



NATIONAL ALTERNATE ASSESSMENT CENTER

What Do We REALLY Know About Students Taking Alternate Assessments Based on Alternate Achievement Standards (AA-AAS)?

**Presentation for the
Council for Chief State School Officers (CCSSO)
Annual Conference**

**June 18th, 2007
3:30 pm to 5:00 pm**

The National Alternate Assessment Center is supported through a cooperative agreement through the US Department of Education, Office of Special Education Programs (Grant Number H324U04001). However, the contents of this presentation do not necessarily represent the positions or policies of the Office of Special Education or the US Department of Education, and participants should not assume endorsement by the federal government.

Agenda

- Section I-3:30-4:00 pm:
 - Jacqui Kearns, NAAC will provide an overview of the research study and discuss implications for the field.
- Sections II and III-4:00-4:30 pm:
 - Pamela Rogers, Kentucky Department of Education and Susan Kennedy, Connecticut Department of Education will discuss the implications of the LCI data for their state and developing their technical validity argument for their AA-AAS.
- Section IV-4:30-4:50 pm:
 - Scott Trimble will present insightful thoughts on this research as our discussant.
- Section V-4:50-5:00 pm:
 - We will leave about 10 minutes for questions and open discussion for participants.

Section I

- Jacquie Kearns
 - National Alternate Assessment Center
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- This section will provide an overview of the research and implications for the field of education and assessment, in particular, alternate assessment.

What we do know...

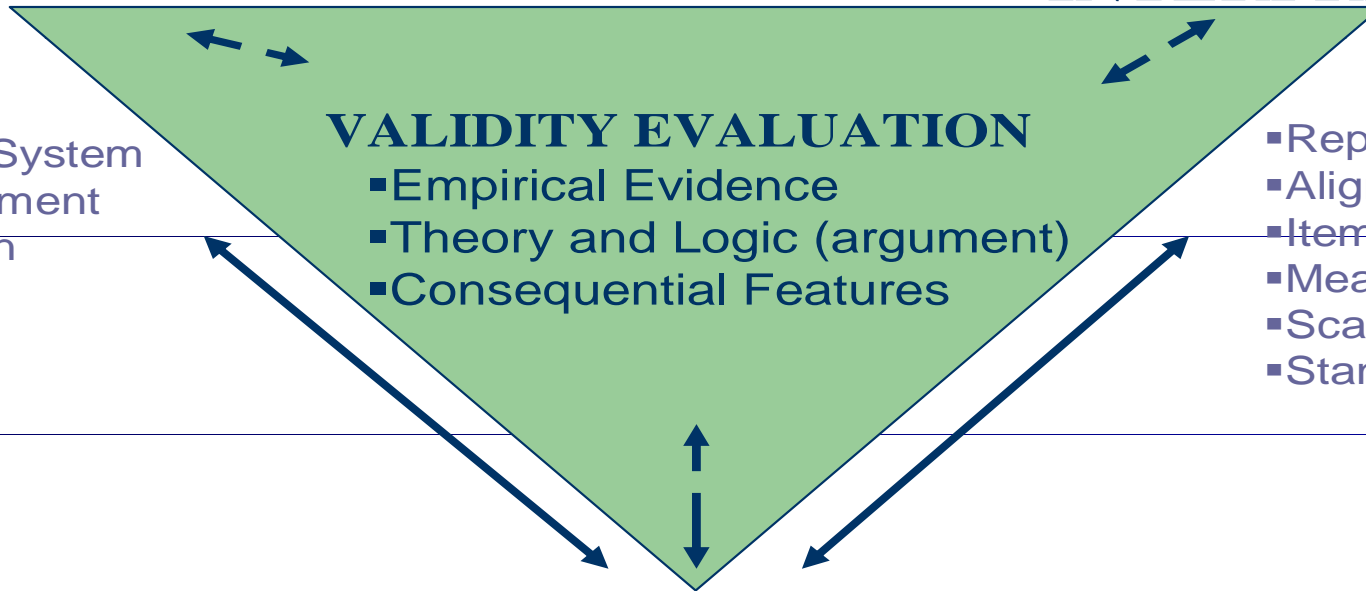
- Students completing an alternate assessment on alternate achievement standards (AA-AAS) represent less than 1% of the total student population and come from a variety of disability categories but represent students with the **most significant cognitive disabilities**.
- Researchers have found that the Individuals with Disabilities Education Act (IDEA) disability label allowing a student to receive special education services (i.e., autism, mental retardation, multiple disabilities) does not adequately describe the learning characteristics of this heterogeneous population (NAAC, 2005).
- To build a validity argument for the intended purposes and uses of an assessment, a state MUST know who the students are that take the assessment.

Theoretical Framework

- An underlying conceptual model for the work of this Center is the “assessment triangle”, based on the work of the National Research Council’s Committee on the Foundations of Assessment (Pellegrino, Chudowsky, & Glaser, 2001). This triangle explicates the key relationships between models of student cognition, observation of student work, and the inferences we can draw from these observations about what students know.
- For AA-AAS for students with the most significant cognitive disabilities, we suggest that a theory of learning (cognition) of academic content has not been well articulated for this population and therefore is incomplete in the assessment design process. Therefore, the first step in understanding the cognition vertex of this triangle is complete documentation of who the students are who take AA-AAS.

The Assessment Triangle and Validity Evaluation

OBSERVATION  **INTERPRETATION**



- Assessment System
- Test Development
- Administration
- Scoring

- Reporting
- Alignment
- Item Analysis/DIF/Bias
- Measurement Error
- Scaling and Equating
- Standard Setting

COGNITION

- Student Population
- Academic Content
- Theory of Learning

Marion, S., & Pellegrino, J. (2006). A validity framework for evaluating the technical quality of alternate assessments. *Educational Measurement: Issues and Practice*, 25(4), 47-57.

Purpose of the study

- The purpose of conducting the current research was to investigate the true learning characteristics of students participating in the AA-AAS in four demographically and geographically dissimilar states through the Learner Characteristics Inventory (LCI).
- The information is intended to help states make data-based decisions about their AA-AAS and to build the validity argument for their alternate assessment system.

Instrumentation

- The LCI was developed by researchers at NAAC in conjunction with experts in the fields of Occupational Therapy, Physical Therapy, Speech/Language Therapy, Deaf-blindness, Reading, Mathematics, and Special Education.
- The survey was then piloted with a small sample of teachers. Teachers were asked to choose a partner respondent and both were to provide an LCI for a single student so interrater agreement could be calculated. Interrater agreement was 84%.
- Changes were made to refine the tool.
- A final version of the LCI was once more piloted with a small sample of teachers (and partner respondents). The interrater agreement was 95%.

Instrumentation

- Learner Characteristics (all on a continuum of skills):
 - Expressive Language
 - Receptive Language
 - Vision
 - Hearing
 - Motor
 - Engagement
 - Health Issues/Attendance
 - Reading
 - Mathematics
 - Use of an Augmentative Communication System (dichotomous variable)

Preliminary Research

- During the 2005-2006 school year, two partner states with NAAC utilized the LCI to gather baseline data on the students participating in the AA-AAS in their states.
- You can go to www.naacpartners.org to read a report of the results of the 2005-2006 school year study.
- For the purpose of this presentation, we will focus on results from the 2006-2007 school year.

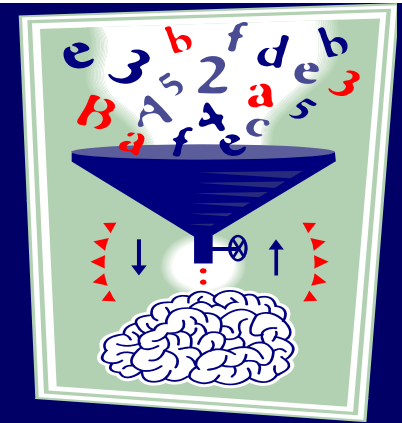
Methodology

- Four partner states chose to participate and provide AA-AAS scores for each student participating in the AA-AAS during the 2006-2007 school year.
 - States 1, 2, and 3: gathered data in the registration process for their AA-AAS.
 - State 4: gathered data using Zoomerang, an online survey package.
- Teachers in States 1, 2, and 3 completed the LCI during the registration process for students taking the AA-AAS. Teachers in State 4 were invited to complete the inventory for each student completing an AA-AAS through emails from the Director of the Assessment and Accountability Office in that state.

Response Rates

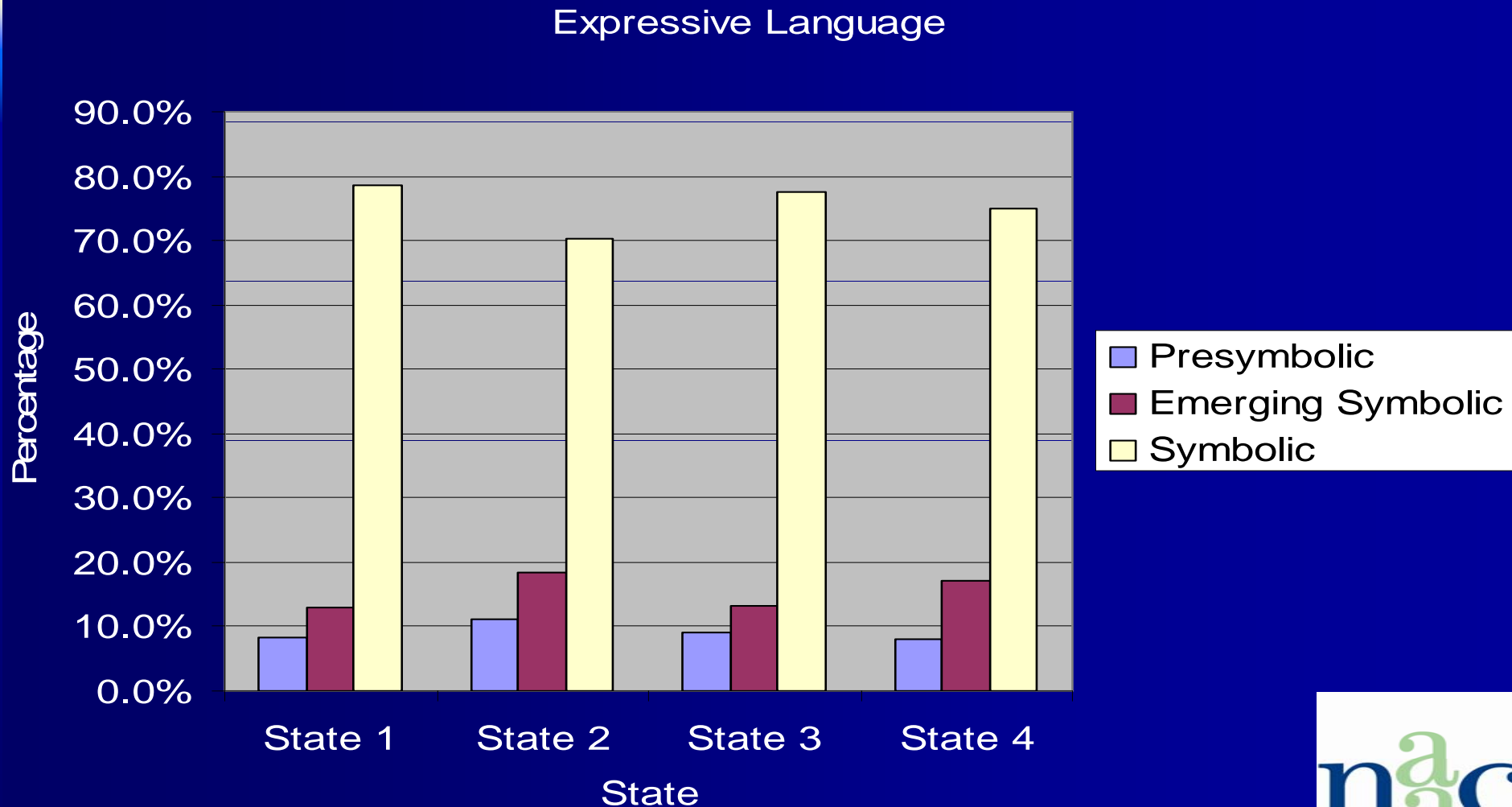
- State 1 was a southern, rural state: =100% (from grades 3-8 and 10-12)
- State 2 was a northeastern, urban/suburban state: $2793/2793=100\%$ (from grades 3-8 and 10)
- State 3 was an eastern, urban state: $468/513=91\%$ (from grades 3-8 and 10)
- State 4 was a western, rural state: $219/467=47\%$ (from grades 3-8 and 11)

Results



- Across the four states, findings were very similar even with the varied response rates.
- We will focus on the categories of expressive language, receptive communication, use of a communication system, reading, and mathematics.

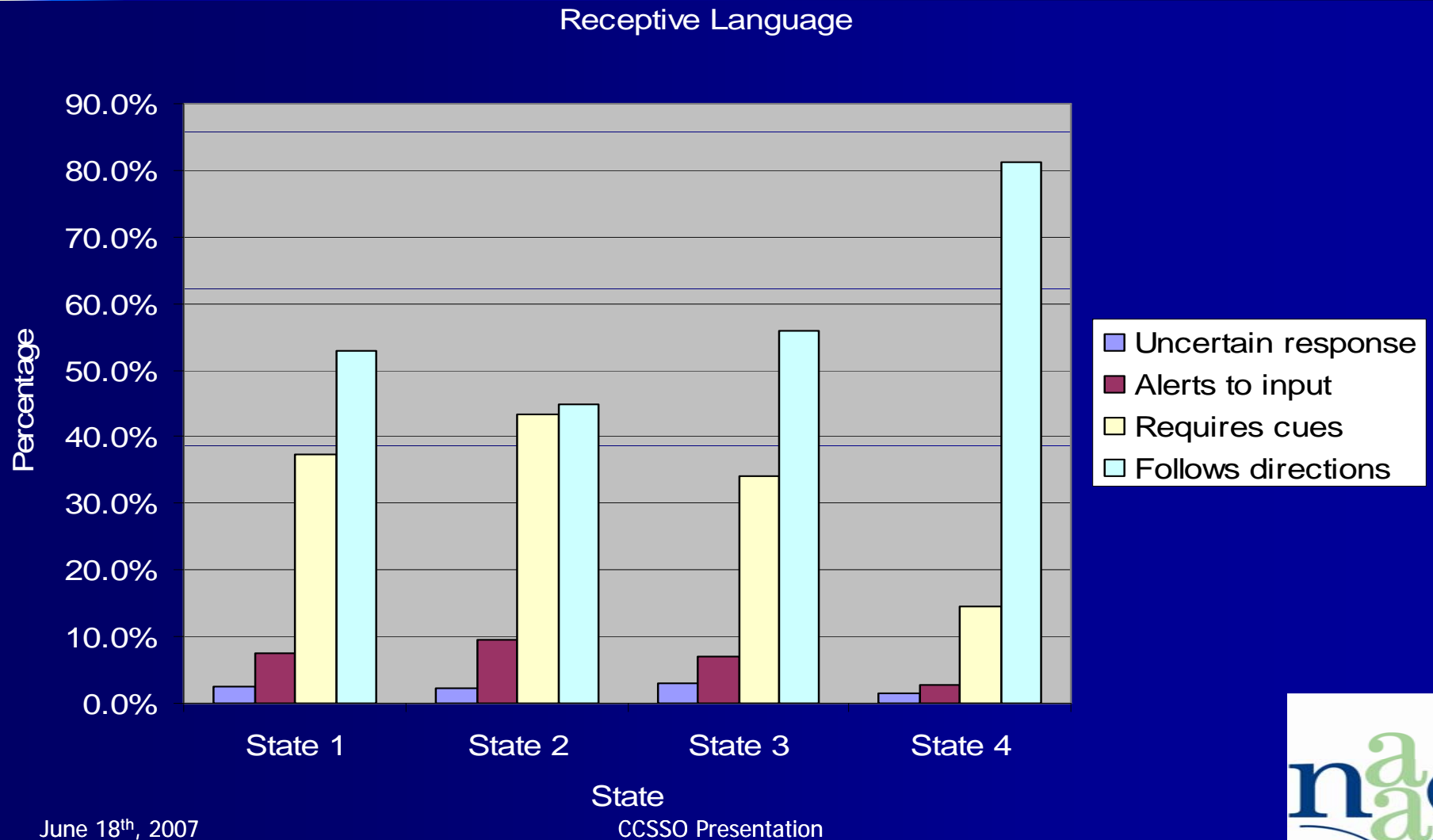
Expressive Language



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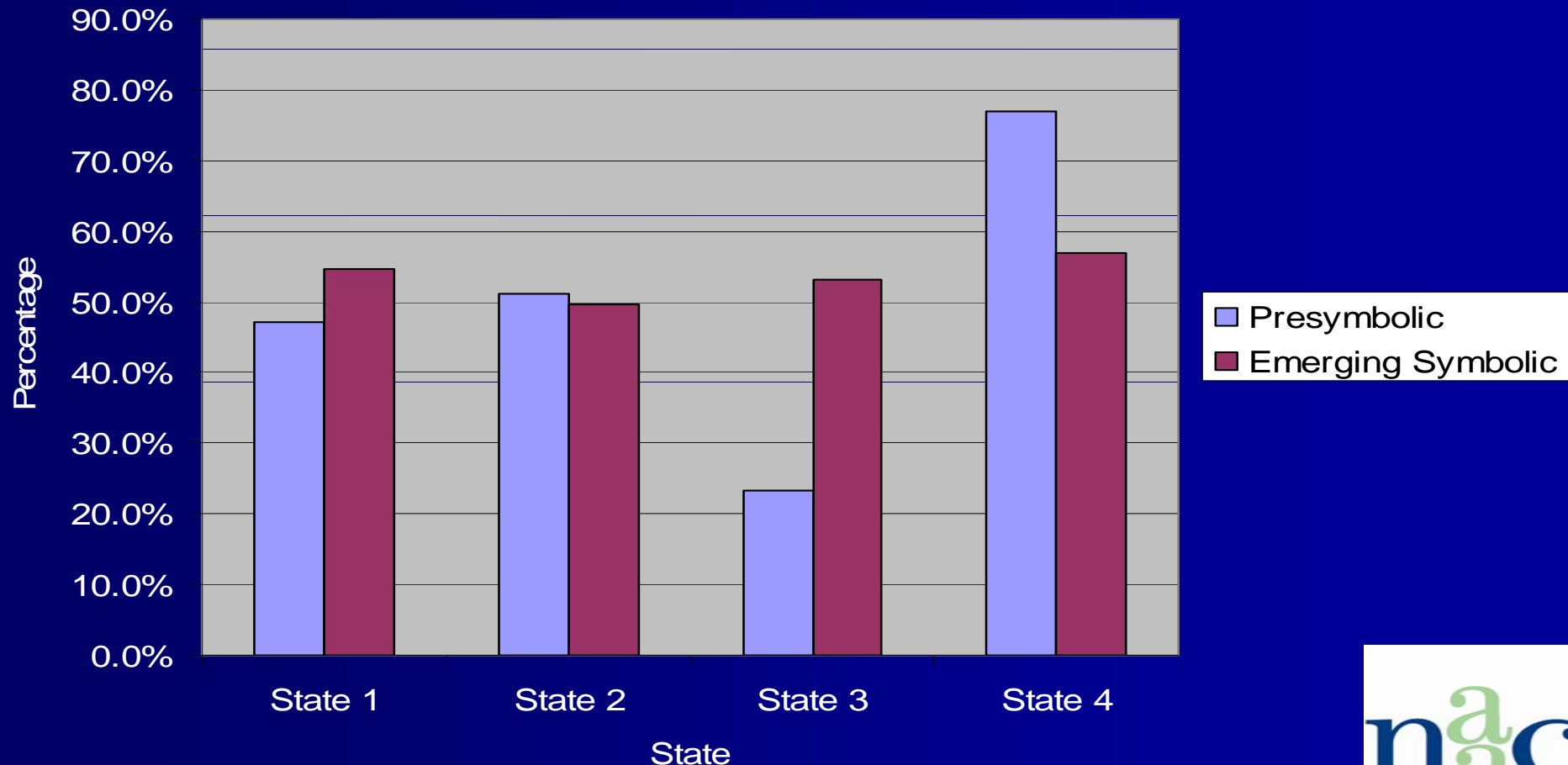
Receptive Language



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Use of an ACS

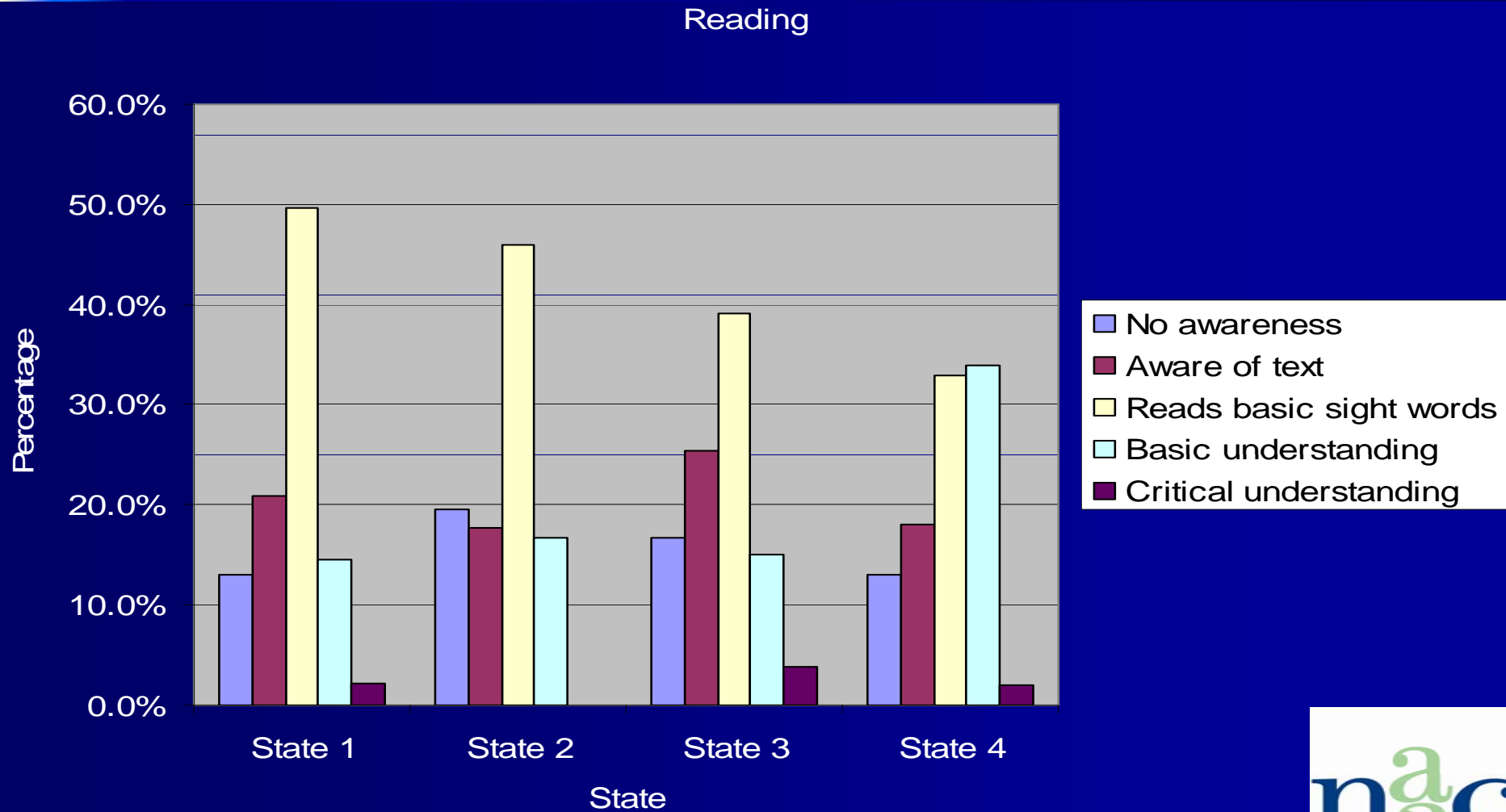
Number of Students not using ACS



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State
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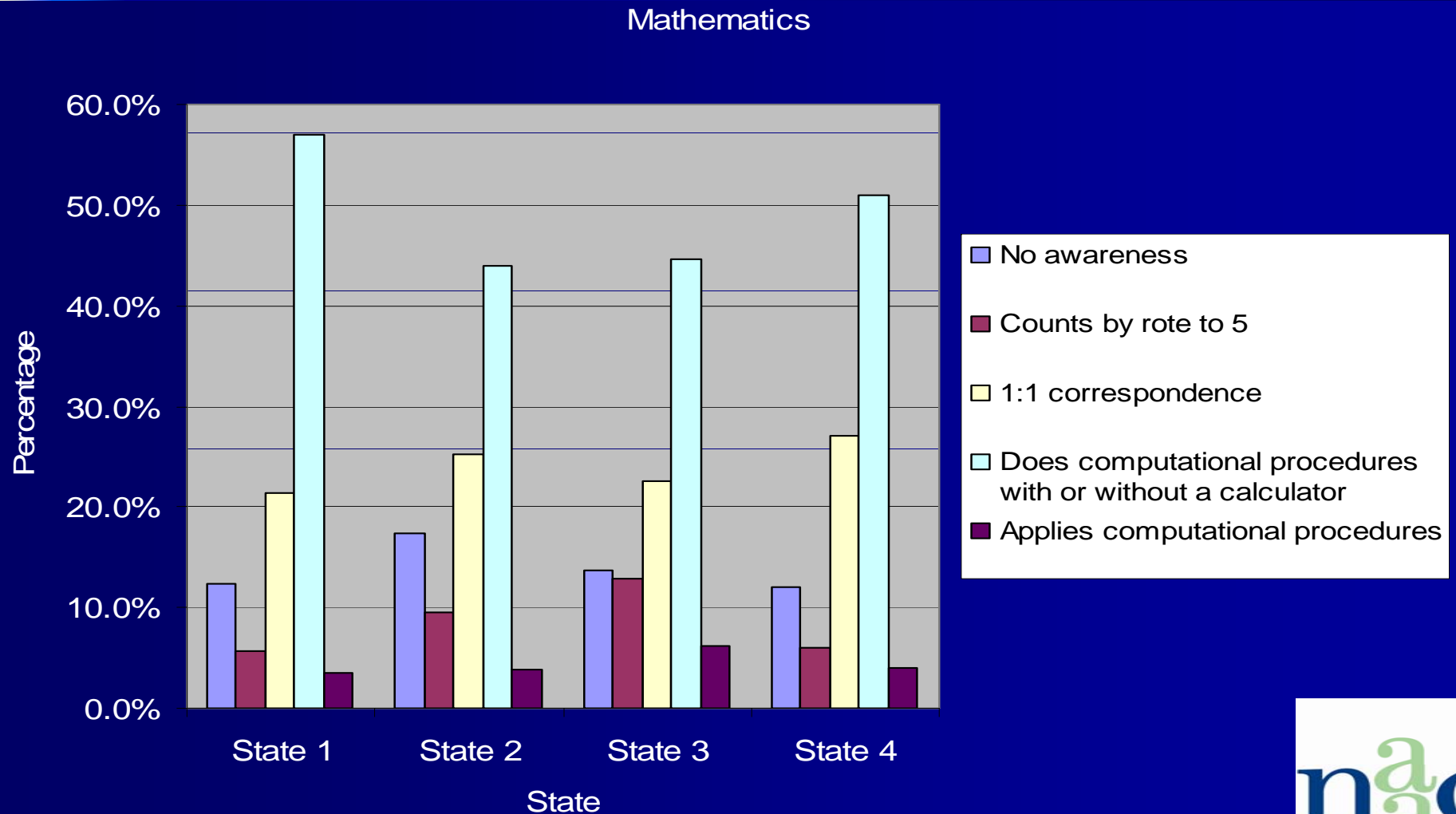
Reading



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Mathematics



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Results

- Large percentages of students in each of these states have no observable awareness of print or Braille (13%, 20%, 17%, and 13% for the four states respectively) and no observable awareness or use of numbers (12%, 18%, 14%, and 12% respectively).

Implications

- Findings highlight the extreme heterogeneity of this population of students.
- This “1%” is more heterogeneous than the rest of the “99%”!

Implications

- While the majority of students did have functional math and reading skills, there is a smaller percentage of students whose lack of a formalized, symbolic communication system, or whose lack of awareness of the basic building blocks of reading and math (i.e., print and numbers) may create tremendous challenges in building alternate assessments.

Implications

- It is a challenge to capture meaningful skills that these students have achieved while also maintaining the link to grade-level content standards.
- For students at a pre-symbolic level, teachers must teach the development of symbolic communication *through* the grade-level content.

Implications

- States may consider developing multiple alternate achievement standards for their AA-AAS.

Section II

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LCI in Kentucky

History of evaluating this population

--Portfolio since 1992

- Holistic measure of reading, math, science, social studies, writing, arts/humanities, voc./practical living
- Emphasis on opportunity to learn
- Weak link to content

LCI in Kentucky

- Change of assessment received with skepticism
- Arguments against driven by
 1. Images/examples of pre-symbolic
 2. Lack of teacher expertise in content
 3. Shopping-list approach to instruction

LCI in Kentucky

LCI data drove design of assessment

- Dimension A—Symbolic
- Dimension B—Pre-symbolic

- Depth adjusted throughout both
- Breadth reduced in B

Section III

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Connecticut

- Connecticut Mastery Test
- Connecticut Academic Performance Test
- CMT/CAPT Skills Checklist
 - Mathematics
 - Reading
 - Communication
 - Access Skills

Reading in CT

- **63.7%** of the sample read basic sight words or demonstrate basic literacy skills (i.e., awareness of print or Braille)
- An additional **16.7%** of the sample reads fluently with basic literal understanding

Reading, con't

- The original LCI had an additional optional reading standard that CT removed:

Reads fluently with critical understanding in print or Braille (e.g., to differentiate fact/opinion, point of view, emotional response, etc).
OPTIONAL FOR STATES

Math in CT

- **25.3%** of the sample can count with 1:1 correspondence to at least 10, with an additional **9.6%** who can rote count to at least 5
- **3.9%** apply computational procedures to solve real life word problems in a variety of contexts, and an additional **43.9%** can do computational problems with or without a calculator

Reading and Math, con't

- Finally, **19.6%** have no awareness of print or Braille and **17.3%** have no observable awareness of use of numbers
- ACCESS Skills component of the CMT/CAPT Skills Checklist attempts to capture what these students may be able to do

Communication Skills

- 70.4% of the students taking this alternate assessment use symbolic language to communicate expressively
- 18.4% of the students taking the alternate assessment use intentional communication with pictures, objects and/or gestures but not at the symbolic language level.

Communication Skills

- **Of the 11.2%** of the students identified as communicating primarily through cries, facial expressions, change in muscle tone, but with no clear use objects/textures, regularized gestures, picture, signs, etc., **51.2% do not use a communication system**

Communication, con't

- Additionally, of the **18.4%** of students identified as using intentional communication but not at the symbolic level, **49.7%** do not use a communication system.

Clearly, CT needs to increase the assistive technology and resources for teachers to learn how to develop and utilize effective communication systems for these students.

Implications

- We plan to collect LCI data annually.
- We will carefully examine the relationship between our LCI results and performance on the CMT/CAPT Skills Checklist-Possible halo effect
- Examine if there is a relationship between LCI and
“time with non-disabled peers” or
disability category

Statewide Results for Grades 3-8 and 10

Statewide Results for Grades 3-8 and 10

Access		Count	Percent
	Awareness	362	13.13
	Practice	569	20.65
	Application	1825	66.22
Communication			
	Basic	2048	74.31
	Proficient	554	20.10
	Independent	154	5.59
Mathematics			
	Basic	2163	78.48
	Proficient	439	15.93
	Independent	154	5.59
Reading			
	Basic	2315	84.00
	Proficient	320	11.61
	Independent	121	4.39

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Implications, con't

- CSDE just completed focus groups and a survey of teachers who completed the Skills Checklist for their students that provided some interesting information regarding assistive technology that may or may not be true:

Some districts are reluctant to invest in costly AT devices for younger students.

Implications, con't

- Others have AT devices in the special education classrooms but the students are unable to take them with them when they go to general education classes.
- One urban district is reported to not have any assistive technology available for their students who are included in general education settings.

Implications, con't

- The good news: two new consultants who have great technology skills and who are on top of this assistive technology situation already.

Section IV

- Scott Trimble
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- Insightful thoughts about LCI research and implications for the field

Section V

Questions from the audience!



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References

- Individuals with Disabilities Education Act (IDEA) Amendments of 1997, PL 105-17, 20 U.S.C. § 1400 *et seq.*
- Marion, S., & Pellegrino, J. (2006). A validity framework for evaluating the technical quality of alternate assessments. *Educational Measurement: Issues and Practice*, 25(4), 47-57.
- National Alternate Assessment Center (NAAC) (2005). *Access and alignment to grade level content for students with significant cognitive disabilities*. Pre-session conducted at the meeting of the Chief Council for State School Officers, San Antonio, Texas.
- Pellegrino, J, Chudowsky, N., & Glaser, R. (Eds.) (2001). *Knowing what students know: The science and design of educational assessment*. Washington, DC: Committee on the Foundations of Assessment, National Academy Press.