The Abecedarian Project: Implications for Programs in the First 3 Years of Life

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Abecedarian Investigators

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Research evidence comes from 3 longitudinal research projects:

- Abecedarian Project, 1972 -
- Project CARE, 1978 -
- Infant Health and Development Program, 1985 –

All are “Gold Standard” research.
What does it mean?

a·be·ce·dar·i·an  (a´bē·cē·dâr´ē·ən)
noun, adjective

one learning the rudiments of something (as the alphabet)  *Etymology: Middle English abecedary, from Medieval Latin abecedarium alphabet, from Late Latin, neuter of abecedarius of the alphabet, from the letters a + b + c + d*
What does it mean?

a·be·ce·dar·i·an  (a´bē·cē·dâr´ē·ən)
noun, adjective

s.
1. (learner) persona que aprende el abecedario
2. (novice) novicio, novato

adj.
1. (of the alphabet) alfabético
2. (elementary) rudimentario, elemental
Key Findings from the Abecedarian Project

18 Months to 21 Years of Age

- Intelligence (IQ, including language)
- Reading and math skills
- Academic locus-of-control
- Social Competence
- Years in school, including college
- Full-time employment

- Grade Repetition
- Special Education placement
- Teen Pregnancies
- Smoking and drug use

Plus benefits to mothers of these children (education, employment)

Ramey et al., 2000
Why aren’t results like these commonplace?
Cómo pasan su tiempo la mayoría de niños de pre-kindergarten
How most pre-k children spend their time

Free Choice/Center: 32%
Whole Group: 23%
Small Group: 6%
Routine: 21%
Meals: 14%
Other: 4%

FPG CDI, 2005, Early Developments
Interacción típica entre el maestro y el niño

Typical teacher-child interaction

FPG CDI, 2005, Early Developments
What do the teachers do in a birth to age 3 Abecedarian Child Development Center?
- Currículo Creativo
- Atención y cuidado integral
- Aprendamos Jugando
- Lectura con conversación
- Creative Curriculum
- Enriched Caregiving
- Learning Games
- Conversational Reading
Atención y cuidado integral

Enriched Caregiving
Atención y cuidado integral
Enriched Caregiving

• Alimentación / Lunch or snack time

• Vestirse y desvestirse / Dressing and undressing

• Lavado de la cara y las manos / Washing hands and face
Atención y cuidado integral
Enriched Caregiving

• Paseos / Going for a walk

• Cantar una canción / Singing a song

• Conversación / Conversation
The 3N (NMN) Strategy

- notice
- nudge
- narrate

- notar
- motivar
- narrar
The 3N Strategy
Notice

I can tell that you’d like to zip your own coat today.

Nudge

Zip with one hand and hold your coat with the other.

Narrate

You’re making that zipper go up, up. Nice work!
The LearningGames curriculum has been a key component of all 3 of our longitudinal research projects.

Disclaimer: Joseph Sparling has a financial interest in LearningGames.
Lessons Learned

0 a 12 meses

0 to 12 months
Imite los pequeños ruidos que ella hace.

Copy the little sounds she makes.
Use palabras y objetos para decirle lo que sucederá luego.

Use words and objects to tell what will happen next.

Photographs © 2005 by MindNurture, Inc.
12 a 24 meses
12 to 24 months
When he points to a picture, say what it is.
Acompañe la palabra que le diga con una acción

Do an action while you are saying the word for it.
24 a 36 meses
24 to 36 months
Provéale palabras para lo que él está sintiendo ahora

Give him words for how he’s feeling now.
Hágale preguntas usando “qué pasa si”

Ask her “what if ” questions.
Lectura con conversación
Conversational Book Reading
(Interactive Book Reading)

Photographs © 2005 by MindNurture, Inc.
The 3S (3M) Strategy

- see  mirar
- show  mostrar
- say  mencionar

Levels of Child Response
Use these 3 levels of child response like stair steps:

1. See
2. Show
3. Say
Where are the toys?

The toy shelves are empty. These words say: “Where are the toys?” Maybe this mother and child will look for the toys.

Someone is looking at the empty toy shelf. Point to the mother. Point to the child. Where’s the toy shelf?

Who’s this tall person? Who’s this little person? What’s this? What will they try to find?

Dónde están los juguetes?

El estante de juguetes está vacío. Estas palabras dicen: “¿Dónde están los juguetes?” Quizás esta madre buscará los juguetes con su hijo.

Alguien está mirando al estante vacío. Pon tu dedo en la madre. Ahora, pon tu dedo en el niño. ¿Dónde está el estante de juguetes?

¿Quién es esta persona alta? ¿Quién es esta persona bajita? ¿Qué es esto? ¿Qué van a tratar de buscar?
Look, first they find a ball to put on the toy shelf. A ball can bounce. It's fun to roll or throw a ball.

Here's a ball. Can you put your hand on it? I think they'll put the ball on the toy shelf.

See what they find first. What is it? What can you do with a ball? Do you know where they'll put the ball?

ball

Mira, primero encuentran una pelota para poner en el estante de juguetes. Una pelota puede rebotar. Es divertido rodar o tirar una pelota.

Aquí está una pelota. ¿Puedes poner tu mano en la pelota? Creo que pondrán la pelota en el estante de juguetes.

Mira lo que encuentran primero. ¿Qué es? ¿Qué puedes hacer con una pelota? ¿Sabes dónde pondrán la pelota?

pelota
The toys are on the toy shelf.

Look where the mother and child put all the toys. There's the ball, the bear, the blocks, the doll, the book, and the crayons.

Show me the toys. Where are the crayons, the teddy bear, the blocks, the book, the ball; the doll?

Tell me what they put on the toy shelf. What's this one? (Point to as many as your partner enjoys naming.)

Mira donde la madre y su hijo ponen todos los juguetes. Allí están la pelota, el oso, los bloques, la muñeca, el libro, y los creyones.

Enséñame los juguetes. ¿Dónde están los creyones? ¿El oso? ¿Los bloques? ¿El libro? ¿La pelota? ¿La muñeca?

Dime lo que pusieron en el estante de juguetes. ¿Cuál es éste? (Siga señalando los juguetes mientras su compañero se divierte identificándolos.)

Los juguetes están en el estante de juguetes.
Once you learn to use the 3S Strategy with the Conversation Books...

...you can apply the 3S Strategy to almost all other books
What are the research results from a program like this?
Preschool Results
(Birth to Age 5)
Abecedarian Project

% of Sample in Normal IQ Range (>84) by Age (longitudinal analysis)

Abecedarian Project

Post-High School Education for Teen Mothers

Ramey et al, 2000, *Applied Developmental Science*
School Results
Abecedarian Project

Reading Achievement Over Time

Campbell & Ramey, 2001, *Developmental Psychology*
Abecedarian Project
Retentions and Special Education Placements by Age 15

Ramey & Ramey, 1999, MR/DD Research Review
Early Adult Results
Abecedarian Project

Risk-taking and Criminal Activity
(Self-reported Data)

Marijuana Use*
*p<.05
Regular Smoker
Misdemeanor
Convictions
Felony
Convictions
% of Group
Control
Treated

Abecedarian Project

Percent in Skilled Job or Higher Education at Age 21

X² (1) = 6.72, p ≤ .01

Abecedarian Project

Age at Birth of First Child

![Bar chart showing age at birth of first child for control and treated groups. The treated group has a significantly higher age at birth compared to the control group. F(1, 44) = 6.38, p < .05.]

Our Most Recent Research Results
Learning Games Research in 8 US Cities

ARTICLE

Early Intervention in Low Birth Weight Premature Infants: Results at 18 Years of Age for the Infant Health and Development Program

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Pediatrics, Volume 117, Number 3, March 2006
LearningGames Research in 8 US Cities

- Low birthweight babies
- Home visiting from birth – 12 months
- Home visiting & Abecedarian child care from 12 – 36 months
- Enriched caregiving, LearningGames curriculum, and Conversational reading
LearningGames Research in 8 US Cities

• Positive effect for the LearningGames group with bwt. of 2000-2500 g. seen at:
  – 24 months
  – 36 months
  – 5 years
  – 8 years
  – 18 years
LearningGames Research in 8 US Cities

• Positive effects seen at age 18 in:
  – Math
  – Vocabulary (cognition)
  – Fewer risk-taking behaviors
Curriculum (Learning Games) Variables Predict Positive 36-month Child Outcomes

- High parent interest in the games
- Child mastery of games
- Number of games implemented with child

*Sparling et al., 1991, *Topics in Early Childhood Special Education*
*Liaw, Meisels, & Brooks-Gunn, 1995,* *Early Childhood Research Quarterly*
Infant Health and Development Program
(Children born between 2000 and 2500 grams)

Cognitive Development to Age 18

Mc Cormick, et al., 2006, Pediatrics
“The heart of early education is a series of stimulating, playful, adult-child interactions”

Joseph Sparling
Each LearningGames activity describes an adult-child interaction (on a single page, front and back)
Hablando Para Que Vea

Abra el bebé para que pueda ver su cara y labios. Hable felizmente con él. Luego espere un momento y escuche los sonidos que hace el bebé. Si los hace, repita los sonidos. Déje que su cara y voz le indique que a usted le gusta cuando hace ruidos...porque estos pequeños sonidos son los trozos y piezas de los cuales hará palabras más tarde.

¡Estás hablando contigo!

¿Para Qué?
Para dejarle saber al bebé que los sonidos y los movimientos de la boca se complementan.
Talking for Him to See

Hold your baby close so he can see your face and lips. Talk happily to him. Then pause and listen for him to make baby sounds. If he does, repeat his sounds. Let your face and voice show him you like it when he makes a sound...because these little sounds are the bits and pieces from which he will later make words.

You're talking to me!

Why?
To help the baby know that sounds and mouth movements go together.
Talking for Him to See

**Adult**

In this game it is important for your baby to see your lips move while he is hearing your sounds.  
• Hold your baby close with his head cupped in your hands so that he can see your face and lips. Lean toward him and talk happily. Pause expectantly – giving him plenty of time to make his own sounds.  
• When he makes any sound, by accident or intention, smile and talk, repeating his own sound back to him. Take your time. You’ve had lots of practice making sounds, but vocalizing is new to him, and he may have to really work at it. Your repetition of his sounds and your loving voice and face give him encouragement to try again. These “conversations” with the child can begin at an early age, but they are so much fun and can teach so much that they should be a frequent game at every age.  
• Of course, you and the child will discover new sounds to make back and forth with your voices as he gains new skills.  
• As he gets older, you won’t need to hold his head and he can sit in any comfortable position facing you on your lap.

**Baby**

The baby will watch your face and lips if you move them so he can see clearly. (At this early age things that are about seven or eight inches away are in clearest focus for him.) He may smile because he likes to have the adult talk to him, but he may not try to make sounds right at first. When he’s ready, he will begin. His sounds will, of course, not be like the adult’s, but they may seem to be in answer to her. He has to get a lot of things together – the sound of the adult’s voice, the sight of her lips moving, and the effort of making his own voice and mouth work. His whole body will work at it as he tries. These times of close sharing are enjoyable to him if the adult is relaxed and enjoying them too.

**Why?**

To help the baby know that sounds and mouth movements usually go together, and to encourage him to watch your face as you talk. To allow him to experience the pleasure of back-and-forth vocal play. The baby will need to practice making mouth noises so he can later learn to talk. We believe that later the infant will imitate the mouth movements he has seen as well as the mouth sounds he has heard. Oral language development goes along with and contributes to the child’s development of early literacy.
Shanker: Noticing patterns
Matching Sizes & Shapes

Give the toddler three objects of the same size and color. Two of them should be of the same shape. (Perhaps two yellow balls and a yellow block.) Show her that the balls are the same – smooth, round. Show her how the block is different – with corners and flat sides. Hold up one of the balls and ask her to “Get one like this.” Be really excited and pleased when she picks up the other ball. At a later time play with new objects that are of different sizes but of the same shape and color. (Perhaps two little silver spoons and one big silver spoon.)

Can you get the one like mine?

Why?
To help the child notice the parts of an object that help to identify it.
El programa Abecedario puede implementarse en:

- Centros de cuidado infantil
- Hogares de cuidado y educación infantil
- Programas de Visitadores de Hogares
- Clases educativas para padres
- Cuidado a cargo de miembros de la familia, amigos y parientes
- Campañas de información pública
You can use all or parts of the Abecedarian program in:

- Child care centers
- Family child care homes
- Home visiting programs
- Parent education classes
- Family, friends, and relative care
- Public awareness campaigns
Investment in child development in the first 5 years of life can yield significant, long-term benefits for children, families, and community.
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