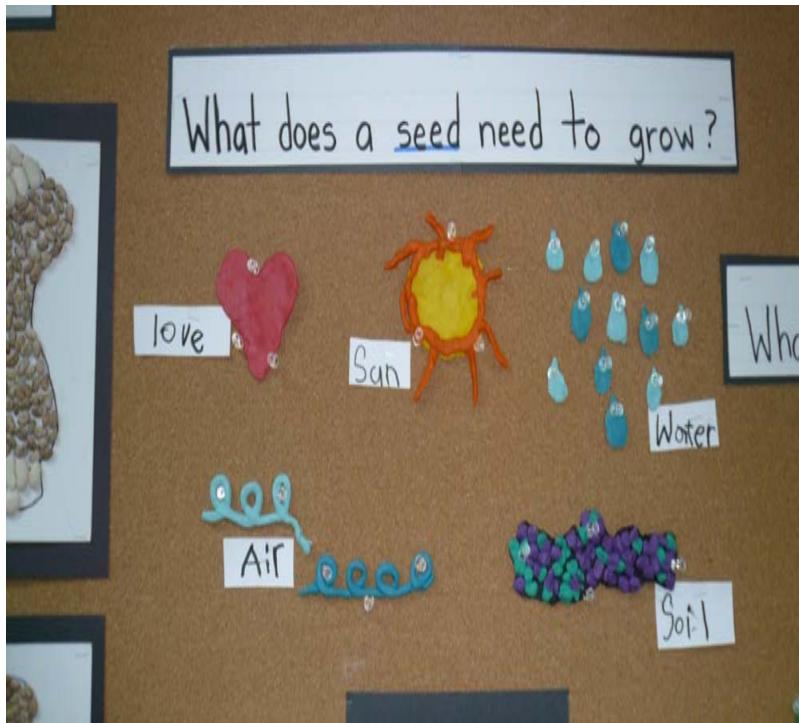


Assessing Language Demands Placed on English Language Learners: Findings from Studies of Authentic Academic Language Exposure



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Overview

Introduction and key terminology

Part 1: Current practices in the assessment of English for English language learners

- *State ELL language assessment systems*
- *Considerations for the fair, valid, and reliable reporting of student language proficiency*

Part 2: Studies of authentic classroom practices (text materials, discourse, teacher report) to illustrate:

- *Complexity of the academic language construct*
- *Role in assessment of ELL students*

Activities: Examination of academic language demands

- *Student writing*
- *Texts*
- *Oral discourse*

Expectations for Language Use in The Classroom



“We want them [students] to understand lectures and participate in academic conversations. We want them to comprehend challenging texts, make informed decisions based on information they have read, form rational opinions, and offer focused interpretations. We expect them to write with clarity, conviction, color, and sophisticated thought. In short we want them to express themselves intelligently, articulately and thoughtfully.”

(Cruz, 2004, p. 14)

Key Terminology

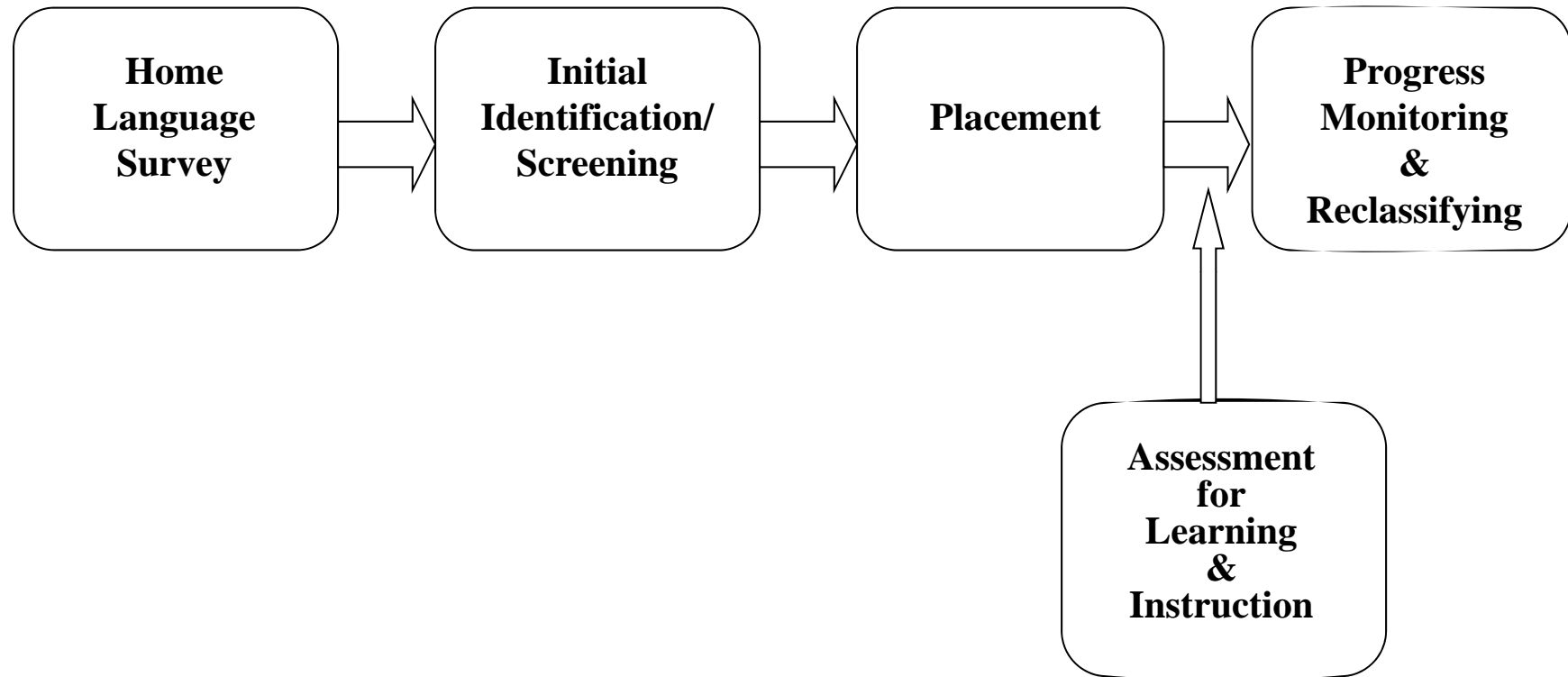
- **ELD/ELP:** English Language Development/Proficiency
- **AMAO:** Annual Measurable Achievement Objective
- **OTL:** Opportunity to Learn
- **Language Modalities (Domains):** Listening, Speaking, Reading & Writing (Comprehension)
- **Academic Language Demands:** Language frequently encountered and commonly learned in the K–12 context; comprised of:
 - ▶ **Linguistic Features:** Identifiable by linguistic domain (*phonological, lexical, syntactic, discourse/text*)
 - ▶ **Academic Language Functions:** Intent of the discourse or text by which students learn curriculum content (*e.g., description, explanation, comparison, summarization*)

Part 1: Overview of current practices in the assessment of English for English language learners

State ELL Language Assessment Systems

- **Identify** students who:
 - ▶ *have a native language other than English,*
 - ▶ *live in an non-English dominant environment, and*
 - ▶ *have difficulties in English language affecting social interactions and academic tasks.*
- **Determine level of proficiency** in English for a range of purposes, not least to show:
 - ▶ *annual progress/development (AMAO 1), and*
 - ▶ *eventual attainment of ELP (AMAO 2)*

Language Assessment by Purpose and Sequence



Bailey, A.L. (forthcoming). Implications for Assessment and Instruction. In M. Shatz & L. Wilkinson (Eds.). *Preparing to Educate English Language Learners*. Guilford Press.

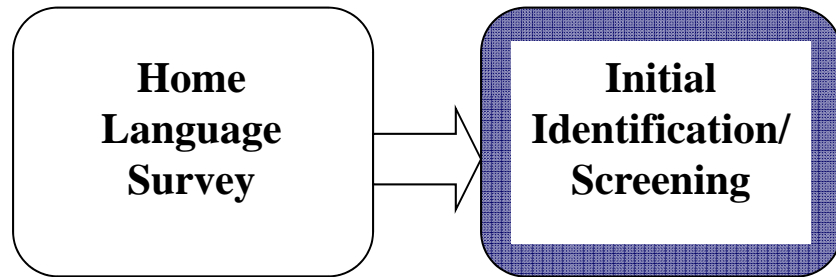
Home Language Survey



- All but 3 states report using a HLS*
- Typically 2-4 questions:
 - “Does the student speak a language other than English?”*
 - “What language(s) is/are spoken in your home?”*
- Triggers next phase in State ELL assessment system if response is “yes”
- Pressure to say “no”
- Cultural desirability to say “yes”

**Wolf, M. K. et al. (2008). Practice Review. CRESST Report 732. www.CRESST.org*

Initial Identification and Screening



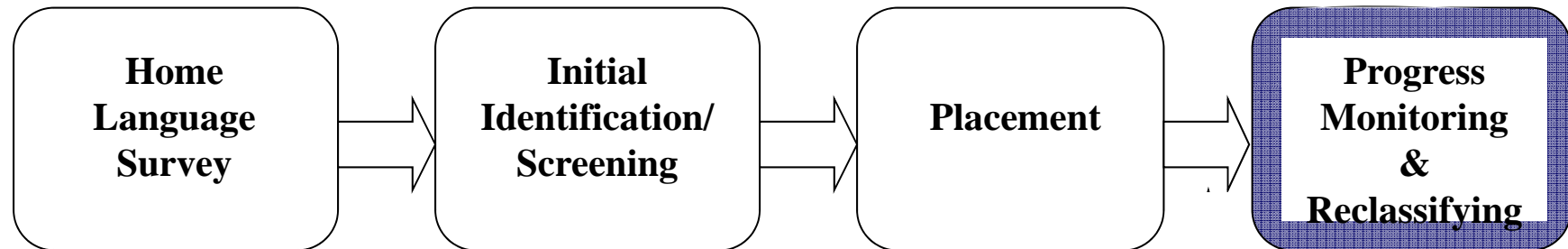
- HLS used by some states (PHLOTE)
- Shorter screening tool, or
- State ELP assessment (CO: CELA)

Placement



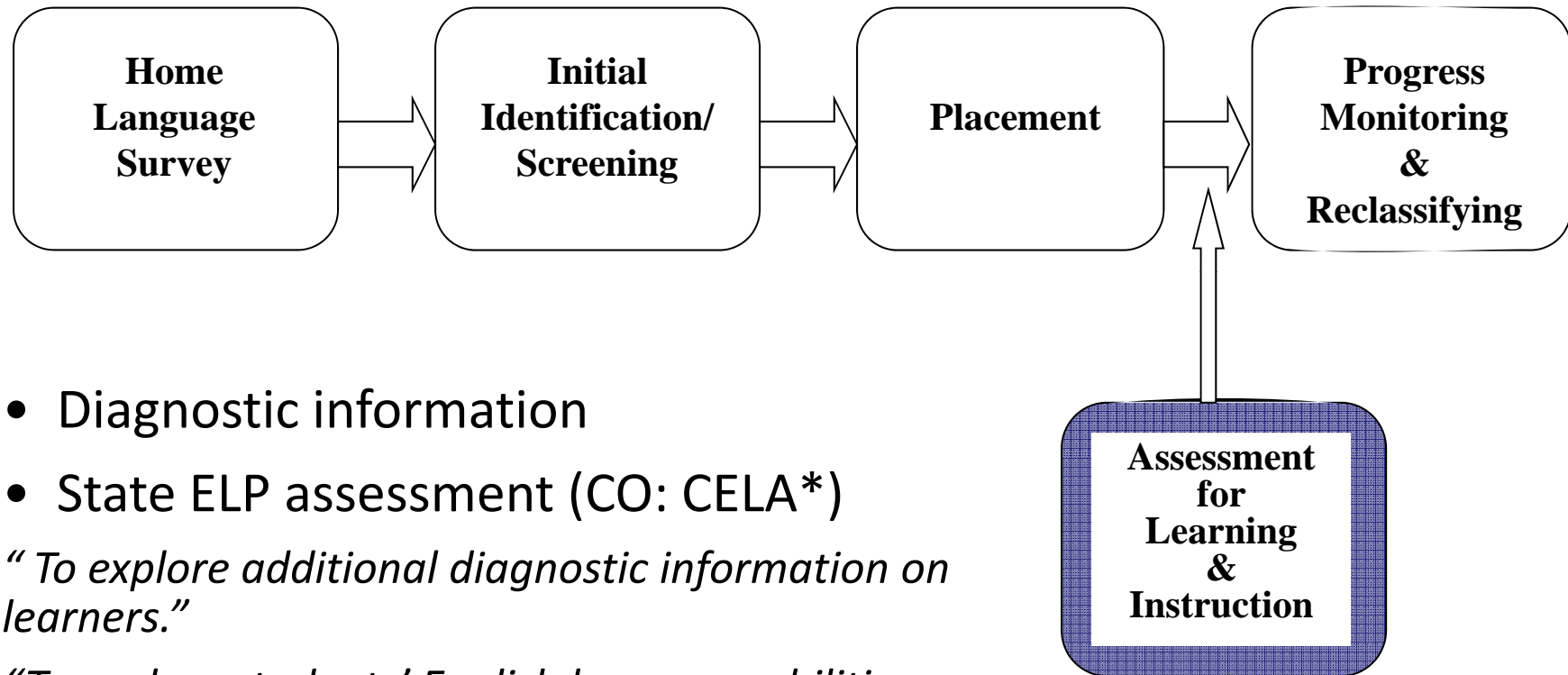
- Need to determine level of English proficiency
 - State ELD/P standards 3-6 levels (CO: 3 levels)
- Match ELL services to student needs
- Placement tools, or
- State ELP assessment (CO: CELA*; 5 levels)

Progress Monitoring & Reclassifying



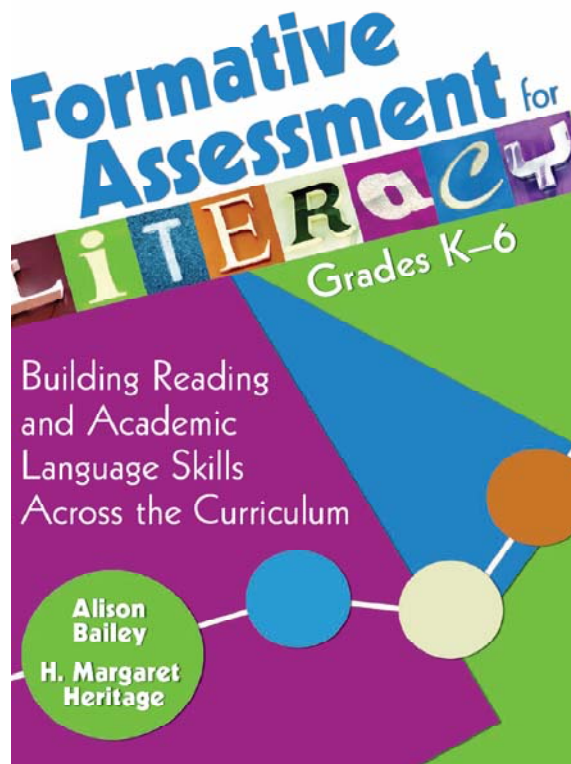
- State ELP assessment (CO: CELA)
- % of students making progress in English during the school year (AMAO 1)
- % of students attaining English proficiency during the school year (AMAO 2)
- Reclassification:
 - ELP score (46 states; 12 only)
 - ELP & content scores (28 states; 7 only)
 - CO: ELP & content scores, district, school, parent, & student portfolio (7 only)

Assessment for Learning and Instruction



- Diagnostic information
- State ELP assessment (CO: CELA*)
“To explore additional diagnostic information on learners.”
“To explore students’ English language abilities through an analysis of linguistic characteristics.”
(vocabulary, grammar and syntax)

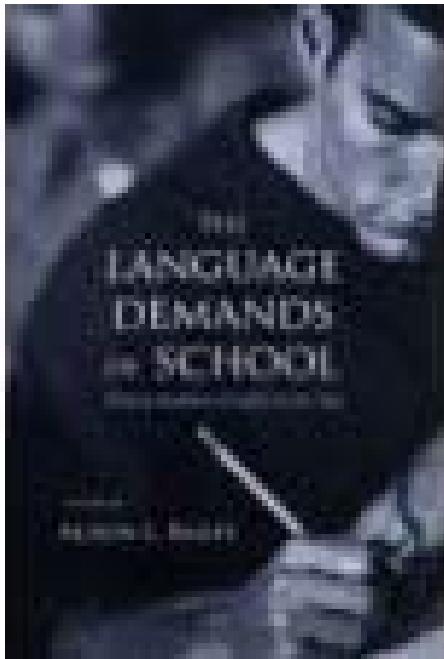
E.g., Formative Assessment of ELP for Learning and Instruction



- Elicit evidence about student language learning
- Provide feedback to teachers and students about language learning
- Use feedback to adjust instruction and language learning strategies in real time
- Involve students actively in their language learning (explicit **Learning Goals** and **Success Criteria**)
- Can be documented and collated over time to also serve a summative purpose at the classroom level

Considerations for Fair, Valid, and Reliable ELP Assessment

- **Testing purpose/use:** *Can one assessment do all things well? Are the ELP assessments you use adequately validated for how you use them?*
- **Language construct definitions:** *Do ELP assessments measure the language constructs they purport to measure? **What is the language of “social interaction and academic tasks?”***
- **Test content/coverage:** *How do we assess language separately from academic content when content knowledge is not distinct from the linguistic means through which it is acquired and **expressed?** What kinds and amount of linguistic features will give a sufficiently detailed profile of a student’s ELP?*
- **Others:** (e.g., Age-appropriate, culturally-appropriate, gender biases)



Part 2: Studies of Authentic Academic Language Exposure

Research on Academic Language

To explore:

- *The complexity of the academic language construct*
- *Its role in the assessment of ELL students*

What is Academic English?

“The language that is used by teachers and students for the purpose of acquiring new knowledge and skills...imparting new information, describing abstract ideas, and developing students’ conceptual understanding.” **(Calla Handbook, 1994, p. 40)**

Language used to “access and engage with the school curriculum....The unique interaction between language and the personal linguistic experiences of each child.” (See handout) **(Bailey & Heritage, 2008, p. 12-13)**

Language Demands

- Specifically, need to know what language demands we put on students so we can assess those demands:
 - ▶ *Word level*
 - ▶ *Sentence level*
 - ▶ *Discourse/Text level*

Word Level Features

- **Word usage in academic contexts:**
 - General use of vocabulary in academic contexts (not exclusive to any one discipline) (e.g., *synthesize, report, product*) (*e.g., Scarcella & Zimmerman, 1998; Nation, 2001; Beck et al., 2002*)
 - Specialized use of vocabulary in academic disciplines (e.g., *thermal, multiplication*) (*e.g., Scarcella & Zimmerman, 1998; Nation, 2001; Beck et al., 2002*)
 - Context-specific: everyday words used with a different meaning in an academic context (e.g., *by, table*) (*e.g., Bailey, 2007*)

Sentence Level Features: Math

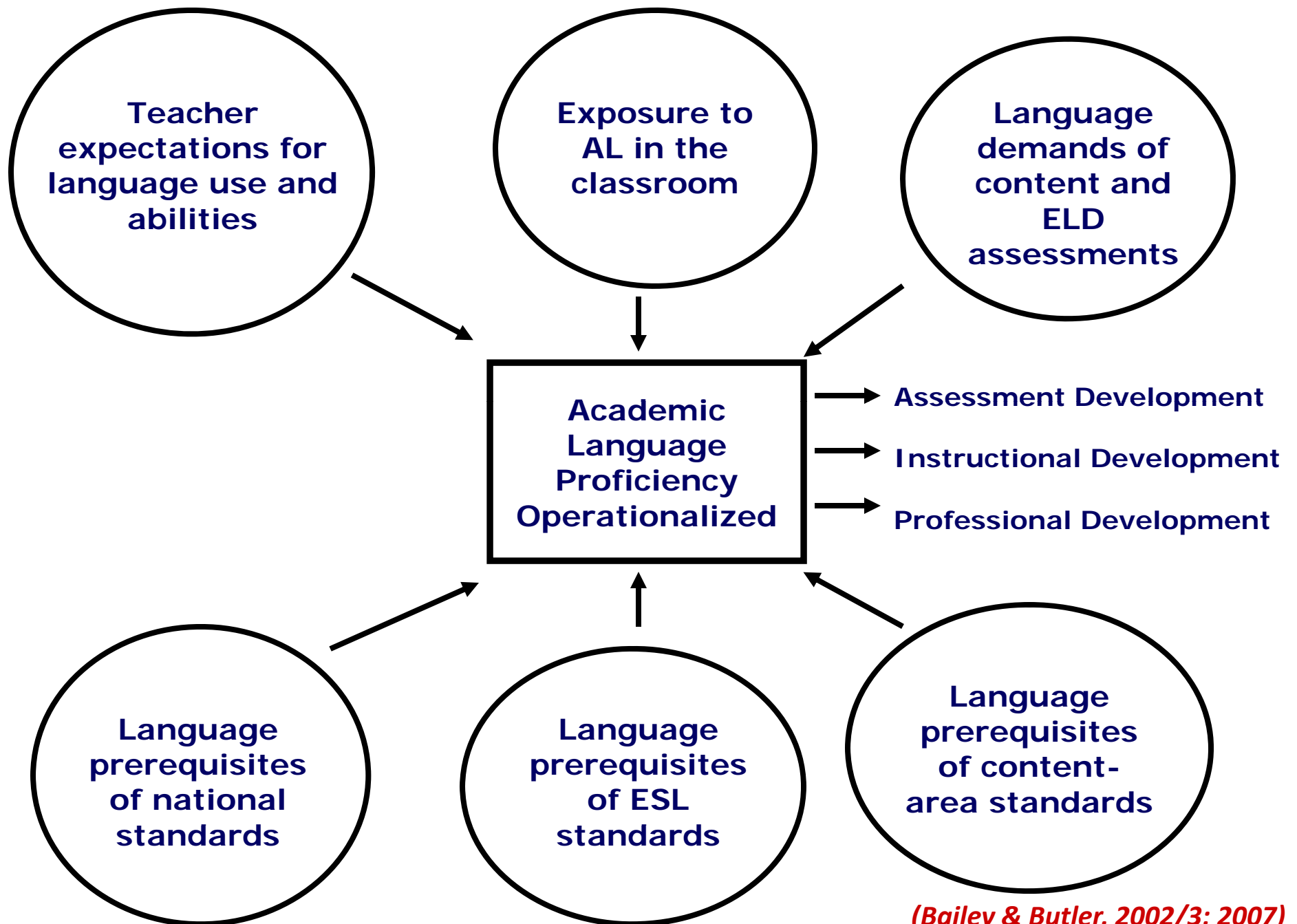
- Comparatives: greater/less than
- Prepositions: divided into, divided by
- Passive voice: x is defined as...
- Reversals: the number “a” is 5 less than “b”
- Logical connectors: if... then...

(Spanos, Rhodes, Dale & Crandall, 1988)

Discourse/Text Level Features: Science

- Learning science means learning to *talk* [and write] science
- Talking science means, *hypothesizing, questioning, challenging, designing experiments, comparing, classifying, analyzing, evaluating, generalizing.*

(Lemke, 1990)



(Bailey & Butler, 2002/3; 2007)

Selected CRESST Studies

1. Text materials (textbook analyses) *(Bailey, Butler, Stevens & Lord, 2007)*
2. Oral discourse (classroom observations) *(Martinez, Bailey, Kerr, Huang & Beauregard, 2009)*
3. Teacher-reported practices (survey) *(Martinez, Bailey, Kerr, Huang & Beauregard, 2009)*

Fifth-grade Text Study: Research Questions

- *What are the linguistic characteristics of word problems in mathematics and of multi-paragraph texts in science and social studies at the fifth-grade level?*
- *How do texts in different subject areas compare to one another in terms of identified characteristics?*

Fifth-grade Textbook Analyses

Subject Areas (3 publishers X 4 topics = 36 selections) **(See handout)**

- ▶ *Math – word problems*
- ▶ *Science – multi-paragraph texts*
- ▶ *Social Studies – multi-paragraph texts*

Types of Analyses **(See handout)**

- ▶ *Descriptive: (Mean length of sentence & paragraph)*
- ▶ *Lexical (word): (General & specialized, low frequency, derived, 3+ syllables)*
- ▶ *Grammatical (sentence): (Sentence/clause type, nominalization, passive voice)*
- ▶ *Discourse (Text): (Language functions: dominant/supporting)*
- ▶ *Task Format: (Prompt/response formats: word matching, graph completion, MC, constructed response)*

Descriptive and Word Level Demands

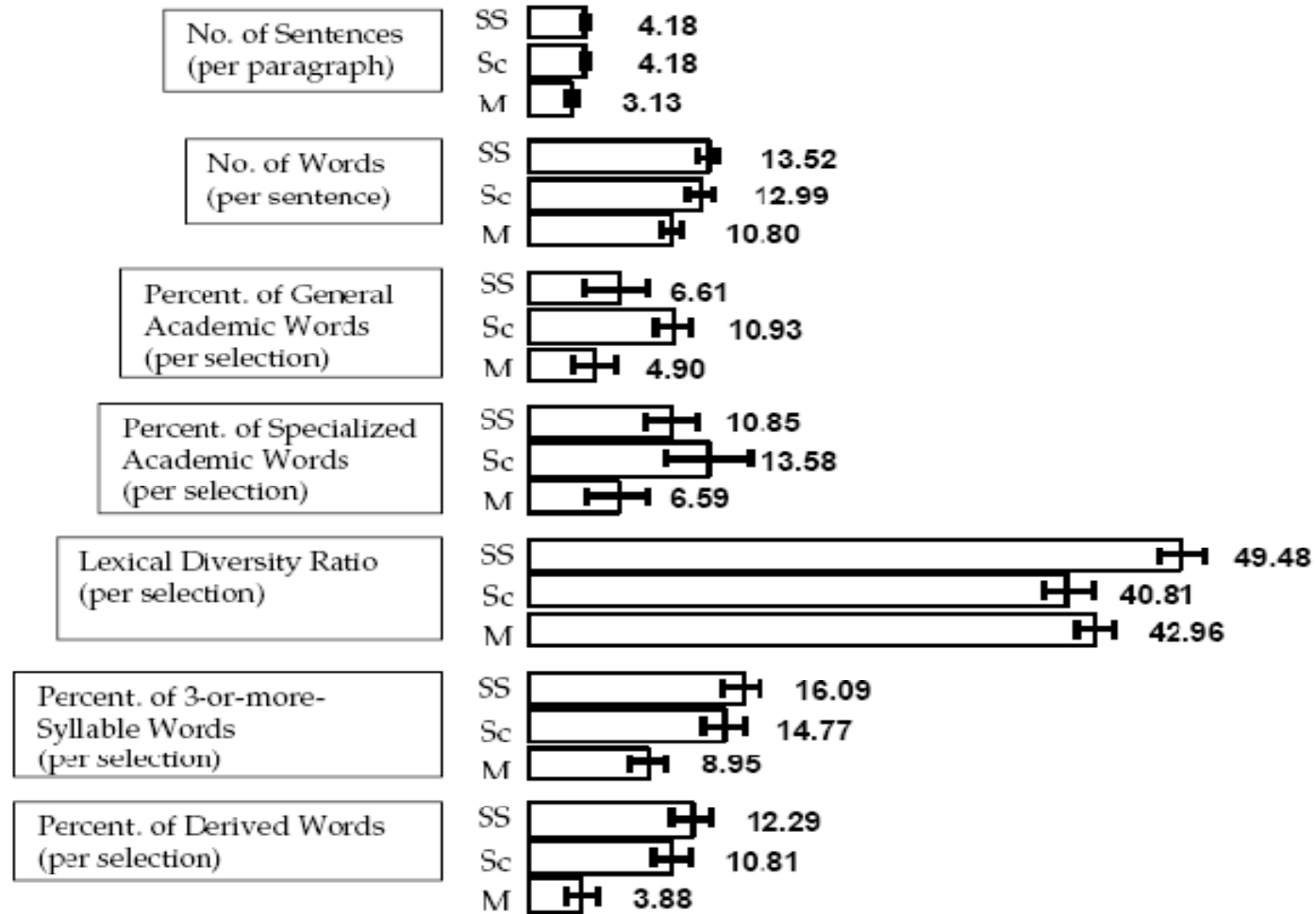


Figure 1. Linguistic Profiles of Fifth-Grade Social Studies (SS), Science (Sc) and Mathematics Text Selections (M): Subject matter averages for descriptive and lexical data.²¹

Sentence Level Demands

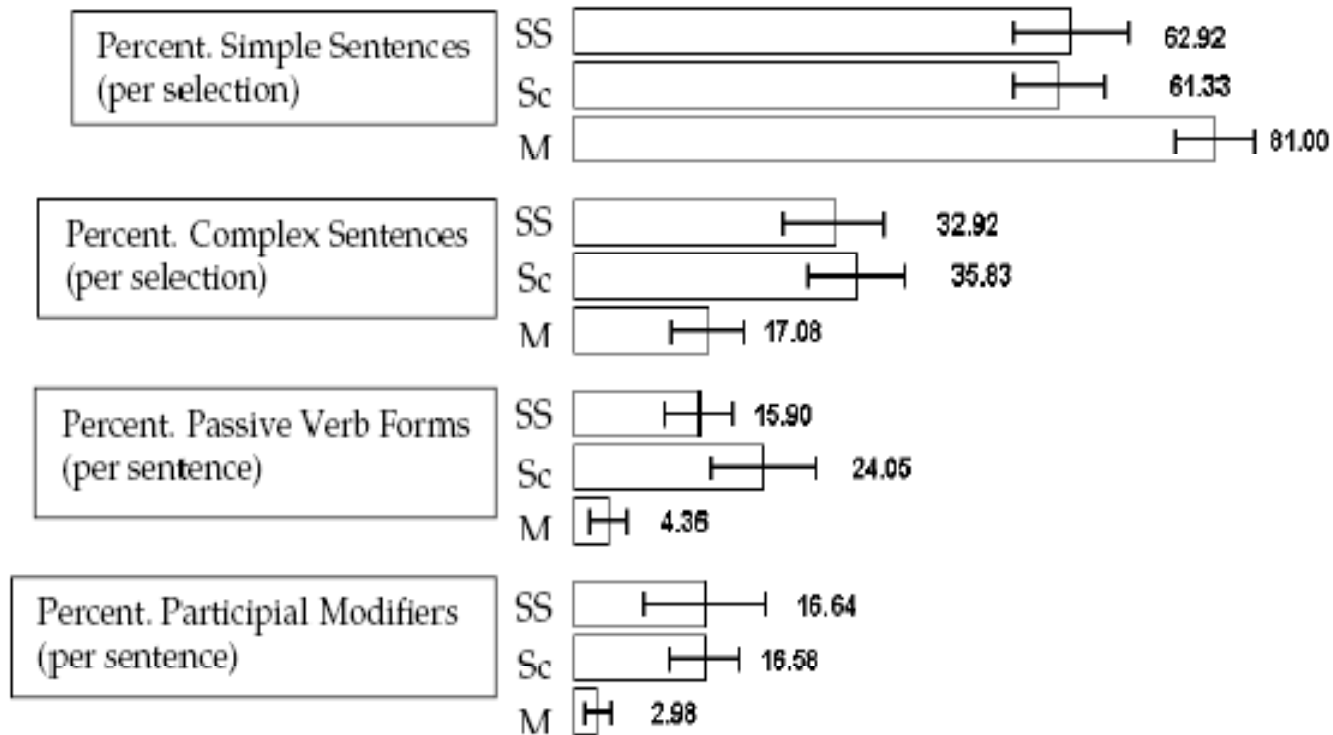


Figure 2. Linguistic Profiles of Fifth-Grade Social Studies (SS), Science (Sc) and Mathematics Text Selections (M): Subject matter averages for grammatical data.²²

Summary of Findings

Language Demands	Math	Science	Social Studies
<i>Word Level</i>	<ul style="list-style-type: none"> • Infrequent academic vocabulary • Measurement vocabulary 	<ul style="list-style-type: none"> • Greatest use academic vocabulary • A variety of general and specialized academic vocabulary 	<ul style="list-style-type: none"> • A variety of general and specialized academic vocabulary • Proper nouns • Greatest lexical diversity
<i>Sentence Level</i>	<ul style="list-style-type: none"> • Fewest sentences/ paragraph • Majority Simple • Fewest complex 	<ul style="list-style-type: none"> • Predominantly simple • Some complex; longer and more varied 	<ul style="list-style-type: none"> • Predominantly simple • Some complex; longest sentences (PPs, NPs)
<i>Discourse/Text Level</i> <i>Dominant organizational features/functions</i>	<ul style="list-style-type: none"> • Description • Scenario 	<ul style="list-style-type: none"> • Description • Explanation 	<ul style="list-style-type: none"> • Description • Explanation
<i>Supporting organizational features</i>	<ul style="list-style-type: none"> • Enumeration • Sequencing 	<ul style="list-style-type: none"> • Comparison • Definition • Reference to other text or visual support 	<ul style="list-style-type: none"> • Comparison • Labeling • Sequencing
CRESST/UCLA			28

Observations of Classroom Discourse: Research Questions

- *What repertoires of academic language are evident in the classrooms?*
- *Do classrooms with larger numbers of ELL students differ from those with lower numbers of ELL students?*

Background

- Five classrooms at 4th grade (3 schools in CA).
- Cover the range of proportion of ELL students in the elementary grades (7% - 100%).
- School Academic Performance Index (API) scores of 887, 734 and 724 (800 state target).
- Cover the range of proportion of students in free or reduced-price lunch programs (12% -100%).
- Data from observations made by pairs of observers for two approx. one-hour periods, and teacher debriefing interviews.
- Three *high-contrast* classrooms for illustration

Science Instruction in Mrs. Troy's Classroom: 2 (7%) ELL Students

- *Mrs. Troy has been teaching for ten years. She is proficient in English only.*
- *Narrow repertoire of **ELL instructional strategies**:*
 - ▶ *reliance on scaffolding student understanding of English (via modeling and use of graphics), and providing many opportunities for student to teacher interactions that encouraged elaborated responses.*
- *Frequently used many different **academic English instructional strategies**:*
 - ▶ *scaffolding techniques such as providing model responses to her questions to make her expectations explicit (e.g., “My hypothesis is... and why I think so....”),*
 - ▶ *providing opportunities for students to practice academic uses of language orally and in writing.*

Mrs. Troy (cont'd)

- *Moderate to high **emphasis on developing student abilities** across most domains of academic English:*
 - ▶ *including listening and reading comprehension skills in science, but no extended (essay) writing in science.*
 - ▶ *relatively strong emphasis on students being able to convey basic facts, as well as explain and justify scientific ideas using evidence.*
- ***Language frequently functioned** for higher-order thinking skills: prediction, inference making, causal reasoning and hypothesis generation; less often used for less cognitively demanding tasks such as labeling and classifying science phenomena.*

Science Instruction in Ms. Gomez's Classroom: 25 (100%) ELL Students

- *Ms. Gomez has been teaching for four years. She is proficient in Spanish and English.*
- *Repertoire of **ELL instructional strategies** was limited to:*
 - ▶ *frequent use of opportunities for student-to-teacher and student-to-student interactions that encouraged elaborated responses; some use of scaffolding via use of visuals and diagrams; paraphrasing; and use of extra wait time for students to respond.*
 - ▶ *An English-only approach to instruction; never uses student primary language, nor incorporates primary language materials (surprising given her own bilingualism).*
- *The class on living organisms (building representations of coral) showed little **instruction of academic English abilities**; one **prevalent emphasis on academic language abilities**—developing student ability in specialized scientific vocabulary; a narrow repertoire of **academic language functions**—describing scientific objects with lesser amounts of classifying and comparing/contrasting scientific processes and objects.*

Ms. Gomez (cont'd)

- *In contrast, **academic English instructional strategies** occurred far more frequently in the conservation class (small group poster)—making explicit links between new concepts and student background experiences, scaffolding techniques to support student responses, making expectations clear, and providing opportunities for students to clarify key concepts.*
 - ▶ *A relatively strong **emphasis on developing student academic language abilities** in: listening comprehension skills in science, explaining and justifying scientific ideas using evidence, and drawing connections among students' ideas.*
 - ▶ ***Academic language functions** focused on higher-order thinking skills: prediction, inference making, causal reasoning and hypothesis generation, as well as on some less cognitively demanding tasks such as enumeration and sequencing scientific information.*

Science Instruction in Mrs. Sato's Classroom: 13 (43%) ELL Students

- *Mrs. Sato has been teaching for 24 years. She is proficient in English only (ESL credential).*
- *Relatively narrow repertoire of **ELL instructional strategies**:*
 - ▶ *reliance on scaffolding student understanding of English (via modeling and use of manipulatives), providing many opportunities for student-to-teacher interactions that encouraged elaborated responses, by paraphrasing, and use of extra wait time.*
- *Moderately used many of the **academic English instructional strategies**:*
 - ▶ *making explicit links between new concepts and students' background and past learning, scaffolding techniques to support student responses, and making teacher expectations explicit.*

Mrs. Sato (cont'd)

- *Provided frequent opportunities for students to **practice academic uses of language** both orally and in writing.*
 - ▶ *during the mineral experimentation, Mrs. Sato also frequently made language objectives explicit in addition to science knowledge objectives.*
 - ▶ *a strong emphasis on developing student specialized vocabulary in science,*
 - ▶ *moderate emphases on listening comprehension skills, and on students being able to convey basic facts.*
- ***Language most frequently functioned** to describe, compare/contrast, label, and define, and for class diagramming Earth to also explain geologic processes, rather than function in support of higher-order thinking skills, such as prediction or hypothesis generation (surprising given the experiment conducted on properties of different types of minerals).*

Teacher-Reported Practices: Research Questions

- *What are some of the underlying dimensions of academic language features?*
- *Can we make strategies for teaching academic language skills distinct from ELL teaching strategies?*
- *In what ways might academic English be related to content-area teaching?*

Sample Descriptives (n=53)

- 4th grade teachers in CA and CO recruited to complete an ***opportunity to learn (OTL) science*** and ***academic language exposure (ALE)*** survey through online forums, PD networks, district science offices.
- Response rate: 55%.
- Answered demographic questions and OTL/ALE 103 items (1-5 scale).
- Eight years of teaching experience, four years teaching science at grade level.
- About 50% had a Bachelor's degree and 50% had a Master's.
- All but one were fully credentialed, most held Elementary credential. Ten also held ESL credential, 6 held bilingual credential.
- 16 fluent in Spanish, 3 in other languages; average 14 ELL students/class of 30.
- Considerable variability in student ELA/Reading performance across classrooms, 0% - 80% Proficient or Advanced (Mean 22%); 0%-90% Below Basic or Far Below Basic/Partially Proficient or Unsatisfactory (Mean 41%).

Factor Analysis of 4 Language Sections

1. ELL Instructional Practices Factors Extracted: 4

- **Support content learning:** *Scaffolding, Student-Teacher Interactions, Paraphrasing, Wait Time, Feedback.*
- **Student strategies:** *Student-Student Interactions, Peer-Assessment, Self-Assessment.*
- **Oral Language Strategies:** *Clarify vocabulary, Adapt speech, English only, Translation, Allow Primary Language, Use Primary Language, Practice English.*
- **Materials/Background:** *Supplementary Materials, Adapt Text, Adapt Tests, Cultural Background.*

2. ALE Instructional Strategies Factors Extracted: 1

- *Links, Scaffolding responses, Scaffolding expectations, Clarify concepts, Scientific Discourse, Language Objectives, Practice Academic Language.*

3. ALE Instructional Emphases Factors Extracted: 2

- **General language skills:** *General Vocabulary, Grammar, Listening, Reading, Essay Writing.*
- **Specialized language skills:** *Science Vocabulary, Scientific Writing, Convey Concepts, Use Evidence, Draw Connections.*

4. ALE Functions Factors Extracted: 3

- **Sorting/organizing information:** *Classifying, Comparing/Contrasting, Sequencing, Enumerating.*
- **Providing information:** *Explanations, Descriptions, Definitions, Sequencing Steps, Labs.*
- **Higher order thinking:** *Causal Reasoning, Predictions, Generalizations, Inferences, Hypothesis.*

Factor Analysis of 7 OTL (science), 10 new ELL and ALE Factors

	2 Factor		3 Factor		
	Tradit.	Reform	Reform	Tradit.	ELL
OTL11 (Traditional)	0.72	-0.25	-0.28	0.51	0.37
OTL12 (Technology)	0.33	0.45	0.43	0.17	0.28
OTL13 (Language Models)	0.24	0.21	0.13	0.42	-0.05
OTL14 (Hands-on, Group)	0.22	0.12	0.05	0.36	-0.02
OTL21 (Connections)	0.13	0.74	0.69	0.19	0.07
OTL22 (Rote/Memorization)	0.47	0.06	0.02	0.38	0.22
OTL23 (Understanding)	-0.09	0.70	0.66	0.04	-0.05
ELL11 (Support x content)	0.44	0.22	0.26	-0.05	0.58
ELL12 (Student Strategies)	0.73	-0.01	-0.01	0.28	0.60
ELL13 (Oral Language)	0.43	-0.01	0.05	-0.24	0.74
ELL14 (Materials/Background)	0.64	0.01	0.02	0.24	0.52
ALE11 (ALE Strategies)	0.45	0.54	0.5	0.27	0.34
ALE21 (General Language)	0.41	0.32	0.16	0.86	-0.14
ALE22 (Specialized Language)	0.25	0.67	0.59	0.4	0.02
ALE31 (Sorting/organizing)	-0.24	0.99	0.95	-0.06	-0.11
ALE32 (Providing Info)	-0.06	0.86	0.88	-0.13	0.12
ALE33 (Higher Order Functions)	0.21	0.75	0.73	0.14	0.2

Implications for ELP Assessment

Content Area Text Profiles:

- *Commonalities* → *general academic English*
- *Differences* → *subject-specific academic English*

Classroom Observations:

- *Relatively narrow repertoires of academic language use* → *Prof. Development*
- *Varied academic language exposures* → *equity issue for instruction and assessment*

Teacher-Reported Practices:

- *Preliminary empirical evidence of underlying dimensions of the academic language construct*
- *Relationship to academic content teaching: reform-orientation* → *all students*

Examination of Academic Language in Student Writing, Text Excerpts, and Oral Discourse

Handout of Samples & Resources

- **Sample A:** 2nd grade, ELL student, literacy instruction in primary language (Spanish)
- **Sample B:** 6th grade, Native-English speaker (low-performing)
- **Sample C:** 5th grade science text excerpt
- **Sample D:** 5th grade social studies text excerpt
- **Sample E:** 2nd grade classroom discourse (all ELL students)
- **Resources:** Tables of lexical and grammatical features, and academic language functions

Guiding Questions

All Samples:

- *What academic English features (word, sentence and discourse/ text levels) are present in the samples?*

Samples A, B & E:

- *If you were using these samples to assess formatively, what would you do next in instruction?*

Samples C & D:

- *What questions would you ask students to know if higher proficiency ELL students are comprehending these tests?*



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Thank You!

Reflection Questions

For those in the role of teacher or instructional leader:

- *Which features of academic English do you expect students in your classroom to know and how do you currently monitor development of these features?*

For those in the role of principal or school administrator:

- *How do you build in-house expertise so that teachers can become experts in academic language development and assessment?*

For those in the role of policy maker:

- *What additional skills should be added to the ELD standards of your state to capture academic language demands across the curriculum and grade levels?*