Overview of DAS-II Early Years Spanish Supplement
Gloria Maccow, Ph.D., Assessment Training Consultant

Agenda
- describe the purpose of the DAS-II;
- describe the structure of the DAS-II Early Years Battery;
- describe the DAS-II Early Years Spanish Supplement.

Description of DAS-II
- Individually administered clinical instrument consisting of 20 subtests.
- Designed to assess cognitive abilities of children and adolescents from 2 years 6 months through 17 years 11 months.
- Consists of two batteries: Early Years Battery (ages 2:6-6:11) and School-Age Battery (ages 7:0-17:11).
Description of DAS-II

- Individually administered clinical instrument consisting of 20 subtests.
- Designed to assess cognitive abilities of children and adolescents from 2 years 6 months through 17 years 11 months.
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Purposes and Uses

Classification
The composite score can be used in making classification and placement decisions.

Diagnostic
A reliable profile of intra-individual cognitive strengths and weaknesses is needed to determine, for example, why a child is struggling to learn to read and what methods we can use to improve learning.

Applications of DAS-II Spanish

- Suitability, Fairness, and Interpretive Considerations.
- Testing Children from Culturally and Linguistically Diverse Backgrounds.
- Testing Monolingual Spanish and Bilingual Spanish-English Speakers.
Applications of DAS-II Spanish

- Out-of-Level Testing for ages 7:0-8:11.
- Testing Children With an Interpreter.
- Testing Young Children.
- Testing Children With Special Needs.

CHC Structure

Historical Perspective


2006 Publication of Differential Ability Scales-II.

2012 Publication of DAS-II Early Years Spanish Supplement.

Author
Dr. Colin Elliott
Overview of DAS-II Early Years Spanish Supplement
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Early Years Battery
Ages 2:6–6:11
Lower Level 2:6–3:5
Upper Level 3:6–6:11
Core Subtests
Diagnostic Subtests

DAS-II Early Years Spanish Supplement
- Cognitive assessment battery that is especially appropriate for children from monolingual Spanish-speaking homes.
- Consists of 17 subtests: 6 core subtests and 11 diagnostic subtests.
- The subtests are translations and/or adaptations of the subtests in the Early Years Battery of the DAS-II.

DAS-II Early Years Spanish Supplement
- Enables clinicians to obtain a more accurate picture of the cognitive strengths and needs of Spanish-speaking children by assessing them in their primary language.
- Is child-friendly and supplements the DAS-II Complete Kit to provide an in-depth analysis of learning abilities across a wide range of domains.
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Early Years Battery
Ages 2:6 – 3:5 (Lower Level)

Core Subtests
- Verbal Comprehension
- Naming Vocabulary
- Picture Similarities
- Pattern Construction

Diagnostic Subtests
- Recall of Digits Forward
- Recognition of Pictures
- Early Number Concepts

- GCA
- Verbal Ability
- Nonverbal Ability

Early Years Battery
Ages 3:6 – 6:11 (Upper Level)

Core Subtests
- Verbal Comprehension
- Naming Vocabulary
- Picture Similarities
- Matrices
- Pattern Construction
- Copying

Supplemental Score
- Special Nonverbal Composite
  PSim + PCon + Mat + Copy

- GCA
- Verbal Ability
- Nonverbal Reasoning Ability
- Spatial Ability

Diagnostic Subtests
- Early Number Concepts
- Matching Letter-Like Forms
- Phonological Processing
- Recall of Sequential Order
- Recall of Digits Backward
- Speed of Information Processing
- Rapid Naming
- Recall of Objects—Immediate
- Recall of Objects—Delayed
- Recall of Digits Forward
- Recognition of Pictures

- School Readiness
- Working Memory
- Processing Speed
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Test Materials

DAS-II Kit

DAS-II Early Years Spanish Supplement Kit
- Administration and Technical Manual.
- DAS-II Early Years Spanish Supplement Stimulus Book.
- DAS-II Early Years Spanish Supplement Record Forms (25).
- DAS-II Early Years Spanish Supplement Interpreter’s Handbook.
- DAS-II Early Years Spanish Supplement Recall of Objects Card.
- Phonological Processing and Training CD. (AM Kimbell)
Organization of Interpreter's Handbook

The Interpreter's Handbook provides guidance for clinicians working with an interpreter prior to, during, and after administering the DAS-II Spanish.
- Testing children from diverse cultural and linguistic backgrounds and using an interpreter.
- Selecting, training, and working with a variety of interpreters.
- Working with an English-speaking clinician to administer DAS-II Spanish.
- Subtest administration procedures for the interpreter.

Organization of Interpreter's Handbook

Appendices provide additional resources for use with interpreters collaborating on DAS-II Spanish administration.
- Interpreter's Information Sheet.
- Interpreter's Quick Reference to the DAS-II Spanish.
- Interpreter's Response Form.
- List of terms.

Development

All Subtests Were Translated
Four Subtests Were Changed
## Subtests Changed

- **Phonological Processing** - complete adaptation.
- **Rapid Naming** - sample item administration modified.
- **Recall of Objects** - developed new stimulus card to accommodate language variation.
- **Recall of Sequential order** - replaced some words and items.

## Procesamiento Fonológico (Phonological Processing)

The Phonological Processing subtest consists of four tasks:

**Task 1:** Rhyming (Rimar)

**Task 2:** Blending (Mezclar)

**Task 3:** Deletion (Suprimir)

**Task 4:** Phoneme Identification and Segmentation (Identificación y Segmentación de Fonemas)

## Rapidez para Nombrar (Rapid Naming)

Child may respond in Spanish or English.

On the Sample Items,

- Supply English names if child responds in English.
- Supply Spanish names if child responds in Spanish.
- Correct with Spanish words if the child is responding in Spanish and English.
As you point to the corresponding pictures, name the objects at about one word per second. Starting with the top row, work from the child’s left to right across each row of objects.

Mira estas figuras (dibujos) mientras digo su nombre. Mira con atención porque quiero que recuerdes todas las que puedas.

Memoria de Objetos (Recall of Objects)

Memoria de Objetos–Card

Early Years Spanish Supplement

Memoria de Secuencias (Recall of Sequential Order)

- Several non-body part words in the original version have multiple translations or meanings, so replacement words were used.
- The replacement words used are simple vocabulary words that have only one meaning. Each replacement word is similar in length and structure to the original English word.
## Modifications: Core Subtests

<table>
<thead>
<tr>
<th>Modified from DAS-II</th>
<th>VCom</th>
<th>NVic</th>
<th>PSim</th>
<th>Mat</th>
<th>PCon</th>
<th>Copy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructions and items translated to allow stimulus book and manipulatives to be used across English and Spanish editions.</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Scoring adapted to allow multiple Spanish responses due to regional variations.</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English prompts allowed to accommodate varying degrees of 2nd language acquisition.</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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</table>

## Modifications: Diagnostic Subtests

<table>
<thead>
<tr>
<th>Modified from DAS-II</th>
<th>DigF</th>
<th>DigB</th>
<th>RObl</th>
<th>RObD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recall items modified to reduce items with multiple Spanish names.</td>
<td></td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>English responses scored as correct if they meet criteria.</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Instructions and items translated.</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

## Modifications: Diagnostic Subtests

<table>
<thead>
<tr>
<th>Modified from DAS-II</th>
<th>ENC</th>
<th>MLLF</th>
<th>PhP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructions and items translated to allow stimulus book to be used across English and Spanish editions.</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>English responses scored as correct if they meet criteria.</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completely adapted to accommodate Spanish language.</td>
<td></td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>Format of the test kept to allow for similar interpretation across English and Spanish versions.</td>
<td></td>
<td></td>
<td>✔</td>
</tr>
</tbody>
</table>
Modifications: Diagnostic Subtests

<table>
<thead>
<tr>
<th>Modified from DAS-II</th>
<th>RNam</th>
<th>SIP</th>
<th>RPic</th>
<th>SeqO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructions and items translated.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Instructions and items translated to allow response/stimulus booklet to be used across English and Spanish versions.</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English responses scored as correct if they meet criteria.</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Some non-body recall items modified due to multiple translations for the original English word.

Process of Development and Equating

- Translating and Adapting DAS–II to DAS–II Spanish.
- Collecting the Equating Sample.
- Developing Final Scoring Rules.
- Establishing Equivalency Between DAS–II Spanish and DAS–II.
Translating and Adapting

- The DAS-II was translated and adapted for use with preschool and early school age Spanish-speaking children.
- The Spanish language edition was required to be equivalent to the DAS-II in terms of constructs assessed, response processes required, and normative scores produced.

Process of Translating and Adapting

- The translation and adaptation of the DAS-II into Spanish was completed by
  - Malu Antunez-Bellatin,
  - Dr. Jonathan Sandoval, and
  - Dr. Alejandro Dioses.
- A team of professionals comprising linguists, interpreters, speech-language specialists, psychologists, educators, and a designer also contributed to the translation and adaptation process.

Collecting Equating Sample

Phase 1
- DAS-II Spanish was administered to a sample of 90 children, ages 2:6 to 6:11.
- Data were analyzed to provide additional evidence of equivalency and clarity of instructions.
Collecting Equating Sample

Phase 2
- The same version was used in the second phase to collect the equating sample.
- A total of 395 cases, ages 2:6 to 6:11, were collected across both phases and used to equate and validate the scale.

Developing Scoring Rules

- The DAS-II Spanish raw scores are converted to ability scores equivalent to the English version for use in norms development.
- The two tests were equated to link the Spanish scores to the same scale as the DAS-II English sample. This allows the use of the DAS-II English norms for the Spanish sample.

Equated Ability Scores

- Equated scores enable a Spanish-speaking child’s performance to be compared to the national norms for all children in the United States.
- Most of the equated tests used a Rasch common-items approach for equating; however, propensity score matching method (Wilkins, Rolphus, Weiss, & Zhu, 2005) was used for equating Recall of Sequential Order and Rapid Naming.
### Subtests Requiring Equated Ability Scores

Eight subtests produced different raw scores across the English and Spanish versions in the initial subtest-level comparisons:

<table>
<thead>
<tr>
<th>Verbal Comprehension</th>
<th>Naming Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recall of Digits Forward</td>
<td>Recall of Digits Backward</td>
</tr>
<tr>
<td>Recall of Sequential Order</td>
<td>Early Number Concepts</td>
</tr>
<tr>
<td>Phonological Processing</td>
<td>Rapid Naming</td>
</tr>
</tbody>
</table>

### Establishing Equivalency

- The start point, decision point, and alternative start point rules were derived for the DAS-II and applied to the DAS-II Spanish equating sample.
- No modifications were made to these rules across the two versions to allow sharing of materials, and reduce potential confusion for users of both editions.
- The process by which these rules were derived is described in the DAS-II Introductory and Technical Manual.

### Establishing Equivalency

- Time bonuses were derived in the DAS-II and applied to the DAS-II Spanish.
- Data from the equating sample indicated that the Spanish sample responded slower than the English sample, so completion times on tasks tended to be higher for the DAS-II Spanish groups.
- However, comparisons of the subtest raw scores indicated no differences between the English and Spanish samples, except for Rapid Naming, a verbal subtest.
Establishing Equivalency

- The amount of modification varied across subtests.
- For the nonverbal subtests, which require no verbal responses by the child, and Recall of Objects, only translation of instructions to the child was required to modify the subtest across languages.
- For these subtests, performance across the English- and Spanish-speaking groups was directly comparable.

Establishing Equivalency

- On the verbal and working memory subtests, changes to item difficulties across languages required equating ability scores in order for DAS–II Spanish scores to be placed on the same measurement scale as the DAS-II scores.

Administration

General Information

English and Spanish Directions
English and Spanish Prompts
Directions

- Directions for the examiner are presented in English—manual and record form.
- Items are presented in English and Spanish in the manual and in Spanish on the Record Form.
- Specific instructions read to the child are provided in Spanish.
- Examiners will read only the Spanish instructions to the child.

Prompts

- Bilingual children may acquire vocabulary at different rates across languages due to varying exposure to concepts in different settings.
- For bilingual Spanish-speaking children who are in school, academic language is frequently learned in English before being learned in Spanish.

- The DAS-II Spanish is an assessment of cognitive ability, not of language fluency.
- Therefore, to capture the child’s best performance, each subtest was reviewed to determine the appropriateness of prompting the child in English and accepting English responses.
- When the child does not demonstrate understanding of the task in Spanish and/or if the child does not respond relatively soon after presentation of an item, it may be necessary to prompt.
- See rules for prompting for each subtest.
### Use of English Prompts

- **Verbal Comprehension** - only subtest that allows English prompts.
- *From Manual*: “The one-time repetition of instructions for an item may be given in English, if you feel the child would perform better with an English prompt.”

### Subtest Administration

**Order of Administration**
- Item Sets
- Basal and Ceiling
- Fixed Start Point and Discontinue Rule

### Calculate Chronological Age

```
<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td>Date of Study</td>
<td>15/8/2012</td>
<td></td>
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</table>
| Age of Child | 26
| Age of Testing | 6.5
(Charged In Test) |
```
### Subtest Administration Order

<table>
<thead>
<tr>
<th>Administration Order</th>
<th>Subtest Name</th>
<th>Ages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Verbal Comprehension (Comprensión Verbal)</td>
<td>2:6–6:11</td>
</tr>
<tr>
<td>2</td>
<td>Picture Similarities (Semejanza De Figuras)</td>
<td>2:6–6:11</td>
</tr>
<tr>
<td>3</td>
<td>Naming Vocabulary (Vocabulario de Nombres)</td>
<td>2:6–6:11</td>
</tr>
<tr>
<td>4</td>
<td>Recall of Objects–Immediate (Memoria de Objetos–Inmediata)</td>
<td>4:0–6:11</td>
</tr>
<tr>
<td>5</td>
<td>Pattern Construction (Construcción de Patrones)</td>
<td>2:6–6:11</td>
</tr>
<tr>
<td>6</td>
<td>Matrices (Matrices)</td>
<td>3:6–6:11</td>
</tr>
<tr>
<td>7</td>
<td>Recall of Objects–Delayed (Memoria de Objetos–Remota)</td>
<td>4:0–6:11</td>
</tr>
<tr>
<td>8</td>
<td>Copying (Copiar)</td>
<td>3:6–6:11</td>
</tr>
<tr>
<td>9</td>
<td>Recall of Digits–Forward (Memoria de Dígitos Hacia Adelante)</td>
<td>2:6–6:11</td>
</tr>
<tr>
<td>10</td>
<td>Recognition of Pictures (Reconocimiento de Figuras)</td>
<td>2:6–6:11</td>
</tr>
<tr>
<td>11</td>
<td>Early Number Concepts (Primeros Conceptos Numéricos)</td>
<td>2:6–6:11</td>
</tr>
<tr>
<td>12</td>
<td>Matching Letter-Like Forms (Emparejar Formas)</td>
<td>4:0–6:11</td>
</tr>
<tr>
<td>13</td>
<td>Recall of Sequential Order (Memoria de Secuencias)</td>
<td>5:0–6:11</td>
</tr>
<tr>
<td>14</td>
<td>Speed of Information Processing (Rapidez de Procesamiento)</td>
<td>5:0–6:11</td>
</tr>
<tr>
<td>15</td>
<td>Recall of Digits–Backward (Memoria de Dígitos Hacia Atrás)</td>
<td>5:0–6:11</td>
</tr>
<tr>
<td>16</td>
<td>Phonological Processing (Procesamiento Fonológico)</td>
<td>5:0–6:11</td>
</tr>
<tr>
<td>17</td>
<td>Rapid Naming (Rapidez Para Nombrar)</td>
<td>5:0–6:11</td>
</tr>
</tbody>
</table>
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Scoring

Scoring of English Responses

<table>
<thead>
<tr>
<th>Subtest</th>
<th>Accept English Responses</th>
<th>Subtest</th>
<th>Accept English Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal Comprehension*</td>
<td>YES</td>
<td>Recognition of Pictures</td>
<td>N/A</td>
</tr>
<tr>
<td>Picture Similarities *</td>
<td>N/A</td>
<td>Early Number Concepts</td>
<td>YES</td>
</tr>
<tr>
<td>Naming Vocabulary*</td>
<td>YES</td>
<td>Matching Letter-Like</td>
<td>Forms</td>
</tr>
<tr>
<td>Pattern Construction*</td>
<td>N/A</td>
<td>Recall of Sequential</td>
<td>Order</td>
</tr>
<tr>
<td>Matrices*</td>
<td>N/A</td>
<td>Speed of Information</td>
<td>Processing</td>
</tr>
<tr>
<td>Copying*</td>
<td>N/A</td>
<td>Rapid Naming</td>
<td>YES</td>
</tr>
<tr>
<td>Recall of Digits Forward</td>
<td>YES</td>
<td>Recall of Digits</td>
<td>Backward</td>
</tr>
<tr>
<td>Recall of Objects-Immediate</td>
<td>YES</td>
<td>Recall of Objects-Delayed</td>
<td>YES</td>
</tr>
</tbody>
</table>

*Core Subtest

Phonological Processing N/A

Raw Score and Item Set = Ability Score
**Summary**

- The DAS-II Early Years Spanish Supplement can be used by bilingual psychologists and by English-speaking psychologists along with an interpreter.
- The subtests are administered in the child’s primary language and enable clinicians to identify the cognitive strengths and challenges of Spanish-speaking children.
- The DAS-II Early Years Spanish Supplement supplements the DAS-II Complete Kit to provide an in-depth analysis of learning abilities across a wide range of domains.

**Additional Information**


**Technical Information**
### Reliabilities for Equating Sample

<table>
<thead>
<tr>
<th>Cluster/Composite</th>
<th>Average Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal Ability</td>
<td>.91</td>
</tr>
<tr>
<td>Nonverbal Reasoning Ability</td>
<td>.90</td>
</tr>
<tr>
<td>Spatial Ability</td>
<td>.94</td>
</tr>
<tr>
<td>School Readiness</td>
<td>.95</td>
</tr>
<tr>
<td>Working Memory</td>
<td>.95</td>
</tr>
<tr>
<td>Processing Speed</td>
<td>.89</td>
</tr>
<tr>
<td>General Conceptual Ability</td>
<td>.95</td>
</tr>
<tr>
<td>Special Nonverbal Composite</td>
<td>.94</td>
</tr>
</tbody>
</table>

### Validity

- Comparisons with the DAS-II Early Years Battery.
- Correlations with the Wechsler Nonverbal Scale of Ability.

### DAS-II Spanish and DAS-II

<table>
<thead>
<tr>
<th>Composite</th>
<th>DAS-II Spanish</th>
<th>Matched DAS-II English</th>
<th>Mean Diff.</th>
<th>p value</th>
<th>Std. Diff.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal Ability</td>
<td>98.1</td>
<td>99.2</td>
<td>1.07</td>
<td>0.35</td>
<td>0.07</td>
</tr>
<tr>
<td>Nonverbal Reasoning Ability</td>
<td>97.6</td>
<td>99.4</td>
<td>1.80</td>
<td>0.11</td>
<td>0.12</td>
</tr>
<tr>
<td>Spatial Ability</td>
<td>100.7</td>
<td>100.5</td>
<td>-0.25</td>
<td>0.82</td>
<td>-0.02</td>
</tr>
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<td>School Readiness</td>
<td>101.0</td>
<td>101.0</td>
<td>0.37</td>
<td>0.84</td>
<td>0.02</td>
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<tr>
<td>Working Memory</td>
<td>97.0</td>
<td>101.2</td>
<td>4.20</td>
<td>0.06</td>
<td>0.22</td>
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<tr>
<td>Processing Speed</td>
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<td>102.2</td>
<td>2.05</td>
<td>0.17</td>
<td>0.15</td>
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<tr>
<td>General Conceptual Ability</td>
<td>98.2</td>
<td>99.4</td>
<td>1.24</td>
<td>0.24</td>
<td>0.09</td>
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<tr>
<td>Special Nonverbal Composite</td>
<td>99.6</td>
<td>100.4</td>
<td>0.76</td>
<td>0.50</td>
<td>0.06</td>
</tr>
</tbody>
</table>

n = 320; ages 2:6-6:11
Special Group Studies

- High Cognitive Ability/Intellectually Gifted.
- Low Cognitive Ability.
- Developmental Delays.

Low Cognitive Ability

<table>
<thead>
<tr>
<th>Composite</th>
<th>Clinical Mean</th>
<th>Control Mean</th>
<th>Mean Diff.</th>
<th>p value</th>
<th>Std. Diff.</th>
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</thead>
<tbody>
<tr>
<td>Verbal Ability</td>
<td>78.7</td>
<td>96.7</td>
<td>17.95</td>
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<td>94.1</td>
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<td>97.2</td>
<td>25.27</td>
<td>&lt; .01</td>
<td>1.99</td>
</tr>
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</table>

n = 22; ages 5:0-6:11

Customer Service

1-800-627-7271 (USA)
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