was an informal discussion following the walk-through between the coach and teacher. Over 80 walk-throughs were conducted each year.

After the first year, SIOP components were selected for deeper study and implementation based on what was

observed during walk-throughs. For example, if there was little interaction observed in SIOP classrooms, the Interaction component would be the focus of the next meeting and subsequent observations.

SIOP Model Results

English learners' results on the Texas Assessment of Knowledge and Skills (TAKS), the required state standardized assessment system, are presented in Table 1. The percentage of English learners who passed the assessment in all content areas has increased steadily since the SIOP Model was introduced in 2008-2009.

In addition, the 2011-2012 language acquisition assessment scores revealed that students at Pasadena Memorial High School made significant progress in acquiring English. The school was the highest ranked high school in the district, with 65% of their limited-English-proficient population making progress. "I think this speaks to the commitment SIOP teachers have in helping students acquire the language," says the school's SIOP peer facilitator. "Overall, having teachers understand the language development process of the students has been very helpful. Teachers hold students to higher standards because the teachers see that the students can do way more than they thought they could."

Table 1. ***TAKS Results: Percentage of English Learners Passing***

Content area	2009	2010	2011
English language arts	43.43%	56.50%	76.60%
Science	30.76%	43.47%	53.00%
Math	29.29%	41.73%	62.00%
Social studies	64.81%	78.26%	86.25%

Other Factors of Success

Restructured ESL program

At the same time that SIOP implementation began, a course plan was developed for students in the ESL program. In year 1, English learners took a language acquisition class whose focus was to develop conversational English. They also took a course on reading in content areas and an English course for ESL students. In years 2 and 3, students took a writing course, a reading in the content area course, and an English course.

Monitoring of Academic Performance

Previously, the school's one ESL teacher had not had time or resources to adequately monitor the academic progress of English learners. In 2009-2010, the SIOP peer facilitator and district ESL specialists began monitoring English learner progress by obtaining failure reports on English learners every 3 weeks. At each 6-week grading period, the SIOP peer facilitator assessed the failure reports and assigned a SIOP instructional aide to assist in the class with the most English learners in jeopardy of failing the course. The aide supported instruction and provided linguistic accommodations for students. The SIOP peer facilitator also assisted teachers by calling parents when teachers requested and keeping parents informed about their child's academic achievement. When multiple requests were made about a particular student, the SIOP peer facilitator set up a parent-teacher conference with the student's family.

Tiffany Park Elementary, Renton, Washington

Located outside of Seattle, Washington, in the urban community of Renton, Tiffany Park Elementary identifies 27% of its student population as English learners. The English learner population includes speakers of Ukrainian, Russian, Spanish, Somali, Vietnamese, and 15 other languages.

Prior to SIOP Model Implementation

Tiffany Park's English learners had consistently underperformed in reading and mathematics on the state's assessment, the Washington Assessment of Student Learning, with only 26% of English learners at the school meeting standards. The number of low-income students who met standards was also low, as shown in Table 2.

Table 2. ***State Reading Assessment Results by Grade Level: Percentage of Students Meeting Standards (2006-2007)***

Grade	All students	Low-income students	Limited-English-proficient students
Grade 3	60.3%	44.7%	26.3%
Grade 4	71%	63.9%	27.3%
Grade 5	73.4%	58.8%	30.0%

Prior to the school's adopting the SIOP Model, Tiffany Park's ESL program was a pull-out program in which all eligible students were pulled out of their general education classrooms to work on language acquisition skills with either an ESL-endorsed teacher or a paraeducator. There was little connection between the instructional program in the ESL classroom and the general education classroom. Classroom teachers reported frustration with the ESL pull-out schedule and its impact on their ability to consistently provide core content instruction to English learners.

In 2005-2006, the new principal of Tiffany Park, a former English learner herself, determined that a new approach was needed to support greater academic achievement for English learners and low income students.

SIOP Training and Implementation

During the 2007-2008 school year, teachers at Tiffany Park participated in a 3-day SIOP Model training. All instructional staff participated, except for first-year teachers. In subsequent years, any staff members who had not been trained (i.e., the previous year's first-year teachers and teachers new to the building) also participated in a 3-day training.

The principal considered the first year of implementation a practice year in which teachers would try out components of the SIOP Model. However, she required teachers to have content and language objectives posted in their classrooms for all mathematics lessons. Most teachers also began using content and language objectives in all subject areas. After the initial training, the school's instructional coach and ESL teacher participated in a 2-day SIOP training focused specifically on coaching and implementation. They subsequently began working with those grade-level teams who wanted to increase their skill and implementation of the model.

In each consecutive year, the principal increased expectations for SIOP implementation, for example, by requiring the posting of content and language objectives in reading, mathematics, and science. She also provided the opportunity for staff to continue to deepen their knowledge of the SIOP Model through periodic component enrichment sessions in which the entire staff focused on one component (e.g., Review & Assessment or Lesson Preparation) during 90-minute staff development sessions.

The SIOP Model was included in Tiffany Park's school improvement plan as an instructional approach for improving the reading and mathematics achievement of all students, and also as an equity and access strategy for low-income students and English learners. Because Tiffany Park had a fairly high transition or ESL exit rate (nearly 25% of English learners in 2010-2011 were transitioned to English proficient status), those mainstream students who were former English learners continued to benefit from the kinds of instructional supports provided by SIOP teaching. Thus, the results for all students at Tiffany Park Elementary are reported along with students identified as low income and English learners.

SIOP Model Results

Washington State assessment results for Tiffany Park Elementary showed an overall increase in scores in 2010-2011 on reading, writing, mathematics, and science assessments (Table 3). Noteworthy improvements included fifth-grade increases of nearly 24 percentage points in science and nearly 26 percentage points in math.

In 2010-2011, Tiffany Park's average scores for English learners surpassed the overall average scores for the state on both the reading and mathematics assessments. Only 27% of Washington state's English learners

Table 3. ***State Reading Assessment Results by Grade Level: Percentage of Students Meeting Standards in 2010-2011 and Their Increase Since 2006-2007***

Grade	All students	Increase from 2006-2007	Low-income students	Increase from 2006-2007	Limited-English-proficient students	Increase from 2006-2007
Grade 3	74.7%	+14.4	61.7%	+17	40%	+13.7
Grade 4	75%	+4	67.3%	+3.4	66.7%	+39.4
Grade 5	80%	+6.6	72.1%	+13.3	40%	+10

met standards on the reading assessment, but 47% of Tiffany Park's English learners met reading standards. In mathematics, only 24% of Washington state's English learners met standards compared with 38% of Tiffany Park's English learners.

In recognition of the school's achievement on state tests, Tiffany Park Elementary received the Washington State Overall Excellence Award in 2011, placing it in the top 5% of all elementary schools statewide.

Other Factors of Success

The factors described below, coupled with fidelity to the SIOP Model, contributed to Tiffany Park's success.

Delayed-Start Fridays

In 2007-2008, Renton School District implemented delayed-start Fridays, providing teachers with the opportunity to work in professional learning communities weekly. Once a month during this time, Tiffany Park's principal held professional development sessions such as SIOP component enrichment, which provided teachers with additional support in SIOP implementation.

Classroom Walk-Throughs

From 2008 to 2010, Tiffany Park was part of a statewide improvement initiative that included an instructional framework, extensive professional development, and classroom walk-throughs. Each building at Tiffany Park had walk-through goals, which resulted in opening the doors of classrooms in a way that had not been done previously. The "open-door policy" created by the walk-throughs provided access to instruction, which helped ensure that high-quality SIOP teaching was being implemented in classrooms.

Ongoing SIOP Support

In 2011-2012, the district began providing a stipend to two SIOP lead teachers at Tiffany Park for providing additional SIOP support to their colleagues. The lead teachers participated in a 1-day SIOP training on peer coaching, and they met together each quarter to plan and discuss ways to support teachers. The lead teachers also set up demonstration classrooms, observed other teachers and provided constructive feedback, provided mini-reviews of specific SIOP features for teachers at staff meetings, participated in lesson design study with grade-level teams, and helped sustain the staff's SIOP teaching efforts.

Modified ESL Program

The ESL director modified the ESL program so that it was more purposeful and of time-limited duration. The content of pull-out group lessons was focused on a specific skill, such as writing a good paragraph. Students in an ESL group were pulled out for 4 to 6 weeks rather than the entire school year. Also, students were no longer pulled from their classrooms during the times that core content was being taught.

Conclusion

The integration of content and language teaching is critical for English learners to develop the academic skills necessary to be successful in meeting high standards. However, teaching must be adapted for these students to access grade-level content material and to develop the specific academic language required in school settings. The SIOP Model is most successfully implemented by teachers who have the support of their administration and other teachers in the building. This support is achieved when the model is adopted as a school-wide initiative. Based on the experience of the two schools featured here, ongoing professional development and fidelity to the research-validated SIOP Model of instruction had a positive impact on student achievement.

References

August, D., & Shanahan, D. (2010). Effective English literacy instruction for English learners. In *Improving education for English learners: Research-based approaches* (pp. 209–249). Sacramento: California Department of Education.

Brisk, M. (2010). Learning English as a second language. In M. Shatz & L. C. Wilkinson (Eds.), *The education of English language learners: Research to practice* (pp. 152–173). New York: Guilford Press.

Coleman, R., & Goldenberg, C. (2012). The common core challenge for English language learners. *Principal Leadership*, pp. 46-51.

Echevarría, J., Richards-Tutor, C., Chinn, V., & Ratleff, P. (2011). Did they get it? The role of fidelity in teaching English learners. *Journal of Adolescent and Adult Literacy*, *54*(6), 425–434.

Echevarría, J., Short, D., & Powers, K. (2006). School reform and standards-based education: An instructional model for English language learners. *Journal of Educational Research, 99*(4), 195–210.

Echevarría, J., Vogt, M. E., & Short, D. (2013). *Making content comprehensible for English learners: The SIOP® Model* (4th ed.). Boston, MA: Allyn & Bacon.

Gibbons, P. (2003). Mediating language learning: Teacher interactions with ESL students in a content-based classroom. *TESOL Quarterly, 37*(2), 247–273.

Guthrie, J. T., & Ozgungor, S. (2002). Instructional contexts for reading engagement. In C. C. Block & M. Pressley (Eds.), *Comprehension instruction: Research-based best practices* (pp. 275–288). New York: Guilford Press.

Short, D., Echevarría, J., & Richards-Tutor, C. (2011). Research on academic literacy development in sheltered instruction classrooms. *Language Teaching Research, 15*(3), 363-380

Short, D., Fidelman, C., & Louguit, M. (2012). Developing academic language in English language learners through sheltered instruction. *TESOL Quarterly, 46*(2), 333–360.

CREATE
Center for Research on the Educational Achievement and Teaching of English Language Learners

CREATE, the Center for Research on the Educational Achievement and Teaching of English Language Learners, is conducting a program of research designed to address the critical challenge of improving educational outcomes for English language learners in the middle grades by

- Enhancing the empirical research base for readers in Grades 4–8
- Using both narrative and expository text to develop and test effective interventions that promote content knowledge and language and literacy development
- Investigating the features of instruction and text modifications that facilitate learning for English learners (e.g., traditional instruction vs. ESL-enhanced instruction, teacher-guided instruction vs. group work, traditional text vs. modified text)
- Designing, testing, and delivering professional development that ensures that teachers implement effective classroom practices to help English learners achieve high standards

For more information, visit the CREATE Web site

www.cal.org/create

The Center for Research on the Educational Achievement and Teaching of English Language Learners (CREATE) conducts a program of research designed to address specific challenges in the education of English language learners in Grades 4-8. CREATE is a partnership of researchers from six institutions:

- Texas Institute for Measurement, Evaluation, and Statistics, University of Houston
- California State University, Long Beach
- Center for Applied Linguistics
- Harvard University
- University of California-Berkeley
- Vaughn Gross Center, University of Texas at Austin

This brief was produced by CREATE with funding from the U.S. Department of Education (ED), Institute of Education Sciences, under Contract No. ED-R305A05056. The opinions expressed in this report do not necessarily reflect the positions or policies of ED. This document is in the public domain and may be reproduced without permission.

6. ATTACHMENT D -- D-I-2

PD Offerings

Revised Response Template for Professional Development Offering

Complete and include a separate Attachment D for each Professional Development Offering to be included in your proposal. For each different Professional Development Offering, first enter the name and description and then answer Question 1 below. Based on your response to Question #1 below, insert -I, -II, -III, or -IV in the header above after "Attachment D." If you have the same delivery method for more than one professional development offering to be included in your proposal, add a number after the Roman numeral indicating the category. For example, if your proposal includes three different professional development offerings that will be delivered face-to-face (in-person), two different professional development offerings that will be delivered via an online interactive format, and one professional development offering that will be delivered via a combination; you will have attachments D-I-1, D-I-2, D-I-3, D-II-1, D-II-2, and D-IV.

Within Tab 6 of your proposal, include separate tabs so that each offering is in a separate tab with the name indicated in the header. For the example above, within Tab 6 include Tabs D-I-1, D-I-2, D-I-3, D-II-1, D-II-2, and D-IV.

Name of Professional Development Offering

Listening and Speaking: Oral Language and Vocabulary Development for Early Childhood English Learners

Brief (15 to 20 Word) Description

This PD will feature content from CAL's *Listening and Speaking: Oral Language and Vocabulary Development* workshop, including oral language acquisition for emergent bilingual learners and the connection to early literacy skills.

1. What method will you use to deliver the professional development? Indicate one and only one delivery method set out below as (I, II, or III) per separate Attachment D. (Also see Attachment E, Pricing Schedule.) Indicate the delivery method I – III to the right of "Attachment D" in the header above.

   Select one and only one:

   ☒ I. In-person (face-to-face)

   ☐ II. Virtual or online (e.g., via Webinar)

   ☐ III. Combination of live and virtual/online

Briefly describe the approach and why it is appropriate for meeting the learning objectives.

The professional development will feature content from CAL's new series, Hot Topics in ELL Education, *Listening and Speaking: Oral Language and Vocabulary Development for ELLs* (Levine, Smallwood, and Haynes, 2013). Topics will include classroom conditions and strategies for promoting oral language development; principles of effective instruction for young English learners; pre-reading and read-aloud activities that build background knowledge and provide opportunities for oral language development; selecting vocabulary terms for emergent bilingual learners; and connecting research on the stages of bilingual development to student proficiency levels. Workshops include a variety of activities, such as demonstration and explanation, analysis of video teaching sequences, small group learning tasks, and the development of instructional activities and lesson plans that can be used immediately with students. Teachers will have the opportunity to work in student teams and/or school teams in order to foster collaboration during and beyond the workshop.

Table A. **Check all that apply to this stand-alone product:**

	Professional Development Category
X	a. Quality of teacher-child interactions
X	b. Providing developmentally appropriate preschool learning environments
X	c. Early literacy skills
	d. Early mathematics skills
	e. Early scientific development skills
X	f. Promoting preschool children's critical thinking, problem solving, and other executive functions
X	g. Promoting preschool children's social and emotional development
	h. Instructional services and support for students with disabilities
X	i. Instructional services and support for English language learners
	j. Behavior management techniques for diverse preschool children
	k. Preschool classroom management techniques
	l. Elementary school leadership development to support and strengthen early learning programs

	Professional Development Category
X	m. Communicating with diverse parents of preschool children
	n. Aligning early childhood education programs from birth through third grade or preschool to third grade
	o. Family engagement and support services, including comprehensive preschool services, and effective family engagement strategies designed to sustain improved early learning outcomes through third grade

2. Which of the Essential Domains of School Readiness does this stand-alone professional development offering focus on (Check one or more)

   ☒ Language and literacy development;

   ☐ Cognition and general knowledge (including early mathematics and early scientific development);

   ☐ Approaches toward learning (including the utilization of the arts);

   ☐ Physical well-being and motor development (including adaptive skills); and

   ☐ Social and emotional development.

3. Who is your target audience? (Check all that apply.)

   ☒ Teachers

   ☒ Coaches

   ☒ Administrators

   ☒ Teacher Assistants

   ☐ Other service providers (specify here:_____)

   ☐ Parents and families

4. What is the length of delivery in hours (time required excluding self-study or other assignments)?

__12___ Total Hours for Delivery

EXAMPLES

Face-to-Face Professional Development

The example "X" below provides the time for professional development delivery for a series of 4 workshops that are 4 hours each and require completion of a 10 hour assignment "on your own."

__4__ Days

__4__ Hours per day

__16__ Total (4 x 4)

Online Professional Development

The example "Y" below provides the time for professional development delivery for a series of 2 online interactive workshops that are 8 hours per day.

__2__ Days

__8__ Hours per day

_16__ Total (2 x 8)

The example "Z" below provides the delivery time for online professional development that is in a "listen and learn" format scheduled for completion in 10 hours but may take some individuals longer. .

_10__ Total Hours

5. What are the goals and learning objectives of the professional development offering?

Content Objectives:
Participants will be able to

- Examine teaching strategies that scaffold learning while increasing classroom interaction, comprehensible input, language output, and language learning in an early childhood setting.
- Distinguish five levels of oral language proficiency and teacher and student behaviors appropriate for each level.
- Identify cooperative learning structures and explain how they promote interaction and develop oral language and vocabulary.
- Develop pre-reading and read-aloud activities that build background knowledge and provide opportunities for oral language development

Language Objectives:

Participants will be able to

- Write a poster detailing classroom conditions that promote second language learning in a group
- List teaching strategies that enhance academic listening skills, speaking skills, and vocabulary development in classrooms, with particular attention to the needs of second language learners.
- Explain how language input and output affect second language learning.
- Orally share an activity that they will implement in their classrooms to enhance oral language development

6. Describe the measurement process you will use to determine whether participants met the learning goals and objectives.

   The facilitator will conduct multiple formative assessments throughout the session to gauge participant engagement and mastery of objectives. These formative assessments include but are not limited to: interactive activities and poster creation; reflection journals, table talks and group discussions, “make and takes”, presentations of group projects and peer critique, and reflection assignments that accompany student artifacts completed between workshop sessions. Facilitators will also collect Tickets Out (a summative assessment) at the conclusion of each workshop session and a final evaluation will be collected at the end of the series and provided to the districts. Facilitators will use the formative assessment and summative assessment data to adjust their instruction and tailor the content for the current professional learning session and subsequent ones.

7. Describe how this offering is consistent with the definition of high-quality professional development as defined in Section III of the Request for Proposals.

   CAL Solutions, the PreK-12 EL Professional Development program area, meets the definition of high quality professional development as defined by the state of Virginia and Archibald, Coggshall, Croft, and Goe (2011). Each workshop is tailored for the individual school, program, or district. For example, links would be made to the local demographics of English learners or to program initiatives such as balanced literacy or dual language programs. In particular for this project, resources and references on the development and

instruction of young emergent bilinguals will be used to form the base of the PD. The workshop activities are drawn from PD workshop materials delivered to early childhood educators. Explicit connections are made with local learning standards, such as Virginia's Foundation Blocks.

Active learning is the bedrock of CAL professional development. Second languages are best learned the way a first language is learned, with active social engagement and authentic activities. We strive to model these best practices with the educators through each step of the PD, and then have them practice the concepts in collaborative groups, and finally apply the learning to their own lesson plans. During group and individual lesson planning, facilitators move around the room to provide feedback and answer questions. Tickets out are used to modify content for follow-up workshops and answer any further questions.

In terms of sustaining the model, the workshop can be offered as a Training of Trainers. The materials includes a DVD of video clips related to oral language development and supplementary materials that can be used in professional learning communities as a follow-up to this PD.

For an example of active learning when working with content that is teacher-based, see Figure 1 below.

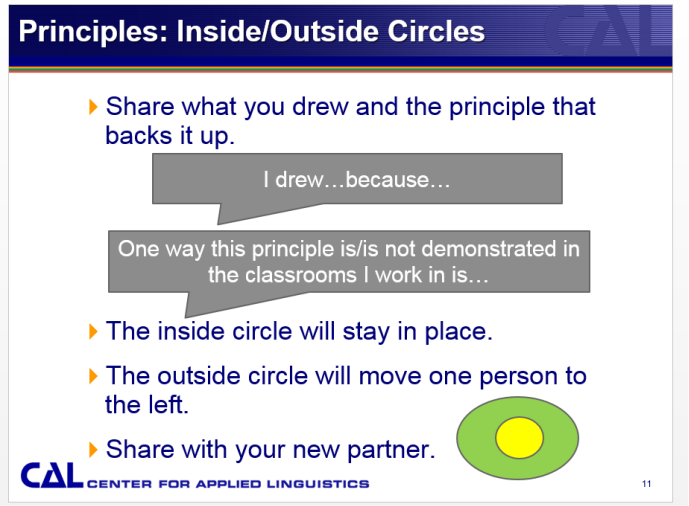


Figure 1

For an example of the discussion on tailoring the activity to meet teacher needs, see Figure 2 below.

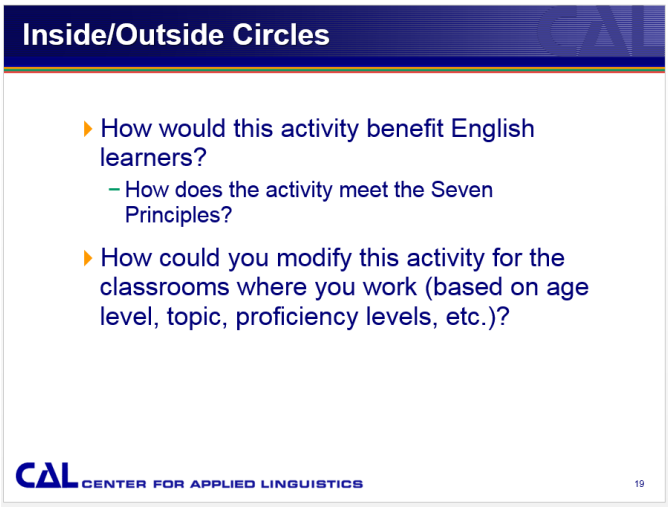


Figure 2

For an example of an activity using early learning content, see Figure 3 below.

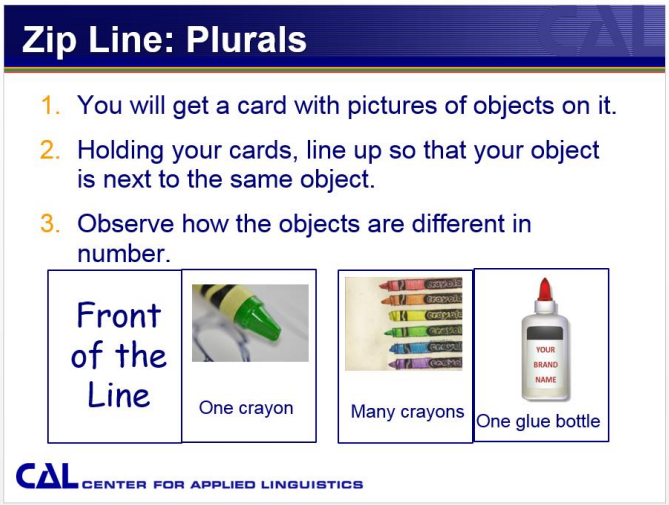


Figure 3

For an example of hands-on learning, where teachers make posters with grade-level teams, see Figure 4 below.

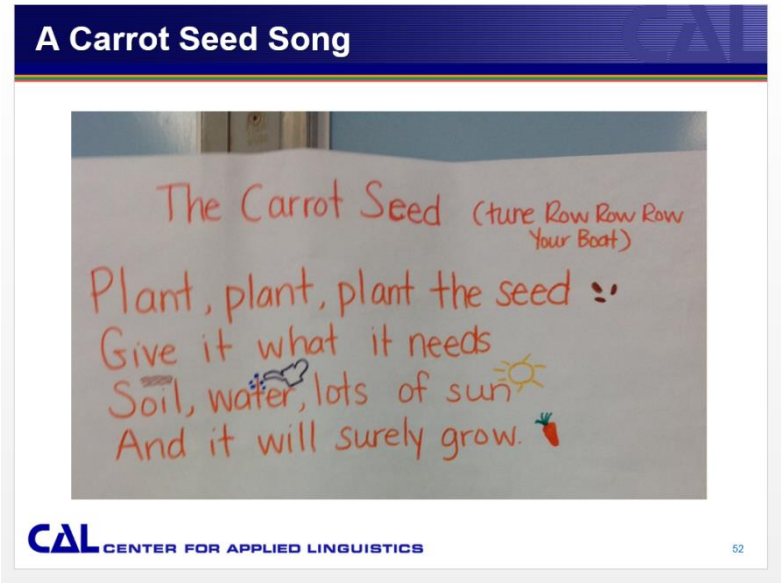


Figure 4

8. Describe qualifications of the individuals/staff who developed this offering.

The Hot Topics for English Language Learners is CAL's newest series of publications. The authors of this particular Listening and Speaking workbook are senior researchers with vast experience in instruction, teacher preparation, and professional development.

Linda New Levine, PhD, lead author of the professional development material, is an ESL/EFL consultant conducting numerous workshops with ESL, EFL and mainstream teachers on four continents. She has been a teacher of English as a Second Language (K-12) and Staff Development Facilitator for the Bedford Central School District, NY and taught ESL Methods and Materials courses at Teachers College, Columbia University. Dr. Levine holds a Masters in TESOL and a Ph.D. in Applied Linguistics from New York University. She is the coauthor of Teaching English Language and Content in Mainstream Classes: One Class Many Paths (2013, 2nd Ed.) Pierson and Collaborative Partnerships: Helping English Language Learners Succeed in PreK-8 Elementary Schools, (2007) TESOL International.

Betty Ansin Smallwood, Ph.D., is currently a CAL Fellow and past Manager of English Language Learner (ELL) Services for the PreK-12 program area. She has over 35 years of

direct experience in English as a Second Language (ESL) and with ELLs, including 17 years as an ESL classroom teacher and over 17 years as a PK-12 ESL teacher educator. At CAL (since 1996), she works with schools, districts, and states to design, customize, and supervise services for their English language learners PK-12. Dr. Smallwood has also provided direct services for educators of English Language Learners (ELLs), Pre-K – Grade 12 in about 25 states and over 50 schools or districts, including major projects in Alaska, North Dakota, New Mexico (with educators of Native Americans and Alaskan Natives), and Massachusetts and Missouri (with a focus on immigrant and refugees issues). Her areas of expertise include professional development, program design and evaluation, curriculum development, standards alignment and development, and children's literature (especially multicultural literature and singable books). Dr. Smallwood has provided professional development nationwide on the major teacher education programs for ELLs, K-12 published by CAL and Delta, including What's Different about Teaching Reading for Students Learning English, Enhancing English Language Learning in Elementary Classrooms, Enriching Content Classes for Secondary ESOL Students, and Professional Development for Bilingual and ESL Paraprofessionals: The Aspire Curriculum. Delivery has ranged from single-day workshops to full graduate courses and includes training of trainers and direct strategy institutes. Dr. Smallwood served on the International TESOL Board of Directors, 2001-2004. She earned her MS in TESOL from Indiana University and her Ph.D. in ESL Education from George Mason University, VA. She began her ESL career as a Peace Corps Volunteer, teaching 5th grade on a small island in Fiji. She speaks Fijian, Spanish, and French, in addition to English.

Erin Haynes, Ph.D., is a qualitative researcher with expertise in instructional strategies for English language learners (ELLs). She develops curriculum and professional development materials for the Center for ELLs at the American Institutes for Research. She also serves as project director for two federally funded studies of expanded learning time in Boston Public Schools. Dr. Haynes previously served as a project consultant for the Center for Applied Linguistics, where she co-authored Listening and Speaking: Oral Language and Vocabulary Development for English Language Learners. She has conducted research with teachers, students, and administrators for a number of projects since 2006, including an NICHD-funded study on the acquisition of English vocabulary by ELLs. She has also assisted in several ESL program and standards evaluation projects at both the district and state level. Dr. Haynes completed her Ph.D. in Linguistics at the University of California, Berkeley in 2010.

9. Describe the qualifications of the individuals/staff who deliver the professional development program and their previous experience providing professional development aimed at strengthening early learning environments for children from economically disadvantaged families.

Dr. Barbara Kennedy, a Professional Development Specialist at CAL, delivers workshops, trainings, and a range of support services for PreK-12 teachers serving English learners in both monolingual and bilingual educational settings. Trilingual in English, German, and Spanish, Dr. Kennedy has served as a classroom teacher of German as a foreign language, English as a second language, and Spanish and English in bilingual elementary school settings.

Dr. Kennedy holds a Master's degree in German Language and Literature, a second Master's in Education Administration, and a Doctorate in Educational Leadership. Her dissertation, entitled A Qualitative Case Study of the Bilingual Teacher Shortage in One Texas School District, provides a detailed analysis of the bilingual teacher shortage and its ramifications for school leaders, teachers, and students. Dr. Kennedy's dissertation was selected for the NABE 2015 Outstanding Dissertation Award-Second Place.

Prior to joining the team at CAL, Dr. Kennedy was Director of Elementary Education in a school district in central Texas, where she supported and monitored the district's processes for curriculum and assessment writing and provided oversight for the district's professional development programs at the elementary level. In addition, Dr. Kennedy led the district's multilingual instruction team in the design and implementation of the district's Vietnamese bilingual and Spanish dual language programs as well as English as a Second Language (ESL) program services at nineteen elementary campuses. Dr. Kennedy also founded, designed, and coordinated a district-housed alternative certification program for aspiring Vietnamese and Spanish bilingual teachers and provided support and professional development for PreK-12 multilingual teachers and administrators.

José Medina presently serves as a Professional Development Specialist at the Center for Applied Linguistics (CAL) in Washington, DC. In this position, José works as part of a team that creates and delivers professional development, supported by research and that follows best practice, for PK-12 teachers and administrators serving English learners in a variety of educational settings. As an English learner himself, José understands first-hand the importance of ensuring that all students have access to educational opportunity.

Before moving to Washington, DC to serve as a member of the CAL team, José was the Director of Bilingual and ESL Education in the Carrollton-Farmers Branch Independent School District (CFBISD) in the Dallas area. In that role, José provided guidance,

professional development, and implemented systems to ensure that all elementary, middle, and high school teachers were well equipped to effectively meet English learners' needs. Prior to accepting the CFBISD district leadership position, José was the founding campus Principal at Ruth Barron Elementary School in the Pflugerville Independent School District (PISD) in central Texas. The successful dual one-way and two-way campus served a diverse community of students that included 89% of families meeting required guidelines for free and reduced lunch, over 60% English learners, and 9% of students receiving special education services. For José, serving the Barron Elementary community and working collaboratively with the students, parents, and staff to create a culture of academic excellence and where all languages and cultures are valued, has been the most rewarding experience.

In twenty years of service in the field of education, José has worked as an educator and school administrator at the elementary, middle, and high school levels. José is presently completing his dissertation study titled *Campus Principals' Perceptions of How Principal Mentorship Influenced Their Ability to Lead a Dual Language Campus in One Texas School District* and is expected to graduate and earn his Doctorate in Educational Leadership in May, 2015

Annie Laurie Duguay, Associate Director of PreK-12 EL Professional Development, has been with the Center for Applied Linguistics since 2009. During this time she has had the opportunity to work on a variety of projects in the PreK-12 English Learner Program Area. Most recently, Annie helps to coordinate and deliver professional development (PD) for educators working with English learners in school districts throughout the country. PD topics include the SIOP Model, the What's Different about Teaching Reading to Students Learning English program, Research-Based Vocabulary Instruction, and CAL's Hot Topics series (Listening & Speaking; Math & Science; and Developing Academic Literacy and Language in the Content Areas). Annie also helps districts to identify their needs for professional development to improve educational outcomes for language learners. Additionally, she is a co-author on the CAL Practitioner Brief: *Implementing the Common Core for English learners: Responding to Common Questions from Educators.*

While at CAL Annie has also been involved with several vocabulary intervention projects. For the CREATE project (Center for Research on the Educational Achievement and Teaching of English Language Learners), Annie wrote sheltered science curriculum for middle grades English learners. Additionally, she worked on the NICHD-funded Vocabulary Instruction and Assessment of Spanish-speakers (VIAS) project, collaborating with the Research Core team to develop an instrument which measures teachers' knowledge of vocabulary development and instruction (Teachers' Knowledge of Vocabulary Survey).

Prior to coming to CAL, Annie was a certified K-8 ESL teacher and taught at a STEM-focused public charter school in Cambridge, Massachusetts. Annie did her undergraduate

studies in Psychology and Canadian Studies at McGill University. She studied abroad in Lyon, France and is fluent in French. Annie holds two master's degrees: an Ed.M. from the Harvard Graduate School of Education and an M.A. in Immigration and Settlement Studies from Ryerson University in Toronto. Her M.A. thesis work comparing the integration experiences of immigrants in the U.S. and Canada was published in TESOL Quarterly. Annie also taught English as a Foreign Language in Besançon, France and in Xiantao, Hubei Province, China.

Marybelle Marrero-Colon is a Professional Development Specialist and has taught in lower elementary classrooms in NY, including bilingual special education classrooms. She also served as a principal for the Caribbean Preparatory School in Puerto Rico and was a Field Resource Specialist on a US Department of Education Title VII Grant and service multiple schools in NYC.

While at CAL Marybelle delivers professional development in sheltered instruction, including the SIOP and Two-Way SIOP Model, to a variety of PreK-12 audiences in over 16 states. She also provides professional development to educators related to issues related to dually-identified English learners and effective RTI instruction for English learners.

Marybelle has a B.A. in Psychology and Spanish from Pace University, a M.A. in bilingual special education from Hunter College-CUNY, and a M.S. in Administration and Supervision from College of New Rochelle.

Jennifer Himmel currently serves as Director of PreK-12 ELL Professional Development Programs. Her work involves overseeing research-based professional development activities and technical assistance to schools, states, and districts in the United States and abroad. She also manages the CAL SIOP service line; creating educational products on the SIOP Model and managing professional development activities in the SIOP Model to over 50 schools/districts annually.

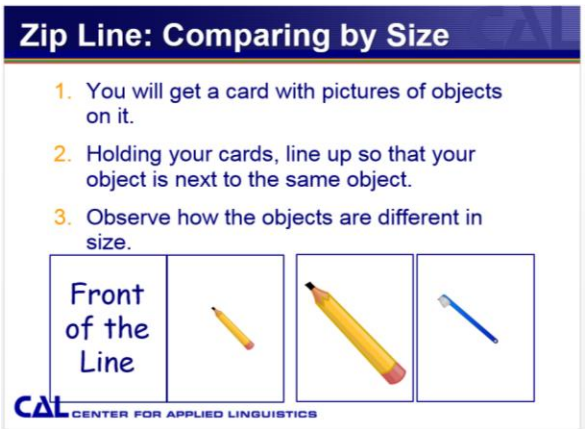
Jennifer began her educational career as an EFL and ESL teacher in Japan and Hawai'i, and later taught sheltered middle and high school content-based ESL in Hawai'i and Virginia. While teaching in Viriginia she began consulting for CAL on the development of the ACCESS for ELLs® assessment battery, an English language proficiency assessment given to K-12 students in over 36 states. Jennifer ultimately left the classroom in 2006 to work at CAL as a Curriculum Developer and Research Assistant for the U.S. Department of Education funded project, Center for Research on the Educational Achievement and Teaching of English Language Learners (CREATE) that investigated academic achievement of ELLs in the middle years. Jennifer has also had the opportunity to work on the Carnegie-funded project Exemplary Programs for Newcomer English Language Learners at the Secondary Level, a 3-year research project looking at programs and best practices for newcomer secondary ELLs.

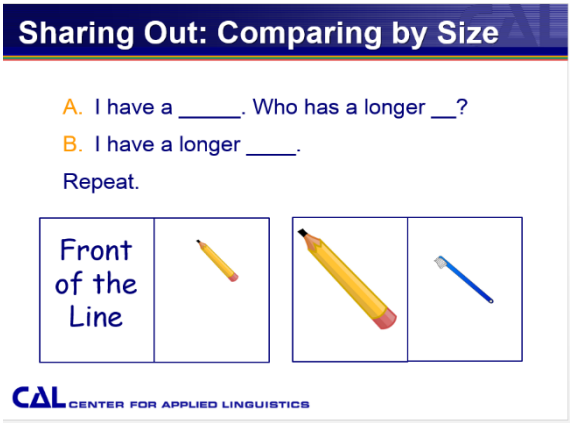
In addition to her work in research and assessment she managed a graduate level, online course that teaches K-12 ESL and content area teachers how to create test items that assess language proficiency using the WIDA Standards, and assisted with the development and facilitation of the course Content and Language Integration as a Means of Bridging Success (CLIMBS)®, designed to assist PreK-12 educators in applying the WIDA English language proficiency standards in their teaching using a sheltered instruction approach. Jennifer holds a B.A. in Linguistics from the University of Kansas, a M.A. in Teaching English as a Second Language from the University of Hawai'i, and is working on her PhDd in reading education from the University of Maryland.

10. Describe the alignment to Virginia's *Foundation Blocks for Early Learning*, Kindergarten *Standards of Learning*, and *Milestones for Child Development*, as applicable. For example, professional development related to behavior management techniques for preschool children would need to align with the Foundation Blocks for Personal and Social Development.

    All professional development content will based on and aligned with the Virginia Kindergarten Standards of Learning (2010), Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds, and Milestones of Child Development: A Guide to Young Children's Learning and Development from Birth to Kindergarten. (2008). Thus, facilitators will situate all content delivery in the instructional day of early childhood educators in Virginia.

    For example, for the Virginia Math Foundations Block #3 (Measurement), teachers will participate in an activity called Zipline to meet standard a (Recognize attributes of length by using the terms longer or shorter when comparing two objects). Participants will also discuss the language needed to be successful in the activity. See Figures 4 and 5.





Figures 4 and 5

The facilitators will also lead the participants through discussions and reflections on how the activity can be implemented for young English learners at different language proficiency levels or at different ages within the early childhood continuum.

Additionally, the facilitator will address how the Foundation Blocks and Milestones can be integrated for enhanced literacy achievement for young English learners. For example, for Science Foundation Block 1, facilitators will show participants how to provide scaffolds for young English learners, like sentence starters or sentence stems, to help young English learners make predictions about science demonstrations in order to encourage the development of oral language in the content of science.

11. Describe any pre-requisites for participation, resources needed (if any), and space requirements (if any) for participation.

    No pre-requisites for participation is required. However, CAL requests the following from the district for each workshop:

    - Secure a workshop site with movable tables and chairs, and sufficient space for teachers and administrators to participate in interactive activities and group in different grouping configurations.
    - Make the following IT equipment available: a laptop computer with a DVD drive that can play videos, speakers for the laptop computer, LCD projector, and white screen; and ensure the availability of IT support services at the beginning of each workshop.
    - Provide chart paper, thick color markers, tape, sticky notes, note cards, and nametags.
    - Reproduce the workshop handouts and ready them for distribution to participating teachers and administrators.

12. Has the proposed professional development offering been subject to rigorous evaluation as defined in Section III of this Request for Proposals?

    ☒ No

    ☐ Yes.

    If yes, in the space below, summarize the evaluation methods, the population in which the program has been subject to rigorous evaluation (as defined in this proposal), and provide documentation verifying the results have been subject to an external peer review process by

including a copy of the study just after this attachment. (For example, if the Attachment name is D-I-1, within Tab 6 of your proposal, include it after attachment D-I-1).

While the PD program has not been subject to rigorous evaluation as defined in Section III, it is based on research principles related to the education of young English learners, has been field tested with multiple groups of teachers and refined according to tickets out, facilitator observations, and evaluations by educators on the final day.

If no, is the proposed professional development offering currently undergoing rigorous evaluation, as defined in Section III of this Request for Proposals?

☒ No

☐ Yes.

13. How much time will your participants need to commit? (Provide total number of days, hours per day, and the total time frame in months in which participants will be expected to participate, and a justification for the time commitment needed to meet the objectives of the professional development opportunity.) If you are also proposing another delivery method for this professional development offering, describe both delivery methods in your narrative, including any differences in the time commitment required.

Face-to-Face Professional Development

__2___ Days
__6 (contact hours) Hours per day
__1 or more Months to complete

Online Professional Development (whether interactive or not)
_____ Total Hours
_____ Minimum time for each segment/lesson

Combination
_____ Days of Face-to-Face Professional Development
_____ Hours per day of Face-to-Face Professional Development

_____ Total Hours Online Professional Development
_____ Minimum time for each segment/lesson of Online Professional Development

Please describe, including the time participants will need to commit, here.

On Day 1 of the workshop, participants learn about the stages of language acquisition for young bilingual learners, principles of effective instruction for English learners, student proficiency levels, and the importance of effective teacher talk. At the end of Day 1, participants focus on specific listening activities and develop an activity to target listening skills of students. On Day 2, the workshop focuses on speaking skills and bridging oral language and early literacy skills. Day 2 wraps up with vocabulary development and instruction. Activities that can be directly applied with students at the early childhood levels are modeled throughout both days of the workshop. Tickets out from Day 1 are used to further tailor the workshop and provide feedback to participants.

References

Levine, N.L., Smallwood, B.A., & Haynes, E (2012). *Listening and Speaking: Oral Language and Vocabulary Development for English Learners*. Washington, DC: Center for Applied Linguistics.

7. ATTACHMENT E

Pricing Schedule

CALSolutions
PreK-12 ELL Education

Table I. Complete this Table for all professional development to be delivered face-to-face (in-person):

Name of Professional Development Offering	Professional Development Category (categories) a – o as indicated on the applicable Attachment D	Total Cost for 25 participants	Length of Delivery (in Hours) as indicated on Attachment D	Per Hour Price
SIOP (Sheltered Instruction Observation Protocol) Model Professional Development for Early Childhood Educators (Fixed Price based on 2 visits x 2 consecutive days of training)	a, b, c, d, e, i		24	
<u>2015/2016 school year</u>				
• Within a 50 miles radius of 20016		$12,155		$506.46
• Between 50 and 125 miles radius		$14,668		$611.17
• Between 125 and 200 miles radius		$16,920		$705.00
• Beyond a 200 miles radius		$18,195		$758.13
<u>2016/2017 school year</u>				
• Within a 50 miles radius of 20016		$12,483		$520.13
• Between 50 and 125 miles radius		$15,072		$628.00
• Between 125 and 200 miles radius		$17,392		$724.67
• Beyond a 200 miles radius		$18,705		$779.38
<u>2017/2018 school year</u>				
• Within a 50 miles radius of 20016		$12,822		$534.25
• Between 50 and 125 miles radius		$15,488		$645.33
• Between 125 and 200 miles radius		$17,878		$744.92
• Beyond a 200 miles radius		$19,230		$801.25
<u>2018/2019 school year</u>				
• Within a 50 miles radius of 20016		$13,170		$548.75
• Between 50 and 125 miles radius		$15,916		$663.17
• Between 125 and 200 miles radius		$18,378		$765.75
• Beyond a 200 miles radius		$19,771		$823.79

Name of Professional Development Offering	Professional Development Category (categories) a – o as indicated on the applicable Attachment D	Total Cost for 25 participants	Length of Delivery (in Hours) as indicated on Attachment D	Per Hour Price
Listening and Speaking: Oral Language and Vocabulary Development for Early Childhood English Learners (Fixed Price based on two consecutive days of training)	a, b, c, f, g, i, m		12	
<u>2015/2016 school year</u>				
• Within a 50 miles radius of 20016		$6,691		$557.62
• Between 50 and 125 miles radius		$8,600		$716.67
• Between 125 and 200 miles radius		$9,191		$765.92
• Beyond a 200 miles radius		$9,737		$811.42
<u>2016/2017 school year</u>				
• Within a 50 miles radius of 20016		$6,935		$577.92
• Between 50 and 125 miles radius		$8,901		$741.75
• Between 125 and 200 miles radius		$9,510		$792.50
• Beyond a 200 miles radius		$10,072		$839.33
<u>2017/2018 school year</u>				
• Within a 50 miles radius of 20016		$7,107		$592.25
• Between 50 and 125 miles radius		$9,132		$761.00
• Between 125 and 200 miles radius		$9,759		$813.25
• Beyond a 200 miles radius		$10,338		$861.50
<u>2018/2019 school year</u>				
• Within a 50 miles radius of 20016		$7,284		$607.00
• Between 50 and 125 miles radius		$9,370		$780.83
• Between 125 and 200 miles radius		$10,015		$834.58
• Beyond a 200 miles radius		$10,612		$884.33